tion and he served prior to that as first Vice President of that organization. He is also a businessman. He is Vice President of the Kentucky-Tennessee Grain Company and serves on the Board of Directors of a local bank. Mr. Bob Wade.

Mr. WADE. Thank you. I will try to disagree without being disagreeable but certainly there is quite a bit of confusion over who is in what position. Even though I spend a good part of every day tending to my job as president of the KFB—with a meeting almost every day and sometimes 7 or 8 a day—I do work on the farm. We have a small family farm corporation and my sons work with me.

My first rebuttal is that from 1950 until 1972 many farmers were forced off the farm, had to sell family farms and were put out of business by controlled reserves. Farmers were under the control of the bureaucratic management specialists, who even today want to manage everything from the air we breathe to the water we drink.

There is a point where we must remember that this great U.S. was put together under the free enterprise system.

We have vast reserves. We have a storehouse full of knowledge that can be used by the people in agriculture and will be used to provide the food that the world wants.

We have a storehouse here that can be shared with other countries to help them raise their own food, to help them feel that they have a respective place in society.

Too long have farmers been subject to these government management specialists who have managed such things as our welfare program.

We look at history and we can see that 95% of the people in this great U.S. would like to have a big food reserve—at someone else's expense. What is the need for the food reserve? It is to control farm prices. Dr. Cochrane has just outlined how they would be controlled. Let's take his 20% under and over variance. What happened to the farmer last year when the price of fertilizer went up from three to five times? Is that 20% going to allow him any profit? No, it is not.

What has caused the big price fluctuation? We can give you our cattle and your meat is going to cost you 52 cents a pound. That's if we give it to you. Do we cause that 52 cents fluctuation? No, the thing that caused the fluctuation was wage and price controls, with more bureaucratic management specialists and their errors.

We need a strategic reserve for the grain supplies in this country like we need another hole in our head. Sooner or later with this type program you are going to break all the farmers in this country and then you are going to have to try it like Russia is running theirs. And I have a feeling then we won't have a reserve, we won't have a supply, and we will have hunger here in the U.S.A., where some think it can't happen. But it will happen if we sit around on our duffs and we are lulled to sleep by the fact that we want cheap food.

It hasn't been too many years ago in this country since the pioneers came through; the main thing they were looking for besides their health and their hides was food. Look how much it has changed. We are having a hullabaloo over the fact that we are now paying 17% of our incomes to feed ourselves. There are lots of countries in the world that would be happy if they were paying 50%—if they had the opportunity to pay 50%.

Back up and spend a little time and read the history of the Commodity Credit Corporation. There were more management errors in that system than any system that has been devised by the government in quite some time. For instance, everyone remembers Billie Sol Estes down in Texas. He managed to take a little gravy out of the system. There were times when the grain in Kansas City was shipped by Commodity Credit to Baltimore supposedly for export. Two years later, this same grain was shipped back to Kansas to the millers to mill it for consumption here in the U.S.

Why not leave the reserves on the farms where they are raised and with country elevators and the terminals that are in the business. I feel that I know a little more about farming than some of the people that have not farmed. And I believe that the elevator people know more about how to handle and keep their grain in condition, and how to sell it and how to ship it than the people in Washington and various places that are working for Commodity Credit.

A year ago people were saying wheat was so high and so scarce, bread was going to be $1 a loaf. That was a total lie and the people who told it knew it was a lie, but the public bought it. Everybody got nervous about a loaf of bread, when the truth was that we had more than enough surplus wheat and we have enough surplus now.

There is more grain on the farms in this country than has been there at any one time in the history of the country. And the farmers are storing it. The farmers want to store this grain and they want a reasonable profit. But how are we ever to get a reasonable profit and stay in the farming business, and provide you with quality food that hasn't been shipped all over hell and back, when we have management specialists who want to take it over and use it as a price regulator for the world market in grain?

Let's be sensible. Let's pool the money. Let's establish an international monetary fund and as countries are able let them pay into the fund and as countries need help, let them withdraw from the fund. You have heard Dr. Cochrane say that the yield worldwide has very little variance. Even with a bad crop here and a bad crop there, there are always places that have good crops. The overall variation is very narrow.

We in America could knock off 10% of what we eat and probably be healthier. Too many of us are carrying too much lard.

The problem is that we are trying to create some more jobs for some management specialists who got displaced when the surplus blew out and we are not using our heads to think. The farmer can store it cheaper, ship it on time and in the end you will find that the consumer will have much better quality and much cheaper food.

The fatal step for American agriculture is to go the strategic reserve route.

HOUSE OF REPRESENTATIVES—*Friday, September 5, 1975*

The House met at 10 o'clock a.m.

The Chaplain, Rev. Edward G. Latch, D.D., offered the following prayer:

Thou shalt remember all the way which the Lord thy God hath led thee.—Deuteronomy 8:2.

Almighty and Eternal God we come before Thee on the eve of Rosh Hashanah to join with our Hebrew friends in entering their new year. Grant that we may enter together and live through the coming days with humble and grateful hearts. Help us to work more closely with Thee and to labor more faithfully for the good of our people obeying Thy Commandments, living by Thy laws, and following the example of the best of men.

Enlighten with Thy wisdom and sustain with Thy power those whom the people have set in authority, our President, our Speaker, Members of Congress, and all who are entrusted with our safety and our security. May peace and good will live in the hearts of our citizens and may our faith be strong enough to exalt our Nation in righteousness.

In Thy holy name we pray. Amen.

THE JOURNAL

The SPEAKER. The Chair has examined the Journal of the last day's proceedings and announces to the House his approval thereof.

Without objection, the Journal stands approved.

There was no objection.

MESSAGE FROM THE SENATE

A message from the Senate by Mr. Sparrow, one of its clerks, announced that the Senate had passed bills of the following titles, in which the concurrence of the House is requested:

S. 1245. An act to amend section 218 of title 23, United States Code;

S. 1281. An act to improve public understanding of the role of depository institutions in home financing;

S. 2195. An act to establish a National Center for Productivity and Quality of Working Life; to provide for a review of the activities of all Federal agencies including implementation of all Federal laws, regulations, and policies which impede the productive performance and efficiency of the American economy; to encourage joint labor, industry, and Government efforts to improve national productivity and the character of working conditions; to establish a Federal policy with respect to continued productivity growth and improved utilization of human resources in the United States; and for other purposes; and

S. 2270. An act to authorize an increase in the monetary authorization for certain comprehensive river basin plans previously approved by the Congress, and for other purposes.

PROVIDING FOR CONSIDERATION OF H.R. 8800, ELECTRIC VEHICLE RESEARCH, DEVELOPMENT, AND DEMONSTRATION ACT OF 1975

Mr. YOUNG of Texas. Mr. Speaker, by direction of the Committee on Rules, I call up House Resolution 694 and ask for its immediate consideration.

The Clerk read the resolution, as follows:

H. RES. 694

Resolved, That upon the adoption of this resolution it shall be in order to move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 8800) to authorize in the Energy Research and Development Administration a Federal program of research, development, and demonstration designed to promote electric vehicle technologies and to demonstrate the commercial feasibility of electric vehicles, and all points of order against section 13(b) of said bill for failure to comply with the provisions of clause 5, rule XXI, are hereby waived. After general debate, which shall be confined to the bill and shall continue not to exceed one hour, to be equally divided and controlled by the chairman and ranking minority member of the Committee on Science

and Technology, the bill shall be read for amendment under the five-minute rule. At the conclusion of the consideration of the bill for amendment the Committee shall rise and report the bill to the House with such amendments as may have been adopted, and the previous question shall be considered as ordered on the bill and amendments thereto to final passage without intervening motion except one motion to recommit.

The SPEAKER. The gentleman from Texas (Mr. YOUNG) is recognized for 1 hour.

PARLIAMENTARY INQUIRY

Mr. YOUNG of Texas. Mr. Speaker, I have a parliamentary inquiry.

The SPEAKER. The gentleman will state it.

Mr. YOUNG of Texas. Mr. Speaker, it is this Member's understanding that we will take up both rules, House Resolution 694 and House Resolution 693.

The SPEAKER. The gentleman is correct.

Mr. YOUNG of Texas. Mr. Speaker, I yield 30 minutes to my distinguished friend and colleague from the Committee on Rules, the gentleman from Mississippi (Mr. LOTT), pending which I yield myself such time as I may consume.

Mr. Speaker, House Resolution 694 provides for an open rule with 1 hour of general debate on H.R. 8800, the Electric Vehicle Research, Development, and Demonstration Act of 1975.

House Resolution 694 provides that all points of order against section 13(b) of the bill for failure to comply with the provisions of clause 5, rule XXI of the rules of the House of Representatives—prohibiting appropriations in a legislative measure—are waived.

H.R. 8800 establishes a program within the Energy Research and Development Administration—ERDA—to demonstrate the commercial feasibility of electric vehicles for private and business travel. This bill mandates a 5-year project of placing more than 7,500 vehicles into use in various applications and geographical regions, along with associated research and development efforts. Its purpose is to get present and future state-of-the-art electric vehicles into every region of the country, and to use and evaluate them under all appropriate driving circumstances.

H.R. 8800 authorizes $10 million for fiscal year 1976 and the transition period, $40 million for fiscal year 1977, $30 million for fiscal year 1978, $60 million for fiscal year 1979, and $20 million for fiscal year 1980.

Mr. Speaker, I urge the adoption of House Resolution 694 in order that we may discuss and pass H.R. 8800.

Mr. LOTT. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, as has been noted, the rule presently before us would provide for the consideration of H.R. 8800, the Electric Vehicle Research, Development, and Demonstration Act of 1975. Under the terms of the rule, there is to be 1 hour of general debate; and the bill is open to all germane amendments. The rule further allows for a waiver of points of order against language in section 13(b) on page 18 of the bill for failure to comply with clause 5 of rule XXI of the Rules of the House, which relates to appropriation language in a legislative bill.

H.R. 8800 establishes a program within the Energy, Research, and Development Administration to demonstrate the commercial feasibility of electric vehicles for private and business uses, mainly in urban areas. The project would place about 7,500 electric vehicles in use in widely distributed geographic areas. Authorizations of $160 million for a 5-year period are called for under this legislation with loan guarantees for industrial efforts in electric vehicle development to a maximum of $60 million at one time.

Mr. Speaker, I know there are some questions that many of us would like to ask concerning this legislation. It is my understanding also that the Administration has reservations about the timeliness of the bill's passage. Therefore, I would have no objection to the adoption of this rule so that the House may consider and fully debate H.R. 8800.

Mr. Speaker, I have no requests for time, and I reserve the balance of my time.

Mr. YOUNG of Texas. Mr. Speaker, I move the previous question on the resolution.

The previous question was ordered.

The resolution was agreed to.

A motion to reconsider was laid on the table.

PROVIDING FOR CONSIDERATION OF H.R. 8674, METRIC CONVERSION ACT OF 1975

Mr. YOUNG of Texas. Mr. Speaker, by direction of the Committee on Rules, I call up House Resolution 693 and ask for its immediate consideration.

The Clerk read the resolution as follows:

H. RES. 693

Resolved, That upon the adoption of this resolution it shall be in order to move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 8674) to declare a national policy of converting to the metric system in the United States, and to establish a United States Metric Board to coordinate the voluntary conversion to the metric system, and all points of order against section 12 of said bill for failure to comply with the provisions of clause 5, rule XXI, are hereby waived. After general debate, which shall be confined to the bill and shall continue not to exceed one hour, to be equally divided and controlled by the chairman and ranking minority member of the Committee on Science and Technology, the bill shall be read for amendment under the five-minute rule. At the conclusion of the consideration of the bill for amendment the Committee shall rise and report the bill to the House with such amendments as may have been adopted, and the previous question shall be considered as ordered on the bill and amendments thereto to final passage without intervening motion except one motion to recommit.

The SPEAKER. The gentleman from Texas (Mr. YOUNG) is recognized for 1 hour.

Mr. YOUNG of Texas. Mr. Speaker, I yield 30 minutes to the distinguished gentleman from Tennesse (Mr. QUILLEN), pending which I yield myself such time as I may consume.

Mr. Speaker, House Resolution 693 provides for an open rule with 1 hour of general debate on H.R. 8674, the Metric Conversion Act of 1975.

House Resolution 693 provides that all points of order against section 12 of the bill for failure to comply with the provisions of clause 5, rule 21 of the Rules of the House of Representatives—prohibiting appropriations in a legislative bill—are waived.

H.R. 8674 declares, as a matter of national policy, that the United States will convert to the metric system of weights and measures on a voluntary basis. H.R. 8674 provides for the establishment of a National Metric Conversion Board, composed of 21 persons from the public which will be appointed by the President. The bill provides that the Board shall execute a program of planning and coordination to the conversion to the metric system, conduct research and submit recommendations to the President and to the Congress, and conduct a program of public education in the metric system.

Mr. Speaker, I urge the adoption of House Resolution 693 in order that we may discuss and debate H.R. 8674.

Mr. QUILLEN. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I rise in support of the rule and of the bill, H.R. 8674, the Metric Conversion Act of 1975. This bill's adoption by the House today will, in my judgment, provide for a smooth and orderly transition during the changeover in our national system of weights and measures.

All of the major industrial and trading nations of the world, with the exception of the United States, have either adopted the metric system or are now in the process of doing so. We are long past the point of no return in this matter. Whatever our sentimental attachments may be, there is no question but that America is going to convert from the old and obsolete English system to the metric system.

This legislation provides for a well-planned and voluntary changeover from the old ways to the new. With the passage of this bill, we will be providing a national policy for the conversion that is coming irregardless of what we do. But with a sound national policy, the costs will be less and the benefits greater—and be realized earlier—than under the haphazard and uncoordinated changeover which is now in progress.

To provide a coordinating mechanism for our conversion to the metric system, H.R. 8674 establishes a board composed of a membership broadly representative of all sectors of society which will be especially affected by the changeover. In addition to the representatives of industry, business, labor, education, science, and other areas of national life, the board will include two Members of the House of Representatives and two Members of the other body. The board will devise and execute a program of planning the conversion, conduct research, and submit recommendations to the

President and to Congress, and establish a program of public education.

All these activities are necessary because, I repeat, this country is converting to the metric system. Indeed, the conversion is already underway, particularly in those firms substantially involved in international commerce. The question before us today is not the merits or demerits of metric conversion. The question is rather—Will the Congress provide any assistance and leadership during the period of transition?

The rest of the world uses the metric system because it is the best system of weights and measures devised by mankind. It is based on a natural unit of length and on the decimal. It is logical and universal in the sense that the units are interchangeable as to weight, length, volume, and temperature. In short, the metric system makes sense.

Mr. Speaker, the advantages of metrication for this country are numerous. I would like to speak briefly to just one. Whatever may be said about the metric system, there is absolutely no doubt that its adoption by this country will be of tremendous long-term benefit to our international trade. The industrial and engineering standards used in the United States are incompatible with the standards of the world, and this is clearly and demonstrably to our own disadvantage. Bringing American engineering standards into uniformity with the world's standards will remove an obstacle presently interfering with our efforts to increase our trade with other nations.

With America converted to the metric system, new markets will open, and old ones expand. In addition, an increase in the volume of international trade through metrication will result in lower costs of production because of a reduction in the number of different standards required. This pleasant fact will be especially apparent for companies selling in both the domestic and foreign markets since the standards will be identical in each instance.

Although it is going to require some time and effort to forget the old ways of measurement and to use up stocks of parts designed to current standards, all of the experience of other countries that have made or are making the change reinforces the belief that we will not encounter insurmountable problems in going metric—if we do so in an orderly and coordinated way.

I do not wish to minimize the magnitude of the metrication process that we will undergo. It will mean that we will have to learn a new system, although this will be much easier for the young than for their elders. I have no doubt that many of us, myself included, will have some problems reeducating ourselves. But with a thoughtfully planned and well-organized national program, such as I believe we will have with this bill, we will be able to minimize confusion during the transition period.

Mr. Speaker, there are valid and legitimate concerns about America's conversion to the metric system. I believe this bill provides precisely what we require to meet these anxieties. We know that industry will have to retrain workers. We know that this retraining need, and also the eventual obsolescence of tools and machinery, has given rise to management and labor fears.

The point to be made, however, is that America is already drifting into the metric system and the metric costs, whatever they are, are going to occur. Realistically, there is no alternative of not spending the money by not going metric. The real question is, in fact, how will the change be made?

I believe H.R. 8674 provides a sensible and compelling answer to that question, and I congratulate the members of the Committee on Science and Technology for their fine work. They have produced legislation which recognizes that any change in the traditional measuring system cannot be performed by the Government. It can be accomplished only by the cooperation of citizens engaged in all of the activities that make up our national life. As industry should plan its own metrication programs, so should educators plan for the changes that will come in the schools and universities.

Mr. Speaker, the provisions of H.R. 8674 provide the means for obtaining such widespread cooperation by means of a well-planned, coordinated national metrication program, and I am pleased to recommend its passage to my colleagues.

Mr. Speaker, I urge adoption of the rule on H.R. 8674.

Mr. YOUNG of Texas. Mr. Speaker, I move the previous question on the resolution.

The previous question was ordered.

The SPEAKER. The question is on the resolution.

The question was taken; and the Speaker announced that the ayes appeared to have it.

Mr. FRENZEL. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER. Evidently a quorum is not present.

The Sergeant at Arms will notify absent Members.

The vote was taken by electronic device, and there were—yeas 342, nays 3, not voting 88, as follows:

[Roll No. 495]

YEAS—342

Abdnor	Bowen	Collins, Tex.
Abzug	Brademas	Conlan
Adams	Breaux	Conte
Ambro	Breckinridge	Corman
Anderson, Calif.	Brodhead	Cornell
Andrews, N. Dak.	Brooks	Cotter
Annunzio	Broomfield	Coughlin
Archer	Brown, Calif.	D'Amours
Armstrong	Brown, Mich.	Daniel, Dan
Ashbrook	Brown, Ohio	Daniel, R. W.
Ashley	Buchanan	Daniels, N.J.
Aspin	Burgener	Danielson
AuCoin	Burke, Calif.	Davis
Badillo	Burke, Mass.	de la Garza
Bafalis	Burleson, Tex.	Delaney
Baucus	Burlison, Mo.	Dellums
Bauman	Burton, John	Derrick
Beard, R.I.	Burton, Phillip	Devine
Beard, Tenn.	Butler	Dickinson
Bedell	Byron	Dingell
Bell	Carney	Dodd
Bennett	Carr	Downey, N.Y.
Bergland	Carter	Downing, Va.
Bevill	Cederberg	Drinan
Blouin	Chappell	Duncan, Tenn.
Boggs	Clawson, Del	du Pont
Boland	Clay	Early
Bolling	Cleveland	Eckhardt
Bonker	Cochran	Edgar
	Cohen	Edwards, Calif.
	Collins, Ill.	Eilberg
Emery	Lagomarsino	Rees
English	Landrum	Regula
Erlenborn	Leggett	Reuss
Esch	Lehman	Richmond
Evans, Colo.	Lent	Rinaldo
Evans, Ind.	Levitas	Roberts
Fascell	Lloyd, Calif.	Robinson
Fenwick	Lloyd, Tenn.	Rodino
Findley	Long, La.	Roe
Fish	Lott	Rogers
Fisher	Lujan	Roncalio
Fithian	McCollister	Rooney
Flood	McCormack	Rose
Florio	McDade	Rosenthal
Flowers	McDonald	Rostenkowski
Flynt	McFall	Roush
Foley	McHugh	Rousselot
Ford, Mich.	McKinney	Ruppe
Ford, Tenn.	Madden	Russo
Forsythe	Madigan	St Germain
Fountain	Maguire	Santini
Frenzel	Mahon	Sarasin
Frey	Mann	Sarbanes
Fuqua	Martin	Satterfield
Gaydos	Mathis	Scheuer
Giaimo	Matsunaga	Schneebeli
Gibbons	Mazzoli	Schroeder
Gilman	Meeds	Schulze
Ginn	Melcher	Sebelius
Goldwater	Meyner	Sharp
Gonzalez	Mezvinsky	Shriver
Goodling	Michel	Shuster
Gradison	Mikva	Sikes
Grassley	Milford	Simon
Green	Miller, Calif.	Skubitz
Guyer	Miller, Ohio	Slack
Hagedorn	Mills	Smith, Iowa
Haley	Mineta	Smith, Nebr.
Hall	Minish	Solarz
Hammer-schmidt	Mink	Spence
Hanley	Mitchell, Md.	Staggers
Hannaford	Mitchell, N.Y.	Stanton, J. William
Hansen	Moakley	Stanton, James V.
Harkin	Moffett	Stark
Harris	Mollohan	Steed
Hastings	Montgomery	Steelman
Hawkins	Moore	Steiger, Ariz.
Hechler, W. Va.	Moorhead, Calif.	Steiger, Wis.
Hefner	Moorhead, Pa.	Stephens
Heinz	Mosher	Stratton
Helstoski	Moss	Stuckey
Henderson	Motti	Studds
Hicks	Murphy, Ill.	Sullivan
Hightower	Murphy, N.Y.	Symington
Hillis	Myers, Ind.	Talcott
Hinshaw	Myers, Pa.	Taylor, Mo.
Holland	Natcher	Taylor, N.C.
Holt	Neal	Teague
Holtzman	Nedzi	Thone
Howard	Nichols	Thornton
Howe	Nix	Traxler
Hubbard	Nolan	Treen
Hughes	Nowak	Ullman
Hyde	Oberstar	Vander Jagt
Ichord	O'Brien	Vander Veen
Jacobs	O'Hara	Vanik
Jeffords	O'Neill	Vigorito
Jenrette	Ottinger	Waggonner
Johnson, Calif.	Passman	Wampler
Johnson, Colo.	Patman, Tex.	White
Johnson, Pa.	Patten, N.J.	Whitehurst
Jones, Ala.	Pattison, N.Y.	Wilson, Bob
Jones, N.C.	Perkins	Wilson, C. H.
Jones, Okla.	Pettis	Winn
Jordan	Pickle	Wirth
Karth	Pike	Wolff
Kasten	Poage	Wright
Kastenmeier	Pressler	Wylie
Kazen	Preyer	Yates
Kemp	Quie	Yatron
Keys	Quillen	Young, Fla.
Krebs	Railsback	Young, Tex.
Krueger	Randall	Zablocki
LaFalce	Rangel	

NAYS—3

Hutchinson	Latta	Snyder

NOT VOTING—88

Addabbo	Clausen, Don H.	Harrington
Alexander	Conable	Harsha
Anderson, Ill.	Conyers	Hayes, Ind.
Andrews, N.C.	Crane	Hays, Ohio
Baldus	Dent	Hébert
Barrett	Derwinski	Heckler, Mass.
Biaggi	Diggs	Horton
Biester	Duncan, Oreg.	Hungate
Bingham	Edwards, Ala.	Jarman
Blanchard	Eshleman	Jones, Tenn.
Brinkley	Evins, Tenn.	Kelly
Broyhill	Fary	Ketchum
Burke, Fla.	Fraser	Kindness
Casey	Gude	Koch
Chisholm	Hamilton	Litton
Clancy		Long, Md.

McClory	Pritchard	Tsongas
McCloskey	Rhodes	Udall
McEwen	Riegle	Van Deerlin
McKay	Risenhoover	Walsh
Macdonald	Roybal	Waxman
Metcalfe	Runnels	Weaver
Morgan	Ryan	Whalen
Murtha	Seiberling	Whitten
Obey	Shipley	Wiggins
Patterson, Calif.	Sisk	Wilson, Tex.
Pepper	Spellman	Wydler
Peyser	Stokes	Young, Alaska
Price	Symms	Young, Ga.
	Thompson	Zeferetti

So the resolution was agreed to.

The Clerk announced the following pairs:

Mr. Addabbo with Mr. Anderson of Illinois.
Mr. Hébert with Mr. Clancy.
Mr. Baldus with Mr. Kelly.
Mr. Hays of Ohio with Mr. Broyhill.
Mr. Biaggi with Mr. Harsha.
Mrs. Chisholm with Mr. McClory.
Mr. Dent with Mr. Gude.
Mr. Bingham with Mr. Jarman.
Mr. Price with Mr. Burke of Florida.
Mr. Morgan with Mr. Edwards of Alabama.
Mr. Koch with Mr. Biester.
Mr. Shipley with Mr. Rhodes.
Mr. Sisk with Mrs. Heckler of Massachusetts.
Mr. Thompson with Mr. Peyser.
Mr. Zeferetti with Mr. Eshleman.
Mr. Barrett with Mr. Pritchard.
Mr. Casey with Mr. Horton.
Mr. Diggs with Mr. Fary.
Mr. Murtha with Mr. McCloskey.
Mr. Obey with Mr. Walsh.
Mr. Macdonald of Massachusetts with Mr. Don H. Clausen.
Mr. Jones of Tennessee with Mr. Blanchard.
Mr. Pepper with Mr. Symms.
Mr. Hayes of Indiana with Mr. Brinkley.
Mr. Roybal with Mr. McEwen.
Mrs. Spellman with Mr. Whalen.
Mr. Stokes with Mr. Andrews of North Carolina.
Mr. Udall with Mr. Wydler.
Mr. Van Deerlin with Mr. Conable.
Mr. Whitten with Mr. Wiggins.
Mr. Evins of Tennessee with Mr. Young of Alaska.
Mr. Alexander with Mr. Harrington.
Mr. Riegle with Mr. Derwinski.
Mr. Risenhoover with Mr. Ketchum.
Mr. Young of Georgia with Mr. Kindness.
Mr. Hamilton with Mr. Runnels.
Mr. Conyers with Mr. Duncan of Oregon.
Mr. Fraser with Mr. Crane.
Mr. Litton with Mr. McKay.
Mr. Long of Maryland with Mr. Patterson of California.
Mr. Metcalfe with Mr. Ryan.
Mr. Seiberling with Mr. Tsongas.
Mr. Waxman with Mr. Weaver.
Mr. Charles Wilson of Texas with Mr. Hungate.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

PROVIDING FOR SUSPENSION OF RULES ON TUESDAY, SEPTEMBER 9

Mr. O'NEILL. Mr. Speaker, I ask unanimous consent that on Tuesday, September 9, 1975, the Speaker may be authorized to entertain motions to suspend the rules notwithstanding the provisions of clause 1, rule XXVII.

The SPEAKER. Is there objection to the request of the gentleman from Massachusetts?

Mr. MICHEL. Mr. Speaker, reserving the right to object, might I inquire of the distinguished majority leader why this request is being made? It is being made for consideration of what bill?

Mr. O'NEILL. At the present time we have three pieces of legislation that would be brought up:

H.R. 1073, war risk insurance;

House Joint Resolution 209, National Hunting and Fishing Day; and

House Joint Resolution 597, St. Elizabeth Seton Day.

As the gentleman knows, suspension days are the first and third Mondays and Tuesdays of the month, but because of the Labor Day recess and the Yom Kippur holidays we were unable to get in our suspension days. There would otherwise be no suspension days in September.

There could possibly be other suspensions than those I have mentioned.

Mr. MICHEL. Mr. Speaker, further reserving the right to object, did I understand the majority leader to say there could be other bills?

Mr. O'NEILL. There could be if there were requests by chairmen and the Speaker approved them.

Mr. MICHEL. This being Friday, we would expect that we would have a little bit of advance warning, no later than Monday and preferably this afternoon.

Mr. O'NEILL. Mr. Speaker, we would acquiesce in this request.

Mr. MICHEL. I appreciate the gentleman's announcement.

Mr. Speaker, I withdraw my reservation of objection.

The SPEAKER. Is there objection to the request of the gentleman from Massachusetts.

There was no objection.

PERMISSION FOR COMMITTEE ON POST OFFICE AND CIVIL SERVICE TO FILE COMMITTEE REPORTS

Mr. HENDERSON. Mr. Speaker, I ask unanimous consent that the Committee on Post Office and Civil Service have until midnight tonight to file committee reports on House Joint Resolution 209, National Hunting and Fishing Day; House Joint Resolution 597, National St. Elizabeth Seton Day; S. 584, National Guard technicians; H.R. 6227, right to counsel; and H.R. 7110, Customs and Immigration Inspectors.

The SPEAKER. Is there objection to the request of the gentleman from North Carolina?

Mr. ROUSSELOT. Mr. Speaker, reserving the right to object, if the gentleman will yield, many of these reports were not filed and would it not be impossible to bring them up?

Mr. HENDERSON. I am not sure that I am able to answer the gentleman's question. If they are not filed by midnight tonight, of course, they would have to be filed next week.

Mr. ROUSSELOT. Mr. Speaker, further reserving the right to object, there are several similar bills to be brought up on suspension; is that correct?

Mr. HENDERSON. I understand the first, House Joint Resolution 209 and House Joint Resolution 597, according to the announcement the majority leader just made, would be included under suspension.

Mr. ROUSSELOT. Mr. Speaker, I withdraw my reservation of objection.

The SPEAKER. Is there objection to the request of the gentleman from North Carolina?

There was no objection.

PERSONAL EXPLANATION

Mr. DOMINICK V. DANIELS. Mr. Speaker, on Wednesday, September 3, I am not recorded as being present on the first quorum call, that is rollcall 489. I was actually present. I put my card in the electric box, but I am not recorded as being present. I would like the RECORD to show I was actually present.

APPOINTMENT OF CONFEREES ON H.R. 3474, AUTHORIZING APPROPRIATIONS TO ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

Mr. TEAGUE. Mr. Speaker, I ask unanimous consent to take from the Speaker's table the bill (H.R. 3473) to authorize appropriations to the Energy Research and Development Administration in accordance with section 261 of the Atomic Energy Act of 1954, as amended, section 305 of the Energy Reorganization Act of 1974, and section 16 of the Federal Nonnuclear Energy Research and Development Act of 1974, and for other purposes, with Senate amendments thereto, disagree to the Senate amendments, and request a conference with the Senate thereon.

The SPEAKER. Is there objection to the request of the gentleman from Texas? The Chair hears none, and appoints the following conferees: Messrs. TEAGUE, HECHLER of West Virginia, MCCORMACK, DOWNING of Virginia, FUQUA, FLOWERS, SYMINGTON, MOSHER, BELL, GOLDWATER, PRICE, ANDERSON of Illinois, and RONCALIO.

ELECTRIC VEHICLE RESEARCH, DEVELOPMENT, AND DEMONSTRATION ACT OF 1975

Mr. TEAGUE. Mr. Speaker, I move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 8800) to authorize in the Energy Research and Development Administration a Federal program of research, development, and demonstration designed to promote electric vehicle technologies and to demonstrate the commercial feasibility of electric vehicles.

The SPEAKER. The question is on the motion offered by the gentleman from Texas (Mr. TEAGUE).

The motion was agreed to.

IN THE COMMITTEE OF THE WHOLE

Accordingly the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill H.R. 8800 with Mr. MURPHY of Illinois in the chair.

The Clerk read the title of the bill.

By unanimous consent, the first reading of the bill was dispensed with.

The CHAIRMAN. Under the rule, the gentleman from Texas (Mr. TEAGUE) will be recognized for 30 minutes, and the gentleman from California (Mr. GOLDWATER) will be recognized for 30 minutes.

The Chair now recognizes the gentleman from Texas (Mr. TEAGUE).

Mr. TEAGUE. Mr. Chairman, for the benefit of the members of the committee,

I will say that when our committee began hearings on this bill, ERDA had not been organized. The administration would not make its recommendations except for the fact that it wanted an electric bill. Our subcommittee has very carefully considered this bill. We know of no controversy, and we would hope to expedite the bill.

When we finish the bill, I shall ask that all Members have 5 days to extend their remarks in the RECORD.

Mr. Chairman, H.R. 8800 establishes a 5-year, $160-million Electric Vehicle Research, Development, and Demonstration project in the Energy Research and Development Administration—ERDA. The primary goal of the project will be to demonstrate the commercial feasibility of electric vehicles and to promote the use of electric cars as a practical alternative to gasoline-powered autos for short-range driving. It will include the evaluation and demonstration of about 8,000 vehicles.

The bill was approved unanimously by the full committee on July 28, and it was reported on July 31 with House Report No. 94–439. I wish to particularly commend Congressman MIKE MCCORMACK, chairman of the Subcommittee on Energy Research, Development, and Demonstration, and Congressman BARRY GOLDWATER, the ranking minority member of the subcommittee; and also Congressman BROWN and Congressman OTTINGER for their hard work and effort in bringing this bill to the floor.

Electric vehicles can play a key role in reducing our dependence on imported petroleum for transportation. In addition, they would contribute to reducing urban air and noise pollution.

The two major components of the program established by H.R. 8800 are research and development on the one hand and demonstration on the other. It is critical that the current state-of-the art be significantly improved, especially with regard to batteries and other potential energy storage systems. This can only be accomplished by an aggressive research and development effort, utilizing the expertise of our scientific community, university experts, and the private sector.

Research and development, no doubt, will emphasize energy storage technologies, including not only storage batteries but flywheels, fuel cells, and other technological options. Other research and development efforts will encompass control systems and overall design of electric and hybrid vehicles. The objective of this research will be to maximize energy efficiency, durability, and recyclability of parts. Associated efforts will be carried out on urban design and traffic management in order to optimize transportation use and minimize environmental degradation.

The demonstration will involve three phases. After an initial 1-year period of design and standard-setting based on in-use testing of existing vehicle technologies, ERDA will contract for at least 2,500 vehicles within 15 months. It will insure widespread distribution of these vehicles by enabling individuals or businesses to lease or buy them. Within 42 months, another 5,000 vehicles, incorporating design advances derived from the first phase of the project, will be purchased. Demonstration maintenance programs will also be established.

Planning grants, special contract provisions, and a loan guarantee program will allow small firms with problems in raising capital to bid competitively for the ERDA contracts and establish manufacturing capability.

ERDA will also conduct studies of tax provisions, regulatory law, and other factors related to the transportation system and electric vehicles. These findings, as well as assessment of the long-range environmental and economic impacts, will be reported to the Congress on a regular basis.

Mr. Chairman, H.R. 8800 is a good bill. It received the unanimous endorsement of the members of the Committee on Science and Technology and the strong support of representatives of industry, universities, and the scientific community. I urge the support of each Member of this body.

Mr. Chairman, for the purposes of explaining the details of the bill, I yield such time as he may consume to the chairman of the subcommittee, the gentleman from Washington (Mr. MCCORMACK).

Mr. MCCORMACK. Mr. Chairman, I want to thank Chairman TEAGUE and congratulate him for his leadership on this bill and the other important energy bills that have been reported out of this committee.

Mr. Chairman, H.R. 8800, the Electric Vehicle Research, Development, and Demonstration Act of 1975, establishes a 5-year, $160 million program for research, development, and demonstration for electric vehicles under the Energy Research and Development Administration. The primary goal of this project will be to demonstrate the feasibility of electric vehicles, including the evaluation and demonstration of more than 7,500 vehicles over the next 5 years.

Demonstration and maintenance programs would also be established. Planning grants and a loan guarantee program will be provided to allow small firms with problems in raising capital to bid competitively for the ERDA contracts and to establish themselves in the electric vehicle industry.

Mr. Chairman, when considering what is and is not being done, and what can and cannot be done, that will have a significant impact in relieving the problems of the energy crisis. Some programs have a much greater value than others because they will have a significant impact, and have it soon. As we on the Science and Technology Committee have analyzed the energy crisis and tried to provide solutions, we have picked pressure points where a small change in technology that is socially, economically, and environmentally attractive can make a big difference either in increasing our energy resource base or reducing energy consumption.

In addition, we have sought pressure points where demands of critically short materials such as natural gas today or petroleum and gasoline in the near future can be reduced specifically as compared to just reducing energy consumption generally. One of the realities of the energy crisis is that we must reduce our reliance on petroleum and natural gas and increase our reliance on electricity produced from nuclear energy and coal. We can do this deliberately because it is attractive and because we want to and know that such an easy step can have a major, positive impact on both conservation of petroleum and improving our way of life. When this can be done in a short time, then that program has unusual value.

Switching to electric cars is such a program, particularly for second cars for urban commutng, and it has the advantage that Americans replace 10 percent of their cars each year anyway and that 40 percent of our cars are second cars.

Mr. Chairman, it is clear that this Nation needs a concerted effort to develop and employ electric vehicles on a massive scale. This bill, unanimously approved by the Subcommittee on Energy Research, Development and Demonstration and by the Full Committee on Science and Technology is the first step in that direction.

Before going into the details of the bill itself, I should like to address some of the underlying reasons that we need such a research, development, and demonstration program. As most of you in this Chamber are well aware, transportation now accounts for about 50 percent of our petroleum use, and more than one-third of our petroleum is imported. It also seems likely that we will simply run out of petroleum by the end of this century. By using electric vehicles we can replace this imported petroleum with electricity produced from nuclear energy, coal, solar, or geothermal sources. We will at the same time dampen the flow of petrodollars and develop the technology and economic infrastructure for a new personal transportation system in this country.

In addition to conserving liquid fuels, electric vehicles can make a significant impact on air and noise pollution. The extremely complicated job of controlling millions of moving internal combustion engines—present sources of pollution—in a single city can be transferred to the more tractable problem of controlling and monitoring emissions from a few electric generating plants.

I hope everyone here today will understand the initial objective of this legislation is to develop "second" cars for our citizens and specialized delivery vans for businesses and government agencies. This constraint, very frankly, is a technical one. The driving range of existing electric vehicles is about 60 miles. Thus they are amenable for immediate use in the 50 percent of those automobile trips which are less than 5 miles. In fact, a recent—1974—EPA study indicates that nearly 98 percent of daily driving of second cars could be met by an electric vehicle utilizing a single daily battery charge.

That same EPA report entitled "Impact of Future Use of Electric Cars in the Los Angeles Region" also has significant calculations of potential oil savings. It states that short-range electric cars could replace 1 million or 17 percent of the cars in the Los Angeles Basin by 1980.

By the following decade, 1990, nearly half of the area cars could be electric. Replacement of similar fractions of our 100 million gasoline-powered vehicles throughout the Nation would have extremely salutary effects, both on our petroleum supplies and urban pollution. Replacement of 17 percent of the Los Angeles vehicles would affect about 15 percent of the automobile petroleum consumption; on a national scale this would be equivalent to about 1 million barrels of oil per day.

Electric vehicles also have the potention of energy conservation on short trips and in heavy traffic. This is because electric vehicles do not require energy when they are not moving, and are relatively more efficient than internal combustion engines at very low speeds.

In order to make the fuel savings that I have referred to real, we must also take the further step of replacing electric generation by oil and natural gas with powerplants utilizing nuclear energy and coal. This is a reasonable strategy. I would, at the same time, like to emphasize that since electric vehicles are normally charged during the night, this off-peak use of electricity actually increases the efficiency of our electric utility system.

Electric vehicles are not a new idea. For example, in the year 1900 almost 1,600 electric automobiles were manufactured. During that same year less than 1,000 automobiles equipped with internal combustion engines were made.

From 1900 to 1915 there were over 100 manufacturers of electric vehicles in business. However, the technological effort and capital investment that went into the internal combustion engine soon overshadowed that which went into electric vehicle technology. The self-starter, improved performance, and cheap petroleum eventually resulted in the gasoline powered car attaining the ascendancy. Most of us think of electric cars only through nostalgic memories of Aunt Minnie driving one around a small town.

This began to change, however, in the 1960's. This was due to some extent to the concern over exhaust fumes polluting our cities from automobiles.

In 1967 a Department of Commerce study pointed out that the automobile was the largest single contributor by weight to our national air pollution problem. The Clean Air Act, Public Law 88–206, provided for research on motor vehicle pollutants. As a result, a program on advanced automotive power systems was initiated in the EPA. This program was transferred to ERDA by the Energy Reorganization Act of 1974.

Electric vehicle technology has continued to be used for some applications. We are all familiar with golf carts and fork lift trucks. The U.S. Postal Service plans to take delivery of about 350 electric vehicles this year. In London, England, 10 times this many electric vehicles have been in service as milk delivery vans for a number of years.

I mentioned a few minutes ago the fact that EPA had conducted significant studies on potential uses of electric vehicles in the Los Angeles region. There have been a number of other careful analyses of electric vehicle technology and utilization. The legislative report accompanying H.R. 8800 addresses six studies which are relevant to the discussion here on the floor this morning, including the Los Angeles study. At this point I should like to insert in the RECORD summaries of these studies:

REPORT OF THE PANEL ON ELECTRICALLY POWERED VEHICLES [1]

This Task Force, *The Automobile and Air Pollution*, recommended that "the Federal Government should initiate a five-year program, in total amount of approximately 60 million dollars, to support innovative developments useful in the establishment of future emission standards, in the following areas:

a. energy sources for vehicles
b. vehicular propulsion systems;
c. emission control devices;
d. special purpose urban cars; and
e. general purpose vehicles.

It also recommended that "Federal, State and local governments should incorporate low emission performance criteria as factors in the purchase of vehicles for their requirements."

POWER SYSTEMS FOR ELECTRIC VEHICLES [2]

The purpose of this symposium was to provide a coordinated review of current research related to power systems for electric vehicles. Meetings were designed to define the status of knowledge at that time and stimulated research. It was pointed out at that time that the Federal Government must develop early and realistic short- and long-term goals and standards, both for quality of our air and for transportation systems themselves. It was recognized that new types of automotive vehicles must be developed that will operate without generating harmful emissions.

ENERGY TASK FORCE REPORT [3]

The report of the Task Force on Energy of the Committee on Science and Astronautics in December 1972 noted that results of energy research and development may change the outlook for demand or supply in ways not now anticipated. This Task Force was constituted specifically for reviewing energy matters during the 92d Congress.

The Task Force Report pointed out that transportation directly accounts for 25 percent of the total energy consumed in the United States (and perhaps as much as 40 percent if all indirect energy costs are included, such as those associated with the manufacture of automobiles or the construction of highways). The report indicated that one way to conserve motor fuel is to increase the efficiency of engines. However, current air pollution requirements are working at cross purposes, and the difficulties are great for developing an engine that is both efficient and acceptably non-polluting.

The report noted that opportunities for energy research and development during the 1980s could include the demonstration of incentives to encourage the more efficient use of energy, including more efficient carriers for passengers and freight. Also called for was commercial demonstration of more efficient, environmentally acceptable, engines for motor vehicle transport.

AN EVALUATION OF ALTERNATIVE POWER SOURCES FOR LOW-EMISSION AUTOMOBILES [4]

The Panel on Alternative Power Systems of the Committee on Motor Vehicle Emissions of the National Academy of Sciences was charged with considering the possibility of using engines other than spark-ignition gasoline-fueled Otto cycle engines for automobiles. Emission levels and delay before the engine could become available were major considerations.

The report noted that battery-operated vehicles exist now and limited-production battery-operated automobiles could be said to exist, albeit with low performance and small size. Mass production of these limited performance vehicles could be achieved in 4 to 6 years if required.

Advanced battery power plants are estimated to be about 4 years from a suitable prototype assuming optimum funding. If this schedule could be held, mass-produced electric-powered vehicles of high performance could become available in another 7 to 10 years.

IMPACT OF FUTURE USE OF ELECTRIC CARS IN LOS ANGELES REGION [5]

Impacts of the use of electric cars in the Los Angeles region in 1980–2000 were projected for four-passenger subcompact electric cars using lead-acid and advanced batteries, such as nickel-zinc, zinc-chlorine, and lithium-sulfur, with urban driving ranges of about 55 and 140 miles, respectively. Data from Los Angeles Travel Surveys show that such cars could replace 17 to 74 percent of future Los Angeles autos with little sacrifice of urban driving.

Adequate raw materials and night-time recharging power should be available for such use in the Los Angeles region. Air quality improvements due to the electric cars would be minor because conventional automobile emissions are being drastically reduced. It was noted that the electric cars would save little energy overall, as compared to conventional subcompacts, but would save a considerable amount of petroleum if they were recharged from the nuclear power plants that are planned.

The electric subcompacts would be 20–60 percent more expensive overall than conventional subcompacts until battery development significantly reduces battery depreciation costs.

THE ROLE FOR FEDERAL R. & D. ON ALTERNATIVE AUTOMOTIVE POWER SYSTEMS [6]

This report prepared for NSF examined various alternative automotive power systems including the battery-powered electric sys-

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[1] U.S. Department of Commerce, Panel on Electrically Powered Vehicles. The Automobile and Air Pollution. Task Force Reports. Washington, U.S. Govt. Print. Off., 1967. 2 volumes.

[2] U.S. Department of Health, Education, and Welfare, Public Health Service, National Center for Air Pollution Control, Power Systems for Electric Vehicles. A Symposium sponsored by the U.S. Department of Health, Education, and Welfare; Columbia University; and Polytechnic Institute of Brooklyn, Cincinnati, Ohio, 1967, 323 p.

[3] U.S. Congress, House, Committee on Science and Astronautics. Subcommittee on Science, Research and Development. Energy Research and Development, Report of the Task Force on Energy. 92d Congress, 2d session. Washington, U.S. Govt. Print. Off., December 1972, pp. 63, 167, 222.

[4] National Academy of Sciences, Committee on Motor Vehicle Emission. An Evaluation of Alternative Power Sources for Low-Emission Automobiles. Report of the Panel on Alternate Power Sources. Washington, April 1973, 151 p.

[5] U.S. Environmental Protection Agency, Office of Mobile Source Air Pollution Control. Alternative Automobile Power Systems Division. Impact of Future Use of Electric Cars in the Los Angeles Region. Ann Arbor, Michigan, October 1974. 3 volumes EPA–460/3–74–020.

[6] Massachusetts Institute of Technology. The Role for Federal R and D on Alternative Automotive Power Systems, by John B. Heywood, Henry D. Jacoby, and Lawrence H. Linden. Cambridge, November 1974, 98 pages plus appendices. Rept. No. MIT–EL 74–013. Prepared for the National Science Foundation under Contract No. EN–44166. PB–238771.

tem. The report indicated that electrically driven battery-powered vehicles provide freedom from emissions and from high losses in energy conversion in the vehicle; however, these problems are transferred to the location of the electricity generating plant.

The report pointed out that potential alternatives, including electrical battery-powered vehicles, may offer advantages over the internal combusion engine, but considerable development would be required, and Federal support was proposed.

Mr. Chairman, I should now like to make a few comments on the details of H.R. 8800. The objective of this bill is to develop the technology needed to undergird a viable electric vehicle industry. This means aggressive research and development on all aspects of electrical vehicles capped by a demonstration to help determine their commercial feasibility.

This objective will be met through a balanced program culminating in a three-phase demonstration program. Starting with a relatively small number of current design electric vehicles, the program will push the state of the art, and demonstrate about 5,000 advanced design vehicles in addition to about 3,000 that represent mostly present-day technology.

The administrator of ERDA will undertake cooperative work with other agencies—such as the National Aeronautics and Space Administration, the Department of Transportation, the National Science Foundation, the Environmental Protection Agency, and the Department of Housing and Urban Development—to take advantage of their particular areas of expertise.

The bill declares that it shall be the policy of the United States to demonstrate the commercial feasibility of electric and hybrid, personal- and business-use vehicles in order to conserve liquid fuel and to reduce environmental pollution.

RESEARCH AND DEVELOPMENT

Probably the greatest potential for improvement of the electric vehicle state of the art is through the development of advanced storage batteries, having considerably increased energy density, reliability, and lifetimes. The bill will underwrite research in energy storage technology, including batteries as well as other portable power sources such as flywheels and fuel cells.

Research will also be done in control systems for electric vehicles, motor and drive systems, and other performance-related areas. In addition, research will be conducted on overall vehicle design for improved energy efficiency, minimal maintenance and extended lifetime. Studies undertaken will include those on traffic management alternatives to optimize the conservation of both energy and the environment.

DEMONSTRATION PROGRAM

Mr. Chairman, the heart of the bill is the demonstration program. Its purpose is to get present and future state-of-the-art electric vehicles out into every region of the country, and to use and evaluate them under all appropriate driving circumstances—both business and personal. This demonstration will serve not only to evaluate technical performance and identify problems, but it will also acquaint the public with this mode of propulsion and help ascertain consumer preferences and reservations. Technological and social issues, which may not be appreciated in advance, can be exposed and addressed. Most important, resulting consumer awareness and the creation of an electric vehicle "second car" market may actually push the state of the art, permitting the United States to reduce its petroleum dependency sooner than might otherwise be possible.

The demonstration program will be carried out in three stages. The first involves a few hundred electric vehicles at the present state-of-the-art for in-use demonstration and evaluation. Contracts for this stage are to be let within 1 year of the date of enactment.

Contracting for the second stage is to be completed within 15 months, and will include 2,500 vehicles which meet initial performance standards and criteria.

The third stage, which is to be contracted for in 3½ years from enactment, will involve 5,000 electric vehicles having advanced components and designs. They will meet appropriately advanced revised standards and criteria.

The initial standards are set to be drawn up within 1 year of enactment of the bill, and they must be revised periodically thereafter. Before the third stage demonstration takes place, the Administrator is required to transmit a complete statement of performance standards and criteria, as revised, to the Congress and its appropriate committees.

ERDA will make arrangements to introduce the vehicles into Federal, State, and local government fleets as a part of the demonstration. They will also be made available to individuals and businesses, with the option of purchase or lease, on some equitable basis, to evaluate performance and consumer reaction. ERDA will also undertake demonstration maintenance projects and disseminate safety and operating characteristics and data to appropriate consumer affairs groups.

USE BY FEDERAL AGENCIES

The U.S. Postal Service, the General Services Administration, the Department of Defense, and other Federal agencies will introduce electric and hybrid vehicles into their fleets as soon as possible. If agency heads find electric vehicles practical but not currently economically competitive, the Administrator may pay incremental life-cycle costs associated with use of the electrical vehicles by the agencies.

ASSESSMENTS AND REPORTS

ERDA must report within 1 year to the Congress the results of a study of institutional factors—urban design, regulatory constraints, and so forth—which affect surface transportation systems and may bias them toward particular sorts of vehicles. Research on incentives to promote broader utilization and consumer acceptance of electric vehicles will be undertaken, together with assessments—on a continuing basis—of long-range materials demands and effects of urban traffic electrification on environmental quality. These results will be reported to the Congress.

The Secretary of Transportation must report to the ERDA Administrator within 8 months of enactment of the bill on current and future applicability of safety standards to electric vehicles.

SMALL BUSINESS PARTICIPATION

The bill promotes participation by small business concerns in several ways. Provisions for encouragement and assistance include: First, reservation of a reasonable portion of the funds for small business concerns; second, design of contract terms and schedules to meet the special needs of small businesses, compatible with sound management practices and accomplishment of the objectives of the act; third, making available planning grants to small business concerns which require assistance in contracting.

LOAN GUARANTEES

H.R. 8800 establishes a loan guaranty program designed to protect lenders against loss of principal or interest on loans made to electric vehicle manufacturers. This program will permit small businesses to have access to the capital necessary for their participation in the demonstration. These loans may be used for R. & D., prototype development, construction of facilities and other capital equipment, as well as initial operating expenses associated with electric vehicle production.

Up to 90 percent of the aggregate cost of the activity for which the loan is made may be guaranteed if additional capital is available from other sources.

The maximum guarantee for a single company is $3,000,000. The total of all outstanding Federal guaranties will be not more than $60,000,000 at any time. The maximum repayment period is 15 years. ERDA must initiate guaranties within 5 years after enactment of the act.

The Administrator is given authority to set the terms and conditions for the guaranties, subject to certain conditions related to interest rates and assurance of repayment.

REPORTS

ERDA must report to the Congress semiannually on all activities being taken or carried out pursuant to the bill. A special requirement is that he must include a statement of the extent to which imported components or chassis are being used or are desirable for the first stage of the demonstration program, and the extent to which legal—or regulatory—restrictions on such importation or use may be impeding progress under this act.

APPROPRIATIONS

A total of $160 million, distributed in accordance with procurement cycles of the demonstration vehicles is authorized for the 5-year program. The amounts by year are:

Fiscal year 1976 and transition period: $10 million;
Fiscal year 1977: $40 million;
Fiscal year 1978: $30 million;
Fiscal year 1979: $60 million; and
Fiscal year 1980: $20 million.

Revenues from sales, leases, and so forth, may be retained by ERDA, but the authorization for the corresponding year is reduced by an equivalent amount.

Mr. Chairman, I want to assure the Members of this body that ERDA is in fact the proper agency to administer this research, development, and demonstration program. Electric vehicle development is a part of the broader Federal effort in alternative automotive fuels and power systems. The advanced automotive power systems program transferred to ERDA by Public Law 93–438 has been expanded into an advanced transportation power systems. The House has authorized $27,500 for this program in fiscal year 1976. At this point I should like to insert a summary funding history of electric vehicle research and development, as contained in the legislative report on H.R. 8800:

FUNDING HISTORY OF ELECTRIC VEHICLE RESEARCH AND DEVELOPMENT

Prior to the energy crisis, automotive research and development appeared to have been carried out on a low level. For the period 1969–1974, EPA funding for alternative automotive fuels and power systems R & D programs totaled $35.445 million. (See Table I.) For the same period, funding for battery-powered electric systems totaled $1.166 million. (See Table II.)

Beginning with Fiscal Year 1974, automotive R & D funding appeared in the budgets of several agencies that had not been involved previously in a significant way. For example, NASA (1974 fiscal year funding was $2 million); DOT (fiscal year funding was $1.8 million); NSF (has funded battery research since 1971, 1974 fiscal year funding was $1.7 million). DOT, Army Tank-Automotive Command, has provided technical support to other government agencies for developing ground propulsion engines (fiscal year 1974 funding in projects with military objectives but with a potential spin-off to civilian automotive energy application was $4.2 million).

TABLE I.—ALTERNATIVE AUTOMOTIVE FUELS AND POWER SYSTEMS RESEARCH AND DEVELOPMENT PROGRAMS—FISCAL SUMMARY—FISCAL YEARS 1969–74 [7]

Activity:	Obligation (in millions)
Rankine cycle systems	$17.267
Brayton cycle systems	10.169
Diesel cycle systems	.060
Stratified charge combustion process	.798
Heat engine/flywheel systems	.642
Heat engine/electric systems	1.124
Battery powered electric systems	1.166
Improved energy conversion and utilization subsystems	.423
Alternative fuels program	1.229
Federal clean car incentive program	.050
Annual status of technology documentation	.470
Research grants	.848
Engineering support	1.189
Total	35.445

TABLE II.—ALTERNATIVE AUTOMOTIVE FUEL AND POWER SYSTEMS, BATTERY POWERED ELECTRIC SYSTEMS [1]

[In thousands of dollars]

Contract and contractor	Fiscal year— 1969	1970	1971	1972	1973	1974	Total
W-31-109-Eng-38: AEC-Argonne National Laboratories		350	430				780
N00298-72-C-0028: [2] USN-Dow Chemical Co			50				50
68-01-2103: General Research Corp					169	30	199
68-03-2004: General Research Corp						137	137
Total		350	480		169	167	1,166

[1] U.S. Environmental Protection Agency, Office of Air and Waste Management. Mobile Source Air Pollution Control, Alternative Automotive Power Systems Division, Ann Arbor, Mich. Alternative Automotive Fuels and Power Systems Research and Development Programs. Summary of Fiscal Obligations. June 30, 1974. p. E–7.
[2] An interagency fund transfer.

The transport of people and goods uses one fourth of all our energy. Automobiles use over half of all transportation energy. Savings of as much as four million barrels per day by 1985 may be feasible. Also, greater emphasis is given to this sector since it totally depends upon petroleum and, therefore, savings directly reflect an opportunity for lower imports.

The ERDA Advanced Transportation Power Systems program is the successor to and an expansion of the EPA advanced automotive power systems program and NSF R&D activities relating to internal combustion engines. The expanded ERDA program will encompass R&D in a broader range of transportation modes and technical issue areas including aircraft systems, rail systems, water systems, pipeline systems, and intermodal transportation studies, as well as an expanded highway vehicle systems follow on to the predecessor advanced automotive program.[8]

Funds for this program are shown in Table III.[9]

TABLE III—*Advanced transportation power systems*

[In thousands of dollars]

	Costs	Obligations
Fiscal year 1976	19,000	23,500
Transition period	4,800	5,810

One part of the ERDA Advanced Transportation Power Systems program is the Electric and Hybrid Systems Program. The objective of this program is to develop and evaluate the technologies for advanced electric, hybrid, and vehicular energy storage systems in order to demonstrate vehicle systems that will result in significant reduction in highway system petroleum demands in the midterm, and also demonstrate the viability of alternative transportation concepts capable of independence from petroleum based energy sources in the long term. The program will build upon existing electric and hybrid systems technology and experience in focusing R&D effort, to demonstrate the viable application of the technologies to satisfy current and future vehicular requirements. Activities will include the following:

Assess the current status of advanced battery technology and determine alternate approaches that offer the greatest potential for satisfying midterm electric vehicular requirements.

Research and development of advanced battery systems and related controls. Demonstrate these technologies in optimized electric/hybrid vehicles to assess their viability as energy efficient and publicly acceptable alternate transportation systems.

Develop simulation techniques for optimization and evaluation of electric and hybrid vehicular systems. These techniques will provide an accurate and efficient tool to assist in screening the matrix of potential candidates for directing research and development activities along the most optimum path.

Study and evaluation projects to determine the viability of electric vehicles utilizing near term technology. The results of this evaluation will provide guidance for decisions concerning near term impact from limited implementation of electric vehicles.[10]

Committee action on energy conservation R&D programs resulted in increased funding because it was recognized that present R&D programs are new and inadequately funded.

Increased funding approved by the Committee was to permit ERDA to expand the old Advanced Automotive Power System program which it inherited from the Environmental Protection Agency to encompass non-automotive activities as well as other new transportation concepts. High priority is given to these activities since the transport of people and goods use one fourth of all our energy, almost totally from petroleum. Savings in this sector therefore, reflect an excellent opportunity for implementing lower petroleum import demands.

The increased funding will permit assessments of the impacts of fuel shortages and price on various modes of transportation; technology development related to decreased wind drag and rolling resistance; improved technology for more efficient traffic control; improved technology and managerial methods for increased rail efficiency; and accelerated development of bottoming cycles for diesel trucks and, later, automobiles.

The increased budget will also permit acceleration of alternative fuels utilization programs including methanol and methanol/gasoline blends. Increased supporting research and development as well as support for new concepts associated with engine, components, and entire transportation systems will be made possible with the larger budget. Increases for this program are shown in Table IV.[11]

TABLE IV.—*Advanced transportation power systems*

[In thousands of dollars]

Increases:	Fiscal year 1976	Transition period
Costs	10,760	2,740
Changes in selected resources	3,300	760
Obligations	14,060	3,500

Overall funding approved by the Committee for ERDA energy conservation research and development program most closely related to electric vehicles is given in Table V.[12]

[7] U.S. Environmental Protection Agency, Office of Air and Waste Management. Mobile Source Air Pollution Control. Alternative Automotive Power Systems Division, Ann Arbor, Michigan. Alternative Automotive Fuels and Power Systems Research and Development Programs. Summary of Fiscal Obligations. June 30, 1974. p. A–7.
[8] U.S. Congress. House. Joint Committee on Atomic Energy *and* Committee on Science and Technology. Authorizing Appropriations for the Energy Research and Development Administration for Fiscal Year 1976 and for the Transition Period Ending September 30, 1976. 94th Congress. 1st Session. Washington, U.S. Govt. Print. Off., June 13, 1975. p. 127. House Report No. 94–294.
[9] Ibid
[10] Ibid., p. 130.
[11] Ibid., p. 170.
[12] Ibid., p. 168.

TABLE V.—ENERGY CONSERVATION RESEARCH AND DEVELOPMENT

[In thousands of dollars]

	Fiscal year 1976						Transition period					
	Costs			Obligations			Costs			Obligations		
	Request	Committee change	Total	Request	Committee change	Total	Request	Committee change	Total	Request	Committee change	Total
Operating expenses:												
Energy storage systems	9,100	13,832	22,932	10,100	18,150	28,250	2,000	3,400	5,400	1,800	4,500	6,300
Advanced transportation power systems	8,240	10,760	19,000	9,440	14,060	23,500	2,060	2,740	4,800	2,310	3,500	5,810
Equipment:												
Energy storage systems	591	668	1,259	750	1,850	2,600	250	200	450	300	500	800
Advanced transportation power systems	0	800	800	0	1,500	1,500	0	200	200	0	400	400

Other automotive R&D requests for fiscal 1976 funding are shown in Table VI.

TABLE VI.—*Automotive R. & D. requests for fiscal 1976 funding*

	1976 estimate (in thousands)
DOT (Automotive Energy Efficiency)	$4,000
DOT (Transportation Energy Conservation and Impact Analysis)	1,500
NASA (Energy Program)	10,900

The energy role of NSF in 1976 will be "substantially less than in 1975 due to large transfers of responsibility to ERDA." [13]

In 1976, DOD's Army tank-Automotive Command will continue to provide technical support to other governmental agencies for developing ground propulsion engines.

Electric vehicle technology is already an integral part of the ERDA program. Descriptions of its relevant programs on energy storage and electric and hybrid vehicles were given in House Report 94–294 on the fiscal year 1976 and transition period ERDA authorization bill, H.R. 3474. These descriptions are repeated here for clarity and completeness:

Energy storage

[In thousands of dollars]

	Costs	*Obligations*
Fiscal year 1976	22,932	28,250
Transition period	5,400	6,300

Storage is one of the most ubiquitous of energy problems. Electricity demand has daily, weekly, and seasonal peaks and valleys: yet the most efficient thermal power plants are those that produce a constant output. There are two ways to approach this kind of storage. First, energy can be stored at the source (eg. pumped hydro or batteries); second, energy can be stored at the load (eg. stored heat in the home).

The opportunities for practical use of solar (including wind) and tidal energy also depend upon energy storage and generally will use the same storage technologies as those needed for power plants. The electric car needs effective storage technologies. Energy storage is also needed to enable non-mobile energy resources (eg. solar, fusion, fission) to be used to replace transportable fuels such as gasoline. This can be achieved through stored heat, mechanical energy, batteries, or synthetic gas or liquids.

The development of new techniques for energy storage has recently become recognized by both the public and private sectors as an important component of an expanded national energy R&D effort which would broaden the energy technology base. Implementation of new energy storage technologies will provide the Nation with a greater degree of self-sufficiency in energy supplies, provide for more efficient generation, distribution, and use of energy, and indicate measures which can be taken for conservation of energy resources.

Energy storage has significant potential in electric utility and transportation systems and can also be applied to residential, commercial, and industrial use. Application of new energy storage technologies will: (1) permit more efficient use of central station power plants, (2) provide for improved operating economy of utility systems, (3) reduce the need for scarce petroleum fuels by shifting to more plentiful fuels such as coal, (4) reduce the demand for electrical transmission and distribution facilities, and (5) provide certain environmental benefits. Additionally, energy storage is necessary for the full implementation of new energy resources such as solar and wind which are intermittent. Thus, storage is required to match the time of availability of the resource to the timing of its demand or consumption.

In the mid 1980's, as much as 6 percent of the delivered electricity in the United States could come from energy storage facilities. Estimates indicate that the oil savings from the successful development and implementation of energy storage devices for utility, automotive, industrial, residential, and commercial applications could be about 40 million barrels of oil per year in 1985, 150 million barrels of oil in 1990, and 560 million barrels of oil in 2000. Implementation of solar energy coupled to energy storage could result in an additional savings in oil of 200 million barrels per year in the year 2000. In addition, an initial estimate shows that thermal energy storage coupled to space heating units could result in annual savings of significant quantities of natural gas by 1985.

The ERDA program includes activities in several areas of energy storage technology, including batteries, chemical, superconducting magnetic energy storage, thermal, mechanical and systems analysis. Although based on similar predecessor programs, the FY 76 program represents a several times expansion of activity in storage R&D.

Batteries

The goal in this program is to develop high-performance cost-effective batteries for use by electric utilities, by the automobile industry, and with intermittent energy sources, such as the sun and wind.

Electric storage batteries for utilities have high potential for use before 1985. Secondary batteries, particularly the high-temperature systems which are expected to have a high specific energy of about 150 Wh/kg, have several potential advantages over present methods of meeting peak power requirements. Such batteries would be modular in construction, quiet, emit no pollutants, and require no on-site fuel storage. These features will permit batteries to be distributed throughout a utility network, including locations near the point of end use. Typically, batteries would be charged during the 4- to 8-hour daily off-peak period and discharged into the network as the demand increased.

The primary problems to be solved for electric utility application are cost and life. For automotive applications energy density and power density in terms of both mass and volume require substantial improvement.

It is estimated that, as the cost approaches $250/kw, energy storage with batteries will have a substantial impact on the energy economy. For utility applications these batteries will have to have a lifetime of thousands of cycles over a period of several years. For automotive applications these batteries, in addition to economy and long life, will have to have energy densities approaching about 200 Wh/kg.

Excellent progress has been made on the development of high temperature lithium sulfur (Li/S) batteries. For the first time, full scale sealed cells were operated for over 3,000 hours and achieved specific energies of 150 watt-hours per kilogram, which is six times greater than conventional lead-acid batteries. Lithium-sulfur batteries would be less expensive per unit of stored energy than lead-acid batteries and can be used for stationary and mobile applications.

During fiscal year 1976 several battery concepts will be developed. Specifically, effort will proceed on the Li/S battery and other secondary batteries such as NA/S, ZN/a, advanced lead-acid and the redox system. The R&D activities include the following activities: development of converter equipment, cell chemistry, material development, cell development and testing, battery design, development and testing.

During fiscal year 1975 joint Government/industry efforts to design and construct a national battery energy storage test (BEST) facility were initiated.

In fiscal year 1976 a site, design contractor, and host utility for the BEST facility will be selected. This facility is to be built at a utility site and will be funded jointly by ERDA, EPRI, and the host utility.

Mechanical energy storage

Three forms of mechanical energy storage will be included in the ERDA fiscal year 1976 program, flywheels, compressed air storage and underground pumped hydro storage. Each form represents a different mechanical mechanism for the storage and later retrieval of energy.

Flywheel.—The flywheel work being developed in fiscal year 1976 is directed toward Transportation use and to Electric Energy Systems.

At present, there is an Economic and Technical Feasibility Study being conducted. The study will identify R&D effort needed for development of systems for utility, standby and transportation uses.

The materials problem is the most difficult to solve and considerable work will be concentrated in this area. Several flywheel concepts and designs must be developed and analyzed. The overall system must be defined for transportation, utility and standby.

The technical problems of bearings, noise, vibration, power transmittal, braking will be

[13] U.S. Congress. House. Committee on Appropriations, Department of Housing and Urban Development—Independent Agencies, Appropriation Bill, 1976. 94th Congress, 1st Session, Washington, U.S. Govt. Print. Off., June 19, 1975. p. 36. House Report No. 94–313.

defined. Cost analysis will be refined for all system approaches.

A program will be defined for total systems development of selected approaches.

As the program develops, consideration will be given to selection of an overall contractor for total systems development. This could be a single contractor or separate contractors for utility and transportation pilot demonstration systems.

Industry will be solicited for their views on potential applications, economics, implementation modes and for cooperative funding.

Advanced transportation power systems

[In thousands of dollars]

	Costs	Obligations
Fiscal year 1976	19,000	23,500
Transition period	4,800	5,810

The transport of people and goods uses one fourth of all our energy Automobiles use over half of all transportation energy. Savings of as much as four million BPD by 1985 may be feasible. Also, greater emphasis is given to this sector since it totally depends upon petroleum, and therefore savings directly reflect an opportunity for lower imports.

The ERDA advanced transportation power systems program is the successor to and an expansion of the NSF advanced automotive power systems program and EPA R&D activities relating to internal combustion engines. The expanded ERDA program will encompass R&D in a broader range of transportation modes and technical issue areas including aircraft systems, rail systems, water systems, pipeline systems, and intermodal transportation studies, as well as an expanded highway vehicle systems follow on to the predecessor advanced automotive program.

Highway vehicle systems

The advanced automotive program historically evolved from the technical impact of environmental concern with exhaust emissions. It was recognized in 1969 that achievement of ambient air quality goals in the U.S. would require a major reduction, of emissions of air pollutants from automobiles. Since the internal combustion engine operates at a low overall energy conversion efficiency and gasoline is in increasing short supply, there was a need for advanced research to provide the basis for improving overall automotive power plant performance through understanding of the physics and chemistry of the principal phases of combustion. Although extensive engine development work is underway in manufacturing firms and other Federal agencies, too little attention had been given to providing the underlying research base for improvements in operating efficiency and reduction of noxious emissions.

NSF initiated such a program in the latter half of FY 1974, with the objective of acquiring an understanding of basic fuel combustion and energy conversion processes as they relate to the design of engines with greater efficiencies (while maintaining low air-polluting emissions), thus lowering demand for gasoline. A successful effort could raise heat engine energy conversion efficiency—which now ranges from 20 percent (10 percent—15 percent installed) to 30 percent—to a level as high as 45 percent by 1980, with a proportionate potential increase in vehicle fuel economy. Basic knowledge is also needed in the areas of alternative fuel properties and materials to achieve fuel economies in practical engines while retaining desirable characteristics such as low emissions, starting, and drivability.

The program was implemented primarily in the university community. It provided an opportunity to utilize to the fullest extent the body of scientific expertise (thermo-chemistry, combustion and detonation, materials research, etc.) that has been developed over the years in support of the Nation's aerospace efforts and focuses this capability on advanced automotive combustion and propulsion research. This effort was closely coordinated with research supported by other government agencies (U.S. Environmental Protection Agency and Department of Transportation) and industry.

The NSF program complemented a more environmentally motivated R&D program at EPA which has also been shifted to ERDA. Together, the NSF and EPA programs in fiscal year 1975 form the basis for the expended ERDA fiscal year 1976 program in Highway Vehicle Systems. The basic intent of the ERDA program is to provide a basis for Government decisions regarding the technological feasibility of power systems of increased efficiency which also meet the low emission levels required by environmental standards. The shorter range elements of the program are directed toward more efficient, low emission heat engines that use fossil fuels. The longer range plans include use of alternate fuels and development of vehicle systems that use stored energy such as batteries, heat storage, and inertia systems. In fiscal year 1976 the program will develop prototype hardware appropriate for the demonstration of a practical and efficient engine system which would be capable of meeting the original 1976 Federal emission standards. If the technology advances as anticipated, the systems demonstrated are expected to serve to stimulate industry to adopt these advances and develop their own improved systems.

Because of the advanced nature of this R&D effort and the potential for significant conservation progress, this program constitutes the bulk of the advanced transportation power system effort. The specific program objectives are to develop and demonstrate the technologies required to: 1. achieve a 25 to 50 percent reduction in fuel consumption (50 to 100 percent increase in fuel economy) in automobiles; 2. achieve a 15 to 25 percent reduction in fuel consumption for trucks and buses; 3. permit the use of alternative fuels other than petroleum; and 4. use alternative transportation concepts that utilize energy derived from an electrical economy base supported by coal, nuclear, solar and geothermal.

Powertrain and vehicular systems

The principle objective of this research and development is to find ways to improve the overall energy efficiency of highways vehicles rather than just the power plant (whose special problems are being addressed in subprograms). The specific goal is a 15 to 25 percent reduction in fuel consumption in non-power plant areas. Propulsion systems improvements activities are important to the overall conservation effort in a least two respects: (1) This work is focused on technology development improvements which could be assumed by industry relatively early compared with introduction of new engines; and (2) Successful technology development efforts would be applicable to many types of powerplants such as the alternative systems under development in the Power Systems Evaluations subprogram as well as in the conventional internal combustion engine.

Ongoing efforts in fiscal year 1975 which are planned to progress to the hardware phase in fiscal year 1976 include: development of continuously variable transmissions that permit the engine to operate at engine speed conditions which are close to optimum considering both power demands and fuel consumption; development of more efficient means for running engine accessories; development of subsystems which operate on waste heat such as organic Rankine cycle systems that operate utilizing diesel truck exhaust; and a new project to develop practical means to recover energy which is currently wasted in brakes during vehicle deceleration.

Electric and hybrid systems

The objective of this program is to develop and evaluate the technologies for advanced electric, hybrid, and vehicular energy storage systems in order to demonstrate vehicle systems that will result in significant reduction in highway system petroleum demands in the mid term, and also demonstrate the viability of alternative transportation concepts capable of independence from petroleum based energy sources in the long term. The program will build upon existing electric and hybrid systems technology and experience in focusing R&D effort to demonstrate the viable application of the technologies to satisfy current and future vehicle requirements. Activities will include the following:

Assess the current status of advanced battery technology and determine alternate approaches that offer the greatest potential for satisfying midterm electric vehicular requirements.

Research and development of advanced battery systems and related controls. Demonstrate these technologies in optimized electric/hybrid vehicles to assess their viability as energy efficient and publicly acceptable alternate transportation systems.

Develop simulation techniques for optimization and evaluation of electric and hybrid vehicular systems. These techniques will provide an accurate and efficient tool to assist in screening the matrix of potential candidates for directing research and development activities along the most optimum path.

Study and evaluation projects to determine the viability of electric vehicles utilizing near term technology. The results of this evaluation will provide guidance for decisions concerning near term impact from limited implementation of electric vehicles.

The electric vehicle industry is now a valuable component of our transportation economy. It produces mainly specialty vehicles, but is now branching out on its own to produce electric automobiles. The industry's trade association, the Electric Vehicle Council, strongly supported this legislation in testimony before the Subcommittee on Energy Research, Development and Demonstration. The Electric Vehicle News has given the bill wide publicity through a number of articles. I would like to pay tribute to the electric vehicle pioneers, and to insert at this point a list of those companies active in electric vehicle technology:

ELECTRIC VEHICLE MANUFACTURERS IN THE UNITED STATES

Limited to passenger cars, trucks, vans, and buses. Poential manufacturers that are known to have developed prototype vehicles.

Name, address, and vehicle type and status

Copper Development Association, Detroit, Mich.; two passenger, specialty construction.

Die-Mesh Corporation, Pelham, N.Y.; two passenger, prototype.

Electric Vehicle Engineering, Bedford, Mass.; Van, prototype.

Ford Motor Co., Dearborn, Mich.; two and four passenger prototypes.

General Electric Corp., Schenectady, N.Y.; van and four passenger prototypes.

General Motors Corp.; Warren, Mich.; van and two and four passenger prototypes.

Linear Alpha Corporation, Skokie, Ill.; two passenger conversion, special order.

Pargo, Inc., Charlotte, N.C.; van, production planned.

Waterman, C.H., Industries, Athol, Mass.; four passenger conversion, prototype.

Westinghouse Electric Corp., Pittsburgh, Pa.; van and two and four passenger prototypes.

Stuart Elektrowagon, Ionia, Mich.; two passenger prototype.

Chrysler Corp., Detroit, Mich.; four passenger, prototype.

ELECTRIC VEHICLE MANUFACTURERS IN THE UNITED STATES [1]

Limited to passenger cars, trucks, vans, and buses. Manufacturers producing electric vehicles.

Name, address, and vehicle type and status

A.M. General Corporation, South Bend, Ind.; postal van, in production.

Battronic Truck Corporation, Boyertown, Pa.; vans and buses, limited production.

Elcar Corporation, Elkhart, Ind.; two-passenger, in production.

Electric Fuel Propulsion Corporation, Troy, Mich.; four passenger conversion, limited production.

Electric Vehicle Associates, Incorporated, Brook Park, Ohio; four passenger conversion, limited production.

Jet Industries, Austin, Tex.; van, limited production.

Sebring Vanguard, Incorporated, Sebring, Fla.; two passenger, in production.

B&Z Electric Car, Long Beach, Calif.; two passenger, limited production.

Otis Elevator Company, Special Vehicle Division, Stockton, Calif.; van, two passenger prototype, limited production.

Otis Elevator Company, Diversified Operations, Cleveland, Ohio; buses, limited production.

MANUFACTURERS OF TRACTION MOTORS FOR ELECTRIC VEHICLES [2]

Currently associated with the electric vehicle industry.

ASEA International, Vasteras, Sweden.

Allis-Chalmers Corporation, Milwaukee, Wis.

Ambac Industries, Incorporated, Columbus, Miss.

Applied Motors, Incorporated, Rockford, Ill.

Bosoh, Robert, Corporation, Broadview, Ill.

CAV Limited, Acton, England.

Electric Vehicle Associates, Incorporated, Brook Park, Ohio.

Electro Dynamic Construction Company, Limited, Kent, England.

Fidelity Electric Company, Incorporated, Lancaster, Pa.

General Electric Company, Schenectady, N.Y.

Gould, Incorporated, Rolling Meadows, Ill.

Kollmorgen Corporation, Radford, Va.

Lansing Bagnell, Limited, Bramalea, Ont.

Lawnel Corporation, Bluefield, Va.

Magnetics International, Maple Heights, Ohio.

Otis Elevator Company, Cleveland, Ohio.

Porter, H. K., Company, Incorporated, Warren, Ohio.

Prestolite Company, Toledo, Ohio.

Rantronics, Incorporated, Palo Alto, Calif.

Rogers Electric Company, Troy, Mich.

Westinghouse Electric Company, Pittsburgh, Pa.

Mr. Chairman, I urge my colleagues to support H.R. 8800. I believe it is destined to join the Solar Heating and Cooling Demonstration Act, the Omnibus Solar Energy Research and Development Act, the Geothermal Energy Research and Development Act, all of which originated in the Science and Technology Committee under the leadership of the gentleman from Texas (Mr. TEAGUE). These, together with our nuclear fusion and nuclear breeder programs form a major building block in what is really the most important part of our national energy policy, the long range part, all of which has originated here in the House of Representatives.

Mr. OTTINGER. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I will yield to the gentleman from New York.

Mr. OTTINGER. I thank the gentleman for yielding, and I want to thank the gentleman for his leadership in this legislation.

Mr. Chairman, I would like to express my strong support for this bill, H.R. 8800, of which I am a cosponsor, and urge its passage as a vital piece of legislation in our overall effort to reduce our dependence on imported Arab oil.

Automobiles and other internal combustion vehicles presently consume more than one-third of the petroleum used in the United Sates. This legislation would encourage research on and development of electric, hybrid, and other alternative propulsion systems for all vehicles and help demonstrate their commercial feasibility. Freedom from the need to use oil products for vehicle propulsion would be a dramatic step forward toward energy independence for the United States.

Other advantages possessed by electric, hybrid and other alternative systems of automotive propulsion include a dramatic reduction in air pollution emissions and the more efficient use of energy.

The technology and the vehicles are here and available today. In 1967, I demonstrated a silver-zinc battery car which could get 200 miles to a charge and go 60 miles per hour. I introduced a bill at that time to start electric car research, which was later adopted as an amendment to the Air Pollution Control Act.

Since then, a number of small electric car manufacturers have sprung up all over the country, including one in my own district, the Die Mesh Corp. of Pelham, N.Y.

I introduced my own legislation for the development of alternative automotive propulsion systems on June 2 of this year and I am happy to support H.R. 8800 before us today. It incorporates most of the provisions of my own bill which I felt were important.

Chief among these are the elements of section 10 which recognize the pioneering work of many small businesses in the electric car field by facilitating their participation in this program. Planning grants and loan guarantees will help them qualify under the act and a portion of the contract funds will be set aside for small businesses. The loan guarantees program will prevent the exclusion of small businesses due to problems in raising capital and will help them continue their work.

I am also pleased at the clear inclusion of research, development, and demonstration of hybrid vehicles which covers a wider range of systems including a combination of electric motor and internal combustion engine or other alternative engines.

The assistance provided in this legislation should afford the small manufacturers, who have pioneered in the development of electric and hybrid vehicles, the opportunity to get into production of significant quantities. Provision is made for Government agencies to purchase the vehicles and for initial price differentials to be paid with the funds authorized in this legislation, thus creating a market for significant production. Government research should assist in perfecting the vehicles and bringing down their cost, too.

Electric and hybrid vehicles could make a significant dent in our oil imports and fulfill a large market for limited use second cars immediately. As the autos and batteries are perfected, there is a clear potential for their use as general purpose vehicles.

I urge support for this legislation, for it will surely hasten the introduction of these energy-saving, nonpolluting vehicles into the mass market.

Mr. McCORMACK. I thank the gentleman from New York for his remarks.

Mr. MATSUNAGA. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I will yield to the gentleman from Hawaii.

Mr. MATSUNAGA. Mr. Chairman, I rise in support of the bill. I congratulate the gentlemen in the well and the chairman of the full committee for bringing this measure to the floor. I think this legislation heads the country in the right direction.

The electric car will provide quick, fast, and clean transportation. Because more than 60 percent of our air pollution is caused by gasoline driven motor vehicles, by replacing them with electric cars we would not only be helping to conserve fuel, but also be contributing toward cleaning up our polluted air.

I have every confidence that if we make a concerted effort, we will be able to replace half of our gasoline driven passenger vehicles with electric cars within the next 5 years. My confidence stems from a demonstration I witnessed of the electric car manufactured in Colorado. It has the capability of a speed of 75 miles an hour and a cruise range of 250 miles before recharge. It is of the size of a compact car and handsomely designed. What is even more amazing is that its operational cost would be only 1½ cents a mile. The electric car must be made to replace the gas car at the earliest possible moment. The pending legislation will help to do this.

Mr. McCORMACK. I thank the gentleman from Hawaii.

Mr. MILFORD. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentleman from Texas.

Mr. MILFORD. Mr. Chairman, I thank the gentleman for yielding, and I would like to commend the gentleman in the well not only for his work on this bill but for his very outstanding work in the field of energy. I rise in support of the bill.

Mr. Chairman, H.R. 8800, for which I

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[1] This compilation includes all manufacturers known to the staff of the Division of Transportation at the time of this hearing, June 3, 1975.

[2] This information is from the directory of the electric vehicle industry published in February 1975, Electric Vehicle News. A comprehensive listing of electric motor manufacturers which includes those manufacturers not currently associated with the electric vehicle industry can be found beginning on page 5485, "Volume 4, Products and Services" of the "Thomas Register of American Manufacturers and Thomas Register Catalog File, 1975", Tohmas Publishing Company, One Penn Plaza, New York, N.Y.

am a cosponsor, is a bill which offers a truly forward-looking approach to personal transportation in our country. If we believe the estimates regarding our domestic and even foreign oil reserves, we must find an alternative to vehicles using the gasoline-powered internal combustion engine within the next 30 to 40 years. In fact, we must have some of those petroleum reserves for petrochemical feedstocks for future generations.

If one reads the national energy plan prepared by ERDA, it is clear that we are headed toward an economy which is more heavily dependent on electrical energy generated from such sources as coal, nuclear fission, nuclear fusion, and solar. The Electric Vehicle Research, Development, and Demonstration Act of 1975 is entirely consistent with that trend toward an electric economy. Widespread usage of electric vehicles would aid electric utilities in energy conservation because the electrical energy demands would be more uniform due to a predominance of recharging of batteries during late night and early morning hours. This would permit new more efficient powerplants to replace inefficient old powerplants presently operated to meet peak power requirements in the late afternoon and early evening.

The electric vehicle itself offers some prospect for energy conservation in heavily urban traffic, because no energy is used while the vhicle is stopped and because the energy lost in braking in the form of heat would be largely recoverable in an electric vehicle equipped with a regenerative braking system to store the recovered energy in the batteries, or perhaps in a flywheel.

We must move forward with all the programs in energy which can provide an option for the future course of our Nation's energy policy. I feel this electric vehicle bill is an important element in our total energy program. I support this bill in its entirety as the other members of the committee do. I ask that each of you give your support to this bill so that the important lead time that we still have is not dissipated by a course of inaction.

Mr. McCORMACK. I thank the gentleman from Texas not only for his remarks but for his continuing support and active participation in our energy-producing programs.

Mr. GILMAN. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I will yield to the gentleman.

Mr. GILMAN. Mr. Chairman, I rise in support of this worthy energy-saving measure and request permission to revise and extend my remarks.

We are now living in a time of rapidly rising fuel costs. The average family is being forced to spend more and more on gasoline and motor oil. There is no end in sight to this ever-increasing burden on their budgets.

One possible solution to this major problem is the increased use of vehicles powered by electricity. First developed in the early 1900's, they were extremely popular until the 1930's when they were replaced by gasoline-powered vehicles. At that time gas was cheap and easily obtainable. Such is not the case now. In the mid 1960's fuel shortages and concern over air and noise pollution prompted calls for increased research on alternative power systems.

The legislation before us, the Electric Vehicle Research Development and Demonstration Act of 1975—H.R. 8800—will help provide such research. It authorizes the Energy Research and Development Administration to administer a 5-year program to promote the development of electric and hybrid vehicles and to demonstrate their commercial feasibility. Electrically operated vehicles may very well prove to be a viable answer to our Nation's quest for energy independence. Further research in this direction is certainly laudable.

I urge my colleagues to join in supporting this worthwhile endeavor.

Mr. McCORMACK. I thank the gentleman.

Mr. Chairman, if we assume that the average second car in America uses only 2 gallons of gas a day, for about 20 miles of city driving, and assume that we would convert 10 million of our 44 million second cars to electric propulsion, this would save 20 million gallons or one-half million barrels per day of gasoline. If we can do this by the 1985 to 1990 period, it would save between 2½ and 3 percent of our petroleum consumption.

This will be a voluntary program, reducing pollution and noise, increasing safety, saving dollars, reducing maintenance costs, and providing competition for Detroit's gas guzzling internal combustion engines. Any objective analysis of the potential savings of electric vehicles indicates that it will be at least as great as or greater than the combined contribution of our solar and geothermal energy programs.

If electric cars are so great, what is holding us back? The answer lies in the way we think about electric vehicles. We do not think of them as replacing ordinary internal combustion automobiles because electric vehicles cannot compete in power or in speed with internal combustion engines. For these reasons, they have not been widely used and there is no significant manufacturing industry in operation today for them.

What we must learn to do is think of electric vehicles in terms of what they can do, and that is to provide an attractive, clean, quite, inexpensive mode of in-city transportation.

This is the purpose of H.R. 8800—to demonstrate to the American public that electric vehicles are attractive and utilitarian and to stimulate industrial production and competition.

When this bill becomes law, I am confident that we will see in the near future attractive electric vehicles with modern streamlined design, highly efficient electric controls, and more efficient batteries than are available today. By any measure, this will make a significant contribution to reducing the problems of the energy crisis and enhance our standard of living.

Mr. Chairman, I urge the support of this bill.

Mr. MYERS of Indiana. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I will yield to the gentleman from Indiana.

Mr. MYERS of Indiana. I thank the gentleman for yielding.

Mr. Chairman, I certainly support the concept of electric vehicles but I fail to understand why we should have an appropriation of $160 million when the concept or idea of electric vehicles is nothing new. I remember 40 years ago riding in an electric vehicle. I saw one the other day. I would not exactly say it needs the streamlined lines the gentleman is suggesting in his discussion here today.

But it certainly is a vehicle that is cheap to purchase, and according to what they tell me, the people who own it say it is cheap to operate.

So why do we need to appropriate $160 million at this time to bring on something that we already have?

Mr. McCORMACK. Mr. Chairman, I thank the gentleman for his question.

I should point out that we are not appropriating $160 million; we are authorizing $160 million over a 10-year-period, and the request is for only $10 million for this fiscal year and the transition period.

The purpose of this program is to demonstrate to the American public the utilitarian value of electric vehicles and to stimulate the industry to manufacture electric cars. This is a new industry; as a matter of fact, it consists of a number of small, new industries.

The fact is that the American people still think in terms of the internal combustion engine, and they do not think of electric cars as they need to be thinking about them in terms of what they will do. We need to demonstrate that electric cars are not those old, square, black boxes we remember from our childhood days, but that they can be modern cars, attractive, efficient, streamlined vehicles. Then if they see them in their neighborhoods and see them on the streets and have an opportunity to meet with and talk with people who use them, they will learn that the average electric car driver, even using it as a second car, will save about $500 a year, just in fuel costs. These are things we can do.

We may ask the question: Why does private industry not do this for itself? For exactly the same reason why private industry has not gone into solar energy for heating and cooling. We have a situation in America today where industry is waiting for a market and the consumer is waiting for an industry.

If this were a business-as-usual industry in existence today, we could say, "Oh, well, nature will take its course." But that is not the case. We are in an energy crisis, and we must do something about it.

The amount of money we would spend for this bill over 5 years will be more than paid for in a few days in terms of the petroleum we would save. Assuming we are using a half a million barrels of petroleum a day, that is $6 million a day. We could pay for this entire program in 1 month in petroleum savings. This entire 5-year program can be paid

for in 1 month when we take into consideration the savings we will have in petroleum. That is the reason we must go ahead with this program.

Mr. MYERS of Indiana. Mr. Chairman, if the gentleman will yield further, I certainly do not take exception with the idea and the suggestion that we need to bring on the electric vehicle. However, is it not true that private enterprise has the electric vehicle already developed and is manufacturing it and selling it?

We have the electric vehicle today. Private industry has it and is manufacturing it.

Mr. McCORMACK. Mr. Chairman, all the testimony we heard from about a dozen manufacturers of electric vehicles indicated these were new, embryonic industries that are trying to get into the business of manufacturing electric vehicles. We were told that the industry needs this sort of stimulation. Every representative of the electric-vehicle industry came in and testified about the difficulties they are having getting started because of the very problems we have cited.

This is the reason for this bill. When we authorize the amount contained in the bill, it is going to be a signal to the electric-vehicle industry that they can go ahead. It will be a signal to them that they can go ahead and borrow the money to get started, get the assembly lines going, and get the electric car developed and distributed to the public, because there is going to be a market there. This is the real importance of the bill.

Mr. MILFORD. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentleman from Texas.

Mr. MILFORD. Mr. Chairman, I can give a specific example of what the gentleman is talking about from my own district. In my district there is an embryonic electric car manufacturer, you might say, that is doing exactly what the gentleman is talking about, and that manufacturer is having the very same difficulties the gentleman is talking about.

This is a very substantial car. This is a manufacturer that normally any bank would talk to, except they understand the concept itself is the electric vehicle. That is the very thing that is in doubt, the concept of the electric vehicle, and this bill would provide the answer that this manufacturer and many others across the country are looking for.

I support the gentleman's stand very strongly.

Ms. ABZUG. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentlewoman from New York.

Ms. ABZUG. Mr. Chairman, this bill is designed to meet a national crisis which is facing the country—the energy shortage. The bill has therefore included in section 11 a provision which establishes a loan guarantee program to help in meeting this emergency. As one who has long called for the development of new alternatives to transportation and to an overall effort to find ways to use the energy available to us more effectively, I support the development of such a program.

Previously this session, this House has passed an amendment to the Emergency Livestock Credit Act which increased to 90 percent the portion of loans in this program which the Federal Government was prepared to guarantee. This was also done in response to a perceived special need to meet an emergency situation.

This very week, during which we are considering the electric vehicle development loan guarantee program, New York City has renewed its request of the Federal Government for a program which will allow for a Federal guarantee of its loans. There is hardly any serious economist who would argue that the continued solvency of the Nation's largest city and financial center is not also a matter of national concern. The emergency affects New York directly, but it also will affect the ability of all States and localities to issue bonds successfully. Contrary to the response of Secretary Simon and Chairman Burns, the financial situation in New York City is most definitely a matter of national concern—the emergency that exists there must be overcome with immediate Federal action also.

I will vote today to support the extension of a loan guarantee program in H.R. 8800, because it is needed to maintain the economic strength of this country. At the same time, I will renew my call to both the executive and legislative branches to cooperate with New York City in creating a mechanism for guaranteeing its loans, because such a program is also needed to maintain the economic strength of the country.

Mr. HOWARD. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentleman from New Jersey.

Mr. HOWARD. Mr. Chairman, I rise in support of the legislation. I wish to congratulate the committee for its work and for coming out with this bill. I think this is one thing we must do.

As one Member who owns and operates an electric motorcycle, I understand the need for this. I think there could be some improvements in the engine, but I do believe it is the way we should go, and I congratulate the committee for its efforts.

Mr. McCORMACK. Mr. Chairman, I thank the gentleman for his contribution.

Mr. AMBRO. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentleman from New York.

Mr. AMBRO. Mr. Chairman, it has been reported by the Office of Science and Technology that there is little hope of achieving more than 28 percent efficiency from the Otto cycle internal combustion engine. If we expect to have low fuel oil prices for home heating, not to mention reasonable prices on such items as synthetic clothing, a good deal of which is oil-based, we must come to grips with fuel consumption in transportation. Advances must be made before electric vehicles become commonplace, but electric vehicles have a good future as a second car and offer a way to conserve energy.

This legislation directs the Energy Research and Development Administration to actively promote and demonstrate electric cars, buses, and delivery vehicles. A hybrid variety using electric motors to accelerate, and gasoline for cruising, will also be explored. Government participation is needed to stimulate technological advances in battery design and general reliability of the devices. Without that participation, industry will not give electric vehicle development the attention it deserves.

Electric vehicles are good second cars for the two-car family. Inasmuch as the major criticism of these vehicles is their slow top speed and need for frequent recharging of batteries, they are perfect for in-town driving which does not require high speeds and are generally less than 25 miles in distance. Thus, an electric car that would go 50 miles per hour, recharging after 50 miles, would serve most second car needs. Eventually, research will undoubtedly produce a vehicle with better speed and mileage. With Government funding available, these developments are almost assured.

To me, the image of American homes fully exploiting solar and other alternative energy sources for their heating and cooling, with central power generation providing "fuel" for transportation, is one of the most attractive energy futures we could pursue. In approving this bill, we would be making a major step in the direction of that future

Mr. EMERY. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. I yield to the gentleman from Maine.

Mr. EMERY. Mr. Chairman, in light of the comments made a few minutes ago, relative to the necessity of the Congress becoming involved in the development of the electric automobile, let me point out some facts:

It is important to note that there has not been a significant incentive for the automobile industry in this country to get away from the use of petroleum and internal combustion engines. I do not think that the American automobile industry, as it is presently constituted, will be willing to move into another field of propulsion, such as electricity, unless we can demonstrate to the country that, one, electric vehicles are practical; and two, that they are available.

I think we have to demonstrate to the general public that these vehicles are desirable and practical and do not have the many drawbacks that some people fear.

The only way we can do that is to provide demonstration vehicles so that the automobile manufacturers and the electric companies in this country will be inclined to go into the manufacture of these vehicles on a commercial basis after public acceptance is generated. This is one important method by which the Congress can lead in the movement to acclimate the consuming public to using an energy-saving, pollution-free, low-cost vehicle, and to convince the automobile manufacturers to follow suit.

Mr. YOUNG of Florida. Mr. Chairman, will the genleman yield?

Mr. McCORMACK. Yes, I yield to the gentleman from Florida.

Mr. YOUNG of Florida. Mr. Chairman, I thank the gentleman for yielding.

I support this bill. I think it is a great concept.

I have a question that has been asked of me and that is in my mind, and that is as to the consumption of electricity in the driving of the electric vehicle. Do we have any facts or information as to that, I ask the gentleman from Washington?

Mr. McCORMACK. Yes, we do have those facts. We could easily handle 10 million electrical vehicles, charging them overnight and without having any significant impact on our electric utility demands during the day.

The fact is that electric utilities, of course, must provide for peak periods during the early morning and early evening.

For instance, in driving a car during the day and charging the batteries at night, utilities could easily handle 10 million cars no matter how they are distributed in the country. As a matter of fact, we have a surplus capacity at night in our electric generating system so as to be able to charge between 100 million and 200 million cars around the United States; and if they were distributed equally, we could charge every one without requiring a single new electric plant in the whole country.

Mr. HILLIS. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. Yes, I yield to the gentleman from Indiana.

Mr. HILLIS. Mr. Chairman, I thank the gentleman for yielding.

Back during the Memorial Day recess, I spent a good portion of 1 day touring a research facility of one of the major automobile companies in which they have electric vehicles as one of their research projects.

In inquiring into the future with respect to this particular form of transportation, they seem to point out that the weak point of the electric vehicle is the storage battery system that we have today and that there has been very little technological progress in the development of electric batteries in the last 25 to 40 years.

Under this legislation, will this problem be attacked? Are there provisions here to try to come up with a better electric storage battery system?

Mr. McCORMACK. If the gentleman will yield, the answer is yes, very definitely. The bill does provide for a program specifically to try to improve batteries as against what they are today, and we think this will come about. We have every confidence that we will be able, through this effort, to bring about new and improved batteries in from 2 to 3 to 5 years.

Mr. HILLIS. The point is that the batteries are heavy. They are relatively short-lived. They are quite expensive to replace.

Mr. McCORMACK. In fact, to put that in context with today's batteries, the top-quality batteries one would buy today, if one were to put 10 or a dozen of them in an electric car, then he can run the car from 40 to 100 miles, depending on the car and how he drives it.

By charging it up once at night, it would cost about 40 cents in electricity or about 4 cents a kilowatt-hour. In other words, it takes 10 to 12 kilowatt-hours to charge up these batteries. These will run the car up modest slopes. They will drive up to 60 miles an hour and will run the car from 30 to 100 miles, depending on how it is used.

We can go ahead with the system we have today and still provide for better research and development in providing for better batteries tomorrow, not wait for better batteries, but do both things at once.

Mr. WHITE. Mr. Chairman, will the gentleman yield?

Mr. McCORMACK. Yes, I yield to the gentleman from Texas.

Mr. WHITE. Mr. Chairman, I know it is very difficult to project this, but has there been any study as to whether or not the use of electric cars will cost less per mile than gasoline motors, and if so, has there been any percentage estimate with respect to electric vehicles?

Mr. McCORMACK. Mr. Chairman, in reply to the inquiry of the gentleman from Texas, let me state that an electric vehicle would be much cheaper to operate than an ordinary internal combustion engine. As a matter of fact, if we think of an ordinary car today getting 15 miles to a gallon and the driver paying 60 cents a gallon for gas that means it is costing 4 cents a mile for gas whereas an electric car will operate for a penny a mile.

Mr. WHITE. I am also talking in terms of the generating costs.

Mr. McCORMACK. With reference to the generation of electricity, let me state that in the first place, of course, most of the electricity is expected to be generated by nuclear energy and coal since we will be phasing out the use of petroleum and natural gas. But, in addition to that, it will be possible to charge these cars without any increased demand for electricity, and that we can continue to do this without any new electrical generating capacity being necessary in the utility systems as far as we can see into the future, and certainly way beyond 1990 before all of the electrical cars in the United States would require any additional generating capacity. As I said earlier today, it is estimated that we could handle as many as 100 million cars, more cars than we have in the United States today on the existing utility system if they were equally distributed. In other words, we have that much surplus generating capacity in the utility systems today.

Mr. WHITE. I thank the gentleman from Washington.

Mr. GOLDWATER. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I rise in support of this Electric Vehicle Research, Development and Demonstration Act of 1975, H.R. 8800. I wish to begin by commending the distinguished chairman of the full committee, the gentleman from Texas (Mr. TEAGUE) and the chairman of the subcommittee, the gentleman from Washington (Mr. McCORMACK) and all of the members of the committee and our staff for their efforts and for the cooperative spirit which prevailed in the committee that allowed for full input by all members of the committee.

Mr. McCORMACK. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I am happy to yield to the distinguished gentleman from Washington.

Mr. McCORMACK. Mr. Chairman, may I take this time to congratulate the gentleman from California (Mr. GOLDWATER) upon his leadership and his cooperation, and for the diligent work that he has performed on the Committee on Science and Technology, and on the subcommittee on which the gentleman from California is the ranking minority member. The gentleman from California has been an outstanding member of this committee, and, as a result, this has helped bring about this bill being brought to the floor through a unanimous vote both in the subcommittee and in the full committee. I repeat that I cannot express adequate praise for the gentleman from California (Mr. GOLDWATER) for the work he has done and the leadership he has performed. His has been an excellent effort.

Mr. GOLDWATER. Mr. Chairman, I thank the gentleman from Washington for his flattering comments. I would only paraphrase my earlier remarks by saying that I believe that this piece of legislation does represent a bipartisan and cooperative effort in providing a flexible instrument which I am pleased to be associated with.

Mr. Chairman, as an original cosponsor of the bill and the ranking minority member on the Energy Research, Development, and Demonstration Subcommittee which considered and reported the bill, I am intimately familiar with this legislation. I strongly believe that H.R. 8800 is a significant step in the increasingly critical area of petroleum-based fuel consumption in the transportation sector. The problem, as we all know, is that the United States now and for the foreseeable future will consume much more petroleum than can be domestically produced, with a resulting supply dependence on and cartel pricing by the oil producing nations, OPEC. The transportation sector consumes about 40 percent of all the petroleum consumed in the United States, which incidentally approximates our current level of oil imports, and it is a prime candidate for the substitution of alternate energy sources. H.R. 8800 will mandate a substantial Federal effort in the area of one of the primary alternate sources, electric propulsion.

The bill establishes a program in the Energy Research and Development Administration—ERDA—to demonstrate the commercial feasibility of electric vehicles for private and business travel under urban conditions. The program includes a 5-year project for demonstrating 7,500 vehicles and for associated R. & D., with authorized funding of $160 million. The bill also provides loan guarantees for industrial efforts in electric vehicle development to a maximum of

$60 million. I believe it is particularly important to note that both the demonstration activity and the R. & D. in this program will make maximum use of existing private sector activity in electric vehicle development. Additionally, the loan guarantees and other sections of the bill will insure that the many small businesses which constitute a major segment of the industry can participate and will not be driven out by the ERDA program. The dual objectives of the bill are to accelerate the development of electric vehicle technology and to facilitate commercialization of that technology in the private sector. I believe the program in H.R. 8800 effectively does both, while adequately protecting the various interests involved, and I urge your support of the bill.

Let me briefly explain the opportunity which we have with the electric vehicle to make a start on shifting away from petroleum.

In my own district, the Los Angeles area, electric vehicles can make a significant difference, perhaps as early as 1980. A recent study by the Environmental Protection Agency concluded that, at a minimum, electric vehicles with existing technology could replace a million second cars in Los Angeles in 1980, 17 percent of all area cars "with little sacrifice in typical daily driving patterns." Electric vehicles with advanced technology could constitute from 45 to 75 percent of all cars in Los Angeles in the 1990–2000 time frame, depending on supporting facilities. The obvious environmental benefits, as well as the resulting petroleum savings, clearly support our consideration of a timely demonstration of this electric vehicle potential.

Finally, Mr. Chairman, let me briefly summarize exactly what this bill would do to accomplish our objective of accelerating the development of electric vehicle technology and its commercialization in the existing industry. The bill establishes a 5-year, $160 million electric vehicle research, development, and demonstration project in the Energy Research and Development Administration—ERDA. The primary goal of the project will be to demonstrate the commercial feasibility of electric vehicles, including the evaluation and demonstration of about 8,000 vehicles.

Electric vehicles which would be ideally suitable for urban private and commercial travel, can play a key role in reducing our dependence on imported petroleum for transportation. In addition, they would contribute to reducing urban air and noise pollution.

The demonstration would involve three phases. After an initial 1-year period of design and standard-setting based on in-use testing of existing vehicle technologies, ERDA would contract for at least 2,500 vehicles within 15 months, and insure widespread distribution by enabling individuals or businesses to lease or buy them. Within 42 months, another 5,000 vehicles incorporating design advances derived from the first phases of the project would be similarly purchased. Demonstration maintenance programs would also be established. Of particular importance, planning grants, special contract provisions, and a $60 million loan guarantee program would be provided to allow small firms with problems in raising capital to bid competitively for the ERDA contracts and to establish themselves in the electric vehicle industry.

Research and development would include work in energy storage and hybrid vehicles as well as control systems and overall design of electric vehicles, with the aim of reaching maximum energy efficiency, durability, ease of repair, and recyclability of parts. Associated research would focus on urban design and traffic management for optimum transportation energy use, and minimum environmental degradation.

The Administrator of ERDA would also conduct studies of tax provisions, regulatory law, and other factors which might tend to bias the transportation system toward particular vehicles. These findings, as well as assessments of the long-range environmental and economic impacts, would be first reported to Congress within 6 months, and subsequent reports on the overall progress of the project would be required every 6 months following for the 3-year lifetime of the project.

Mr. Chairman, I strongly support this bill. I cosponsored it. I offered a number of amendments to perfect it in subcommittee which are incorporated in the bill. I believe it is the best balance of all the relevant interests—private interests, Government interests, and the national interests. I urge the support of my colleagues for H.R. 8800.

Mr. LATTA. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to my friend, the gentleman from Ohio.

Mr. LATTA. I thank the gentleman for yielding.

Let me say that I support the concept of an electric vehicle, and I know that the gentleman in the well is a champion of our free enterprise system, so will he please explain to me why we are asking in this legislation that the taxpayers pick up the tab for the purchase of 7,500 of these vehicles and 1,300 additional vehicles for the Postal Service, which is supposed to be an independent agency, at a cost of $160 million?

Mr. GOLDWATER. I think there are two points that perhaps can be made in addressing myself to the gentleman's question. One, this is basically research and development with a very modest demonstration thrown in. The reason for this is that I think there is no argument in this chamber that one of the solutions to our energy dilemma is to accelerate conservation, and this particular program is basically designed to do that. Obviously, we could wait for the market forces to dictate this research and development, but I believe the Congress does have a role to provide this kind of leadership to accelerate.

I would fight alongside of the gentleman if in fact the Congress were to get into and provide moneys for actual manufacturing of these vehicles, but for the research and development and a modest demonstration I think this is the kind of leadership we need.

Mr. LATTA. I just want to raise this question. Using the gentleman's argument that we do want to conserve petroleum, and I heartily endorse it, could we use the same argument on the further development of a rotary-type engine that is supposed to save gasoline, or perhaps a regular-type engine that would maybe give us 50 miles per gallon? How can we say that in one instance we ought to take the taxpayers' money to the tune of $160 million to develop this particular product and not another product? That is the thing that bothers me about this legislation.

I quite agree with the gentleman that we need to be headed in this direction and in all directions where we conserve energy, but to say that we mandate the purchase of 7,500 of these vehicles after they have been manufactured, and 1,300 for an independent agency—and I put that in quotes—the postal system, kind of baffles me, and I cannot quite see an answer to the question.

Mr. GOLDWATER. I can appreciate the gentleman's concern because I, too, share this vital concern where we begin to see an infringement upon the rights of the private sector to develop, to research, and perhaps even to demonstrate. But again I reiterate that I do believe that in the area of technology our Government does have a part to play to provide those moneys which may not necessarily come to be put into a solution or to be put into research that would result in quicker solutions to the problems and dilemmas we face.

But I would say that this same argument that I have made has been made and is being made in other areas such as the Solar Research and Demonstration Act. We are using this same argument in essence to support all kinds of research in the energy area other than for electric vehicles.

Mr. MOSHER. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the ranking minority member of the Committee on Science and Technology, the gentleman from Ohio (Mr. MOSHER).

Mr. MOSHER. Mr. Chairman, as a fellow member of the Committee on Science and Technology, I too congratulate the gentleman in the well for his leadership in developing this legislation. He has done a superb job. That applies also to the chairman of the subcommittee and the chairman of the full committee.

Mr. Chairman, H.R. 8800 is a bill which deserves our support. The successful development of efficient, economical electric vehicles can make a very important contribution to the reduction of our petroleum consumption. Over half of our petroleum consumption is for transportation. Electric could halt the spiraling demand for petroleum to fuel automobiles.

The electric vehicle is not some new or novel concept. At the beginning of the century electrics were emerging along with steam and gasoline-powered cars. At that time there were hundreds of manufacturers in the electric car business and thousands of electric cars were on the road. The rapid advances which occurred in the technology for the in-

ternal combustion engine eventually displaced electric and steam cars. The latter could not then match the superior performance which gasoline offered.

However, some electric "vehicles," that is, trolley cars, have lasted until today in some locations. Thus, the electric vehicle legislation here today is merely designed to pick up on an approach which has been largely overlooked for half a century.

Until a few years ago, small numbers of electric vehicles had been built by persons almost on a hobby basis. Now the energy crisis has prompted many persons to take a fresh look at the electric vehicle as a viable source of transportation.

The electric vehicle fell into disuse over 50 years ago because the batteries then available could not compete with gasoline engines.

However American technology has advanced dramatically in that time period. Many enterprising individuals have been working diligently to apply space age technology to a concept that dates to the horse and buggy days.

I am confident that the natural forces of consumer demand and free competition would eventually lead to a resurgence of the electric vehicle. Unfortunately we cannot afford to wait for the natural forces of the marketplace. And that is the reason for H.R. 8800; namely, to accelerate the development of an electric vehicle compatible with today's standards.

It is significant to note that most automobile trips take place within 5 miles of home. The electric vehicles built with currently available batteries have a range of up to 50 miles, and a top speed between 40 and 45 miles per hour. Thus electric cars already are attractive for use as the "second" car which many families have. One objective of H.R. 8800 is to develop improved battery technology which will permit greater range and speed. A second objective is to demonstrate the viability of electric vehicles by putting large numbers of them on the road. This will acquaint the public with them and dispel any misconceptions that electric cars are just a "toy".

The bill sets out a three-phase program. The first phase directs the administration of ERDA to purchase a "reasonable number" of electric vehicles which contain the current state-of-the art. This initial phase will permit ERDA personnel to acquaint themselves with the current level of electric vehicles. It will help in establishing a baseline from which future advances may be measured. The second phase calls for the purchase of 2,500 electric vehicles which meet intermediate performance criteria. The third phase consists of the purchase of 5,000 electric vehicles which meet advanced performance criteria.

The vehicles so purchased by ERDA will be leased to the public for their everyday use. We anticipate an arrangement whereby the user keeps a record of the vehicle's performance and reports back to ERDA. A program as ambitious and extensive as developing an alternative transportation vehicle probably will have a few "bugs" and the system of monitoring is designed to identify and eliminate them as soon as possible.

Another positive feature of H.R. 8800 is its recognition of the valuable role which small business has played in developing the electric vehicle. It has been the perseverance of small business through many lean years which has now culminated in a strong nucleus for a new line of commerce. H.R. 8800 contains explicit directions to ERDA to take special measures to assure the full participation of small business.

After "carrying the ball" during the tough times, we should not let small business be cut out of the electric market by the large corporations. Fostering the development of electric vehicles by small business will have the beneficial side effect of increasing competition and reversing the strong trend toward concentration which has characterized the automobile industry.

Mr. Chairman, I believe that H.R. 8800 is a strong congressional initiative aimed at meeting the energy crisis headon. The electric vehicle is an established concept which can be brought into widespread use with a reasonable amount of work. I am looking forward to the day when these economical, nonpolluting vehicles will achieve the success which eluded them 75 years ago.

Mr. BAUMAN. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the gentleman from Maryland.

Mr. BAUMAN. Mr. Chairman, I hesitate to shatter the smiling camaraderie we have seen displayed on both sides of the aisle here, but if this legislation is so good, why are we informed that the administration opposes the bill and that it will be vetoed by the President, and that both the Environmental Protection Agency and ERDA testified against the bill in the hearings? It does not seem to me that the executive branch, from what I have learned about the bill, supports this at all. Yet we hear almost no voice being raised to explain these objections.

Mr. GOLDWATER. I think the gentleman raises a legitimate question because of the fact that ERDA and the administration do oppose the bill. They do not oppose the concept. In fact they do have an ongoing program. I think this is a case where the Congress is providing perhaps more dynamic leadership. The difference in the question is that we want to do it now and they want to continue study.

Obviously ERDA is a new agency. They are still in the throes of organization and getting their programs together. It was in that kind of atmosphere that this committee received testimony. There really were no guidelines and, therefore, we had to provide them.

I have most vigorously looked into the objections of ERDA and I believe they can do a better job. I believe we contemplate the electric vehicle research and development and demonstration being done in a quicker mode or a quicker time frame than they are dictating. So I think the difference is basically in how soon we want to do it.

Mr. BAUMAN. Can the gentleman tell us, since we have already appropriated large amounts of money for ERDA in the past, why this cannot be accomplished on some scale within the existing appropriations without having to mandate an additional authorization of $160 million?

Mr. GOLDWATER. In the past there were only modest amounts of money authorized and appropriated for this type of effort. This particular bill demonstrates a very ambitious program and recognizes subsequent to our energy dilemmas in the past year the need for acceleration of conservation programs. Although in the past we have provided modest amounts of money for various systems studies and development, it has not been until this particular bill that we have tried to focus our attention upon the electric car as a viable alternative to the second car and tried to bring this into our society at a faster rate than perhaps what the market forces would dictate or would be provided under the old funding levels.

Mr. BAUMAN. If the gentleman will yield further, the gentleman knows there are before this body and the other body a number of legislative proposals for the Federal Government to take over all or most of the research, development, and even production in the energy field, including a massive Federal corporation which would in fact replace the private economic sector's energy activities. It seems to me that the principle the gentleman advances in this particular bill is the same principle involved in a much larger scale in the legislation I have just noted. It is pretty hard to argue in favor of one and against the other it seems to me.

Mr. GOLDWATER. I obviously would reject that type of effort if in fact it is ever made. I would only say to my friend, the gentleman from Maryland, that this particular piece of legislation, as I interpret its purpose and the format under which it will operate, provides moneys that would be utilized by private industry under the leadership of ERDA. ERDA is to develop the program, to administer the program, but under contracting arrangements and with guaranteed loans for small businessmen to provide the seed money, and industry itself will provide the research and development, working along with ERDA.

Mr. FREY. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the gentleman from Florida.

Mr. FREY. Mr. Chairman, I would just like to add to the comments of the gentleman from California. I certainly agree, the money for ERDA is not sufficient that has been authorized or appropriated.

There is one area we need more emphasis, that is this total energy area we are working on.

Second, I certainly do not want to see this thing federalized, but there are obviously certain areas the Federal Government must get involved in and provide the seed money; not only this area, but in others, as in ocean thermal power, we have to get it started and then take it up and go with it.

Third, when we look at the different

pieces of legislation we have, we are really not sure, we are not completely sure this is all going to work. We cannot be 100 percent sure, but if we are going to spend money and try, it looks to me that we have a chance for a greater return in this area, this electric car area, than anywhere else, because 60 percent of our energy goes for gasoline for automobiles, which gives us a pollution problem.

I think for the investment we have and the place we are putting our money, it makes a lot more sense to put it into this thing than $2 million for someone going around and picking up papers.

Mr. Chairman, I support the Electric Vehicle Research, Development, and Demonstration Act of 1975. There are many important challenges that face our Nation today. I would like to point out that a remarkable number of these major problems are directly or indirectly related to the automobile and the internal combustion engine.

To a large extent the recent energy crisis is the result of the tremendous daily consumption of gasoline by automobiles. If we could permanently and significantly reduce gasoline consumption there would be no energy crisis. Furthermore, I am sure that all my colleagues are aware of the implications of continued reliance on Arab oil to power our automobiles. Dependence on foreign nations for petroleum jeopardizes our economic health and political independence. The continuous flow of dollars to petroleum exporters endangers the standing of the dollar and the viability of the international monetary system. Dependence on foreign petroleum also means that control of the level of domestic economic activity is no longer wholly in our hands. America can be thrown into chaos if a foreigner whimsically decides to turn off the flow of oil.

Additionally, environmental hazards are being created by automobile use. Each time a car is operated, hydrocarbons and other pollutants are admitted into the atmosphere. These contaminants effect the health of wildlife, natural vegetation, crops, and human beings. Now we are discovering that pollution may be permanently altering climate conditions, and imperiling life on Earth. The accumulation of automobile emissions is particularly severe above our urban areas. Noise and air pollution caused by the automobile is partially responsible for the decay of our cities.

The automobile has contributed greatly to the high quality of life that Americans now enjoy. Unfortunately, it is also a source of many problems for our Nation. The legislation under consideration today is a step toward developing a vehicle that will not burn oil nor pollute the environment with fumes and noise. Mr. Chairman, I am referring to the electric car.

There is nothing new about the electric automobile. In fact, shortly after Henry Ford's historic invention develcpment of the electric-powered vehicles proceeded more rapidly than work on cars propelled with the internal combustion engine. In 1900 there were more electric vehicles than internal combustion cars. By 1915, one hundred different firms were producing electric automobiles. But the power of the combustion engine spurred massive research and development efforts far outweighing the resources devoted to electric car technology. By 1930, the internal combustion engine had completely replaced electric propulsion motors as the dominant transportation mechanism.

Now, pollution from the automobile is a major American problem, and petroleum required to fuel combustion engines is becoming scarce and increasingly expensive. The time to reinitiate electric vehicle research is now. H.R. 8800 establishes a program to be administered by ERDA for the research and development of electric vehicle technology. The goals of the project are: First to evaluate and demonstrate the commercial feasibility of the electric vehicle, second, to promote the advancement of electric vehicle design and engineering, and third, to encourage the substitution of electric and electric-type vehicles for many gasoline powered cars.

The bill requires that three stages of development and demonstration be undertaken. First, several hundred vehicles of current design will be evaluated. Second, 2,500 with modified design and technology will be produced, and subsequently tested. Third, and finally, 5,000 vehicles with improved and advanced engineering components will be manufactured, tested, and widely demonstrated. This final generation of electric car will represent the culmination of over 4 years of research and development. The bill anticipates that this advanced vehicle will be suitable for application in the U.S. Postal Service, the General Services Administration, the Department of Defense, and in other Federal agencies.

The bill authorizes a total of $160 million for a 5-year period. Ten million dollars is appropriated for fiscal year 1976, $40 million for fiscal year 1977, $30 million for fiscal year 1978, $60 million for fiscal year 1979, and $20 million for fiscal year 1980. I submit that $160 million is indeed a small sum when the benefits from the electric car program are potentially so great.

Mr. Chairman, I am convinced that H.R. 8800 is a sound and important measure. I enthusiastically support this legislation and I join my colleagues on the Committee on Science and Technology in urging its prompt passage.

Mr. GOLDWATER. Mr. Chairman, I thank the gentleman for his contribution.

Mr. BROWN of California. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the gentleman from California.

Mr. BROWN of California. Mr. Chairman, I thank the gentleman for yielding. I want to commend the gentleman on his presentation and his description of this bill and his defense of it.

I would like to just comment with regard to the attitude the administration has taken and the impact on business, that we have no indication that there is any strong objection from ERDA or EPA. ERDA's feeling was they need a little more flexibility. When they originally testified on the bill, we did extend the program from a 3-year to a 5-year program to give them this flexibility.

With regard to industry and their participation, I have never seen representatives of any industry testify with such united support for this legislation. We had representatives of all phases of the industry that is involved in the construction of electric vehicles, which are basically small business people, battery suppliers and other component suppliers, and even the big four in the auto industry, we found no objection and, in fact, strong support for this legislation, because it does pose the opportunity to get a struggling embryonic industry on its feet so it can make a major contribution to the free enterprise system.

The contribution of the gentleman in the well in framing this legislation to aid this concept, I think, has been very well done and I wish to compliment the gentleman.

Mr. GOLDWATER. Mr. Chairman, I thank the gentleman for his contribution to this colloquy.

I would only say that I have admired the knowledge that my colleague, the gentleman from California (Mr. BROWN) has on this particular subject. The gentleman has obviously been in the forefront of leadership in providing and recognizing the need for the electric vehicle. I think the leadership that is provided here is very helpful.

Mr. OTTINGER. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the gentleman from New York.

Mr. OTTINGER. Mr. Chairman, I also would like to compliment the gentleman in the well for his leadership and his very constructive contribution to this legislation.

I would like to point out to the gentleman from Maryland (Mr. BAUMAN) that almost all the work in the development of electric vehicles has been done by entrepreneurial pioneers, small undercapitalized companies, people who saw a possibility and put a great deal of their own money behind it. They are not in the position to go to the next phase and take the particular development they have from a one-vehicle demonstration situation to the point where they can put it on the market. They say unanimously if we could give them a little help in their research, then they could be in a position to go in the market with their product.

I think this is a private enterprise program, not a Government program, if we will assist the small businessman to go ahead and do an important job.

Mr. GOLDWATER. I thank the gentleman from New York, and I think he makes a very good point that of some 20 vehicles that were parked around the mall, a good majority of them were all built in someone's backyard or garage or by small business. So, I think this money will provide the additional incentive for these types of people to continue the development.

Mr. ROUSSELOT. Mr. Chairman, as

one who has supported the development of alternative energy sources, and the development of energy conservation technology, I rise in support of H.R. 8800, the Electric Vehicle Research, Development, and Demonstration Act of 1975.

The purpose of this legislation is, "to demonstrate the commercial feasibility of electric and hybrid vehicles for urban individual and business use, and to encourage research and development in new technologies for electric and hybrid vehicles with wider application, in order to promote long-range conservation of liquid fuel and reduce environment pollution." In my judgment, the development of electric vehicles is essential to satisfying future transportation needs without increasing use of liquid fuel.

As a Member who represents a Los Angeles vicinity Congressional District—the 26th—I was interested in the information on page 19 of the House report regarding EPA's report on the "Impact of Future Use of Electric Cars in the Los Angeles Region." Reference is made to the fact that improvements in air quality because of the use of electric cars would be minimal since automobile emissions in the Los nAgeles region have been drastically reduced. I believe that the credit for this improvement should certainly go to the fine work which has been done by the California Air Resources Board which for several years was headed by Dr. A. Haagen-Smit.

I do have reservations about the total authorization of $160 million for the 5-year period as reported by the committee. I feel that the number of the demonstration vehicles being purchased—which includes a 5,000 vehicle third purchase—is excessive. In addition, I feel that Congress should keep a close watch on the loan guarantee programs in legislation, and in my opinion, we should be very careful with the loan guarantee approach in any legislation. However, in general, I support the goals of H.R. 8800 and I urge its passage.

Mr. WINN. Mr. Chairman, will the gentleman yield?

Mr. GOLDWATER. I yield to the gentleman from Kansas.

Mr. WINN. Mr. Chairman, I appreciate the gentleman's yielding to me.

Mr. Chairman, I rise in support of the electric vehicle bill. This legislation comes after intensive hearings by the Committee on Science and Technology on the subject of electric car technology, research, and development. Testimony from over 50 witnesses was reviewed and considered prior to the introduction of H.R. 8800. The thorough work of the committee has resulted in a fine legislative proposal that is worthy of prompt passage.

The bill is intended to give new impetus to the evaluation, development, and utilization of electric vehicles. As section 2 of the legislation emphasizes, the reasons for promoting the advancement of electric car technology are many. First, short and predictable urban travel patterns are suited to electric car capabilities. In congested traffic, electric vehicles, which use no energy when stationary, conserve fuel currently wasted by conventional automobiles. Second, the Department of Commerce has found that "in terms of total national air pollution, the automobile is the greatest single contributor, by weight." Internal combustion engine vehicles are also a major source of noise pollution. In contrast to the conventional automobile, electric vehicles are quiet and do not emit any significant pollutants. Third, the recharging schedule of electric cars promotes efficient use of utilities by loading plants in off-peak hours. Furthermore, electric cars do not burn precious petroleum, and as we are all aware, the scarcity and costliness of oil is straining our economic structure. In sum, it is clear to me that the development of the electric car is in the best short- and long-term interests of our Nation.

The bill provides that research development efforts be conducted on energy storage technology. Currently battery limitations are the most significant factor impeding widespread electric vehicle employment. If a long-range battery or fuel cell could be developed, then the electric vehicle would have nearly all the capabilities of the conventional automobile, and it would operate without the disagreeable byproducts of the internal combustion engine. The bill also requires that research and development on vehicle design be undertaken. Specifically, research and evaluation of energy conservation processes, vehicle control systems, and overall design for maximum efficiency, ease of repairs, and replaceability of parts will be conducted.

Perhaps the most important aspect of this legislation is the ERDA demonstration program that is established by section 7. The project guidelines direct that 5,000 electric vehicles of advanced design be produced within 5 years. These urban passenger commercial vehicles will come after previous electric car models have been produced, tested, and evaluated. Performance standards and criteria will be established in order to guide the research and development effort toward practical ends. Additionally, the standards will be useful in the future as electric vehicles become more widely used. The project requires that the cars be demonstrated in all areas of the country in order to test the vehicles under many different conditions, and to increase public awareness and understanding of the electric automobile.

During consideration of this legislation, the Committee on Science and Technology became aware that without special assistance small business might be excluded from participation in the ERDA demonstration program. Large capital requirements and formidable startup problems may impede small business from competing for ERDA contracts. In order to promote the participation of small business, the bill provides that a portion of funds be reserved for distribution to small firms involved in electric vehicle research and development. The bill also instructs ERDA to write contracts for research and development that provide for the special needs of small business. Finally, the bill provides that funds be available so individual firms will be able to contribute to the project regardless of their capital resources. Additionally, planning grants will be supplied to firms requiring assistance in contract submissions.

Mr. Chairman, many previous Congresses have deliberated over legislation dealing with electric vehicle research, development, and demonstration. For one reason or another, these earlier legislative initiatives have been found lacking. The measure before us is timely and well considered. For the good of our Nation I believe that the time to begin developing the electric car is now. Therefore, I enthusiastically support H.R. 8800, and I welcome the opportunity to contribute to its passage.

Mr. TEAGUE. Mr. Chairman, I have no further requests for time, and I reserve the balance of my time.

Mr. GOLDWATER. Mr. Chairman, I yield 3 minutes to the gentleman from Maine (Mr. EMERY).

Mr. EMERY. Mr. Chairman, I join my colleagues on the Committee on Science and Technology in supporting the electric car bill. This legislation articulates the firm commitment of the Congress to develop an alternative transportation device. H.R. 8800 establishes a demonstration program for electric vehicles, and authorizes $160 million for support of the project.

In the 1950's and 1960's, the national love affair with the automobile blossomed, and the car became an integral part of American life. But by the mid-1960's the man on the street began to realize he was being smothered by the gases and wastes emitted from his beloved automobile. In 1966, the Commerce Department found that the automobile was responsible for 60 percent of all manmade, gaseous air polutants plus 86 million tons of particulate emissions per year. New awareness of the deleterious effects of automobile use initiated the search for an alternative vehicle.

More recently, we have confronted a new, critical problem that has provided strong impetus for developing a substitute for the conventional automobile. With the advent of the energy crisis, the production and employment of a nonpolluting, nonoil burning vehicle has become crucial to maintaining the American way of life. Growing dependence on foreign petroleum, the cost of petrofuel and the global scarcity of oil are issues of far-reaching significance that affect our economic prosperity and national security. If we can develop a new type of vehicle that burns little or no oil, we can end our dependence on foreign sources of energy, insure the continued growth of our economy and maintain the quality of life we now enjoy.

I am convinced that electric propulsion vehicles can serve as an alternative to the coventional automobile. I enthusiastically welcome this opportunity to support H.R. 8800 whose purpose is: First, to encourage research and development of electric car technology, and second, to demonstrate the commercial feasibility of the electric vehicle for business, public and individual use. The

bill provides for a $160 million, 5-year program.

Three major demonstrations are planned; they will correspond with improvements in energy storage, vehicle design and mechanical components. First, a few hundred vehicles using improved lead-acid batteries and an optimized drive train will be produced. Contracts for this stage are to be written within 1 year of the date of enactment. Second, approximately 2,500 vehicles using improved transmission and drive train components plus a nickel-zinc or nickel-iron battery will be generated. These vehicles are to have a driving range of 100 miles, and the contracts are to be completed within 15 months after enactment of H.R. 8800. Third, and finally, 5,000 vehicles with a driving range of about 200 miles that utilize advance design, components, and engineering will be demonstrated. Contracts for this stage are to be completed 42 months after enactment.

At each development phase, performance standards and criteria will be drawn up by ERDA. In the future, these standards will provide the guidelines for commercial manufacture of electric vehicles. The vehicles of all three stages are to be publically demonstrated and tested in different areas of the country. This will serve not only to evaluate technical performance and identify problems, but it will also acquaint the public with electric car technology. The consumer awareness produced by the demonstration program will highlight important social and technological issues, plus help define existing consumer preferences and reservations.

The bill provides that small business will be able to participate in the research and demonstration effort. Within the constraints of sound management practices, ERDA is instructed to design contract terms and schedules that accommodate the special needs of small business. The bill also requires that a reasonable portion of program funds be allocated to small business concerns currently involved in developing advanced electric vehicle components and design.

The Administrator of ERDA is authorized to guarantee loans made to electric vehicle manufacturers. This loan program will permit small business to have access to the capital needed for participation in the demonstration program. Finally, ERDA is instructed to make planning grants available to small firms that require assistance in developing, submitting and entering into program contracts.

There is probably no piece of legislation that has come before the Committee on Science and Technology that might have beneficial, long range effects quite as much as this piece of legislation. Consider the fact that some 42 percent of the petroleum that we consume annually in this country is burned in automobile engines. If we are going to cut back on our consumption of petroleum and become self-sufficient, it is absolutely basic to our philosophy that we cut back on the consumption of gasoline on the highways.

The electric car bill will move us in that direction. Even though we will be consuming electrical energy converted from other energy sources, we will be cutting back on petroleum consumption.

With increasing petroleum prices, with an uncertain supply, with the problems of the balance of trade and balance of payments, with the uncertain political stability in the Middle East and other areas from which we must obtain our petroleum, it is absolutely essential that we turn away from consumption of petroleum, and this bill provides for that.

The average American-manufactured automobile may get 10 to 15 miles per gallon, but the energy efficiency comparison if we compare energy consumed in electric vehicles with that consumed by cars powered by conventional internal combustion engines, is equivalent to some 50 to 60 miles per gallon. It could be considerably more with improvements in electrical storage capacity. But this present comparison is very significant.

Another byproduct of this legislation is that electric cars are, for all purposes, pollution free. When we consider the quality of the atmosphere in American cities, such as in this city and when we consider the traffic problems associated with long, heavy automobiles that are not designed very efficiently, it is easy to see that the manufacture, development, sale, and use of small electric vehicles is very practical.

I feel that it is very important that we make this initial expenditure, and although $160 million is significant, it is a very, very small investment when we consider the $4½ to $5 billion deficit that we may incur due to imports of petroleum, or the effects of a 23 cent per gallon gasoline tax, or a $2 per barrel tariff on imported petroleum.

The benefits, compared with this relatively minor expense, of this electric vehicle bill far outweigh the disadvantages. I would urge the House to pass this legislation and show the American people and our constituents that this Congress is willing to do something to conserve energy by turning away from unnecessary consumption of petroleum on the highways.

Mr. MYERS of Pennsylvania. Mr. Chairman, will the gentleman yield?

Mr. EMERY. I yield to the gentleman from Pennsylvania.

Mr. MYERS of Pennsylvania. I thank the gentleman for yielding.

Mr. Chairman, I rise in support of this legislation. I think it represents a very important step in the electric car industry.

Mr. Chairman, as a cosponsor of legislation to provide $40 million for research and development of electric vehicles, I laid my conviction on the line that this method of transportation has a vital role to play in our future economic progress.

I urge my colleagues to follow suit in this vote of confidence and conviction for a job-producing industry that is struggling to help the Nation meet the requirements of energy independence.

Great strides, Mr. Chairman, have been made recently in the use of electric vehicles. The Post Office Department, for one, has a highly successful program underway, and has found operating costs have been less than $400 a year for its postal vehicles, which are nonpolluting, quiet and dependable.

Comparatively, what we are asking for today is a drop in the bucket to what we will be spending in the years ahead if we are going to do for this Nation what needs to be done for energy progress.

The economies in equipping the Federal Government alone with sufficient electric vehicles will, I am convinced, far out distance in savings what we are asking for today, Mr. Chairman.

Mr. GOLDWATER. Mr. Chairman, I yield 3 minutes to my colleague, the gentleman from Ohio (Mr. MILLER).

Mr. MILLER of Ohio. Mr. Chairman, I take this time in order to inquire of the gentleman from Washington (Mr. McCORMACK) and also the gentleman from California (Mr. GOLDWATER) about the type of hearings they held in the Science and Technology Committee, concerning the priorities for research spending. My concern is whether we are going to use this money where I feel it should be used, and that is on the battery or storage technology. I think that most of the people on the Committee on Science and Technology would be aware that today we do have DC motors that have been developed over the years, a series, a shunt and a compound type motor, where we do away with the commutators, because of solid state switching. We do not need to spend great amounts of dollars on that type of research. We do need research on the storage facility, such as the electric battery.

We are still using the lead acid battery that Thomas Edison developed. We have not gone very far. My question is: Is there any proof that the funds in this bill will be used for storage technology?

Mr. McCORMACK. If the gentleman will yield, I am sure this is where the major emphasis is going to be in research and development. There are vehicles on the highway today, for instance, the Honda vehicle made in Japan. They are using all sorts of computerized systems for not only the ignition system but also for controls, for feedback systems, and they have an electric car, the combined computerized feedback system, that will operate efficiently.

The gentleman from Ohio knows there is a design built from the ground up and is ready to go in mass production. We are moving forward, in other words, very, very rapidly in these areas of research and development that the gentleman mentioned, and I think the gentleman will find, when ERDA sets out the criteria they are taking into consideration the technologies that the gentleman mentioned that already exist, and this means the heavy portion of the emphasis is going to be on developing more efficient batteries.

I think the gentleman is completely correct, and I think this is where the emphasis is going to fall.

Mr. MILLER of Ohio. But there is no guarantee we would be using the research dollars for the storage technology?

Mr. McCORMACK. If the gentleman will yield further, I think there is both in the general authorization bill and in this bill a specific requirement for research and development on battery technology.

Mr. MILLER of Ohio. I thank the gentleman.

Mr. GOLDWATER. Mr. Chairman, I yield 2 minutes to the gentleman from Ohio (Mr. KINDNESS).

Mr. KINDNESS. Mr. Chairman, I thank the gentleman from California for yielding.

I would like to urge a note of caution. The peaceful way with which this bill has been developed and discussed is most impressive, and I would seek to continue in that vein but with some rather strong feelings to be expressed about it.

Certainly there is industry support for this bill. Why should there not be?

It is a subsidy. It is a very selective subsidy to an industry that already exists. This is not a new industry; the technology is there. Our Nation knows and has known for a good long time how to produce electric vehicles within a limited range of capability.

The battery research effort is certainly something that may need Federal support, and that properly belongs within the scope and the function of ERDA. But the marketing and sales promotion effort that is the large part of this bill in its thrust is not an ERDA function at all. If it belongs anyplace in the Federal Government at all, maybe it belongs in HEW. That agency promotes programs such as welfare and Federal aid to education, and so on, that have their effect on the development of those fields in ways that we can judge for ourselves.

But this is a sales pomotion bill; it is not a research and development bill at all, considering the scope of it. It is just the battery research we are talking about.

Mr. Chairman, this is a bill that would be just great for Great Britain. With their short distances and flat land and with their socialistic state, it would be just great for Great Britain, but it does not belong here.

We see so many good things start out, things that are good in principle and sound great. We see these things start out on a small scale and start out simply, and then they are added to by this body, and by the other body, and they in time become large and complex. I would suggest that this is one of those programs of that nature. This is one of those things we will see grow.

Mr. GOLDWATER. Mr. Chairman, I yield 2 minutes to the gentleman from New York (Mr. LENT).

Mr. LENT. Mr. Chairman, I thank the gentleman for yielding this time to me.

Mr. Chairman, I rise in support of this legislation, and I commend the committee that handled it.

Mr. Chairman, as a cosponsor of an identical bill, H.R. 9181, I rise in wholehearted support of H.R. 8800. This Congress must begin to take the lead in efforts to cut reliance on imported petroleum, and this legislation represents a significant step in that direction.

Today, fully 30 percent of the petroleum we use in this country goes to run our automobiles. And despite the continued increase in the price of gasoline, it does not appear that we are cutting down on the use of the automobile. Therefore, we must not underestimate the importance of replacing gasoline as a power source as quickly as possible.

In the promotion of electrical energy to fuel our vehicles, where the electricity is produced from coal or nuclear energy, we cut the flow of petrodollars and provide for the future existence of personal transportation.

In addition to the obvious savings in petroleum—the eventual savings of 1 million barrels per day is not farfetched—we can reduce urban noise and air pollution by using a few localized electrical generating points to monitor emissions.

What is most significant is that the use of electric-powered vehicles is no dream. There is an existing electric vehicle industry in this country, capable of producing usable cars, and further technical improvements, which can be hastened by Federal support, are highly probable.

Mr. Chairman, there are no quick and simple solutions to our energy problems. However, the use of electric vehicles is one of the most practical alternatives to a petroleum-powered economy, and we should waste no time in promoting them.

Mr. GOLDWATER. Mr. Chairman, I yield 1 minute to the gentleman from New York (Mr. KEMP).

Mr. KEMP. Mr. Chairman, I appreciate the gentleman's yielding this time to me.

I take the floor, Mr. Chairman, so as to associate myself with the fine remarks of the gentleman from Ohio (Mr. KINDNESS), who I think has put this matter in better perspective. It is an outright subsidy to an enterprise already in operation.

I do not object very much to the debate that has gone on, other than to one important aspect of it. This is not private or free enterprise at work, it is central planning. The bill no doubt is going to pass, but as the gentleman from Ohio (Mr. KINDNESS) has pointed out, we ought to look at more than the immediate aspects of this bill but to the long-run implications of this subsidy and to what is happening in our country and in Great Britain as government controls more and more of the economy.

I understand and appreciate the great efforts that have been made by my distinguished friend, the gentleman from California (Mr. GOLDWATER), and the gentleman from Washington (Mr. McCORMACK). However, what I object to is having this bill pass under the rhetoric of private enterprise. This has nothing to do with free enterprise and we ought not mislead people.

Coincidentaly, this is the 200th anniversary of the invention of the steam engine by James Watt, which was financed by the savings and investment capital of a man by the name of Matthew Boulton. I think the progress that has been made under that system of competitive free enterprise; that is, "capitalism"—has done more for more people than all the Government subsidies ever devised by all the politicians either here or in England.

Let us do what we can to recapture the "incentive system" free enterprise, if we really want to solve the "energy crisis."

The only real crisis is political and governmental interference with this remarkable free market economy.

Mr. FUQUA. Mr. Chairman, the Electric Vehicle Research, Development, and Demonstration Act of 1975, for which I am a cosponsor, is an important part of our program to move our energy economy from one based on petroleum to one founded on coal, nuclear, and solar energy—all of which can be used to generate electricity.

Currently, only about 25 percent of our energy consumption is used in the transportation sector, but over 40 percent of our petroleum consumption is in internal combustion engines. We must begin in earnest to explore the alternatives to the gasoline-powered vehicle, and this bill is intended to begin programs which will both develop an alternative and make the American people aware of it.

Mr. Chairman, the Subcommittee on Energy Research, Development, and Demonstration did an exhaustive inquiry into the status of the electric vehicle technology. It used the testimony of expert witnesses in an attempt to write a bill incorporating that evidence. The bill reported by the full committee sets forth an aggressive but sensible program.

One of the most important conclusions produced by the hearings held by the committee in considering this bill was that the current state of the electric vehicle art is adequate for meeting the needs for second and third cars in this country. This is borne out by the fact that 50 percent of the trips in the United States are less than 5 miles, and the driving range of existing electric vehicles varies from 30 to 70 miles with speeds up to about 50 miles per hour.

It was also pointed out that for certain applications, such as multistop, urban and rural delivery vehicles and farm vehicles, a considerable energy and cost saving may come about through the use of electric vehicles.

A number of witnesses felt that battery research was needed including research on exotic batteries. It was also pointed out that the Federal Government should focus on battery research, and carefully follow and analyze research on batteries under way in other countries. The committee recognized the importance of battery R. & D. and provided sufficient funds for that purpose.

The issue of hybrid vehicles was discussed by a number of hearing witnesses. It was felt that the hybrid vehicle has advantages that should be studied. For example, its use in larger vehicles such as buses in which, in city applications, it could operate as a trolley bus—a dual

mode vehicle. We have included hybrid as well as electric vehicles in the scope of the bill.

On the issue of demonstration, there was general agreement among a number of the witnesses that the demonstration period was too short. The committee lengthened the time span for the procurement and evaluation programs to a total of 5 years based on this testimony.

The issue of the number of vehicles to be produced brought a range of numbers from about 350 to 20,000 or more vehicles. The need for flexibility in the size of the demonstration fleet was also discussed from the point of view of its effect on small business. It was pointed out that staggering the delivery dates of a large number of vehicles into smaller quantities would be helpful to small business as far as reducing the amount of necessary tooling. The demonstration program was carefully drafted with the problems of small business concerns in mind.

The need for supporting small business was discussed by a number of witnesses. Suggestions for assisting small business concerns included giving preferential treatment to small businesses that have been doing research and development work using their own funds to defray expenses. Other suggestions included a provision for a loan guarantee program, some type of subsidy, reserving some portion of the funds for other than major automobile companies, and so forth.

The provision for a loan guarantee program was discussed by several witnesses who felt that such guaranteed loans would assist small companies. One witness suggested a loan guarantee program similar to that in the Geothermal Energy Research, Development and Demonstration Act of 1974. Another witness pointed out loan guarantees similar to FHA or other Government loan programs would make it attractive for lending institutions to put up the money. The loan guarantee provision is a direct consequence of this important testimony.

In summary, I feel the committee did a conscientious job in preparing the bill, and I urge my colleagues to vote in favor of this measure.

Mr. PICKLE. Mr. Chairman, I am proud to join my colleagues in support of the effort envisioned in this legislation, and I hope we will soon see a strong breakthrough here into our established transportation modes. I cosponsored this bill when it was first introduced. I support it now. And I intend to continue to support it by urging its speedy implementation.

While so many of the answers to our energy problems seem so elusive or so far down the line, this is a gas and energy saving idea truly for the near-term. If we have 8,000 electric vehicles on our streets within 5 years under this legislation, I think the program stands a good chance of carrying on from there on its own.

This is a good chance for Government to get in, give a boost where it is needed, and then get out.

As we have heard so often in relation to this bill, very, very many of our auto or commercial vehicle trips last only 5 miles or less. That is where the conventional auto is most inefficient. This is where the electric car could step in and increase our energy efficiency.

And it is seldom a good thing comes with so many bonuses, for, while saving energy, the electric vehicle simultaneously will reduce noise and air pollution. Electric buses and small electric cars will be a boon for the errand-running Texan and for commuter clogged cities as well. Experts agree that travel in a mode controlled by individual choice and schedule will remain the major form of transportation in this country for some time. The problem is matching our energy resources to such travel. Electric cars are a good answer, and I urge again speedy enactment of this legislation.

Mr. HALL. Mr. Chairman, as a cosponsor of H.R. 8800, I am pleased to express my strong support for this bill. The Electric Vehicle Research, Development and Demonstration Act of 1975 is intended to accelerate the state-of-the-art in electric vehicle technology and to make the American people aware of the capabilities of electric vehicles in meeting their needs for personal transportation in urban areas.

If economic, social, and technical factors had remainded unchanged, the gasoline engine would probably have remained unchallenged far into the future. However, the mounting pressures to conserve petroleum and to reduce pollution from vehicle emissions are forcing a trend toward smaller vehicles for short urban commutes. Alternate automotive propulsion systems must now be completely reevaluated, and of all the alternatives, electric vehicles look very promising.

As has been already discussed, this bill provides for research and development programs to improve the existing electric vehicles technology. Batteries are a primary area in which the experts agree that major progress can be made in a short period of time. Dr. Edward David of Gould, Inc., testified that a new lighter weight nickel-zinc battery could be developed at economically competitive prices within 2 years if a vigorous development program was initiated today. Other experts also feel that commercially feasible, highly superior replacements for the lead-acid battery can be developed within the time period of the 5-year program established by this bill.

However, we are faced with a sort of "chicken-and-the-egg" proposition. Before substantial private funding is invested to achieve major progress in batteries or other technical areas, there must be a sufficient market for the product. This is a primary justification for the Federal participation in electric vehicle research, development, and demonstration. Through the R. & D. programs we promote the solution of the remaining technical problems which are currently preventing wider acceptance of electric vehicles.

With the demonstration program we help remove the social and economic barriers by stimulating the interest of the American people in electric vehicles. Both provisions of the bill will undoubtedly also encourage the investment of private capital for further R. & D. on electric vehicle technology and for the production of electric vehicles as well.

It should be emphasized that there will be considerable prospect for technology transfer from the electric vehicles program to other aspects of our lives. For instance, better batteries in terms of energy storage capacity will be directly applicable to storing electricity generated from solar energy sources such as wind generators and solar cells.

I find the prospects for success in this 5-year program very stimulating. I urge my colleagues to join with the members of the committee in supporting this legislation. We have an opportunity here today to take an important stride toward a better lifestyle for the American people.

Mr. BROWN of California. Mr. Chairman, I want to join my committee colleagues in urging passage of the Electric Vehicle Research, Development, and Demonstration Act of 1975, as well as emphasizing one or two special points at this time.

One of the less obvious needs this legislation deals with is the difficulty our society seems to have in translating our vast technological potential into measures which improve our lives. Once we have set up a pattern of doing things, there seems often to be overwhelming barriers against improvement, even though opportunities are obvious. As in the Solar Heating and Cooling Act of 1974, we are trying here to break through these barriers by providing incentives and Federal leadership aimed at getting a ready technology into production and use.

In the case of ground propulsion, the barriers against innovation are more than just the forces of habit, however. Any new product in the field must compete against one of the most highly capitalized, and most well-organized industrial marketing systems in the world—that composed of the large internal combustion engine auto manufacturers. The American auto industry is an institution of itself, partly built by previous Federal action in the form of road design, oil price patterns, and hosts of other policies with demographic side effects. To bring a new technology into use at a reasonable pace in ground propulsion requires, I feel, a Federal incentive program designed to help the new industry over some of the built-up institutional barriers against change. The kind of Federal action we propose today is relatively small compared to all the actions we have taken historically to build the internal combusion engine into our life patterns.

There are many opportunities for developments in transportation beyond electric vehicles, of course, and I hope that the action of the Science and Technology Committee in mandating a large research and development program in this area in the ERDA budget authorization process will help us pursue a wide

range of these opportunities. Similarly, the legislation studied last year by this committee, and which I reintroduced this session—H.R. 5557, the Ground Propulsion Systems Research, Development and Demonstration Act—in which NASA would be given an explicit authorization for work in ground transportation, is another step to a broad transportation program. But the legislation before us today can provide a cutting-edge to progress in all the areas of transportation technology, by providing a demonstration that a particular development, with proper goals and incentives, can be implemented now to the benefit of individuals and the country as a whole. The measures in the Electric Vehicle Research, Development, and Demonstration Act will get us started on reducing the air pollution which plagues our cities, and in reducing our dependence on liquid fuel, which is crippling our economy.

I want also to emphasize the planning and urban design studies which we have written into this legislation. Just as electric vehicles are a small part of transportation, technology, transportation itself is just one aspect of urban design technology. It is time we take a step back from our blind random sprawl in living patterns, and begin to think about better ways to organize our living and commerce, so that all our citizens can have pleasant surroundings and reasonable access to their places of work and recreation. We have required in this bill that the Administrator of the Energy Research and Development Administration study the energy consumption and pollution implications of current urban and transportation design patterns, and that he recommend ways of removing institutional barriers against more rational planning. His findings would be reported to the Congress, and we would hope then to have a framework for further legislation in this area if it is needed. I think that the mandated attention to the energy and pollution consequences of urban design and planning may be as important an aspect of this legislation as the actual incentives for the electric vehicle.

Mr. DODD. Mr. Chairman, I rise in support of H.R. 8800, to provide a program for research, development, and demonstration of electric vehicles.

The subcommittee heard the testimony of over 20 witnesses, in developing a method to promote electric vehicle technologies and to demonstrate their commercial feasibility. A number of Federal agencies including DOT, NASA, National Science Foundation, DOD, HUD, et cetera, will be authorized to partake in the projects set forth in this bill.

Basically, this legislation will help familiarize the American public with electric vehicles and explore the uses of electric vehicles as a secondary form of transportation. Currently technology has developed electric cars that will run at speeds up to 60 miles per hour for 40 to 50 miles without charging. The subcommittee heard testimony of the feasibility of these vehicles for short run inner city use. Since more than half of trips taken in the United States are less than 5 miles in stop and go traffic, the electric vehicle provides a viable alternative to gasoline powered cars.

On the basis of such information, H.R. 8800 will provide a 5-year program within ERDA that will put over 2,500 electric vehicles on the road for public and private usage. Under current technology, 2,500 vehicles will be purchased and then put through a year of testing. Following the test years, these vehicles will be leased for private ownership. Forty-two months after enactment of the bill an additional 5,000 electric or hybrid vehicles will be leased out.

By exposing the public to electric vehicles, we familiarize Americans with an alternative source of transportation that does not run on oil. As we continue to delete our dwindling supply of oil, and gasoline prices continue to spiral, the advantages of a car that may simply be recharged from conventional electrical sources becomes more and more attractive.

I feel, Mr. Chairman, that H.R. 8800 will be a positive step toward the practical application of an alternative energy source for the future.

Mr. MOORE. Mr. Chairman, the Electric Vehicle Research, Development, and Demonstration Act of 1975, H.R. 8800, is a bill with a laudable purpose, but fails to face the realities of present state-of-the-art technology for electric vehicles.

The Office of Management and Budget has stated that this bill may be vetoed. The legislation would require the purchase by the Federal Government of at least 7,500 electric vehicles—in addition to the 1,300 vehicles the U.S. Postal Service plans to purchase—at a cost of up to $160 million and provide a Federal subsidy to manufacturers of such vehicles. However, there must be substantial improvements in the economics of electric vehicles before we try to apply that technology by multimillion-dollar procurement of vehicles and demonstration projects. At present, electric vehicles consume one-third more energy than comparable sized combustion vehicles. Successful completion of battery research projects already underway in the Federal and private sectors should be the first step before any additional funding is given. We should await a report on cost-efficiency before large-scale purchases of Government vehicles is made.

In addition, the Energy Research and Development Administration's fiscal year 1976 appropriation, which is now pending conference, allocates $38 million for research in energy storage systems and $31.2 million for advanced transportation power systems. The Environmental Protection Agency and the Energy Research and Development Administration feel that this is enough money to carry on research already in progress, and that the additional money appropriated in this bill would simply be another example of congressional overkill, that is, throwing money at a problem when it is not really needed.

For these reasons I opposed H.R. 8800 and voted against it. I totally support the concept of a pollution-free, energy-saving electric vehicle. However, I do not feel that H.R. 8800 rationally addresses the problem nor do I think it will substantially contribute to the development of such a vehicle.

Mr. GOLDWATER. Mr. Chairman, I have no further requests for time.

The CHAIRMAN. There being no further requests for time, the Clerk will read.

The Clerk read as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Electric Vehicle Research, Development, and Demonstration Act of 1975".

FINDINGS

SEC. 2. The Congress hereby finds that—

(1) travel patterns of commercial and private vehicles in urban areas are weighted heavily toward short and predictable trips well within the capability of electric vehicles;

(2) our balance of payments and our economic stability are threatened by the need to import oil for the production of liquid fuel for gasoline-powered vehicles;

(3) the shortage of fuel for gasoline-powered vehicles will continue indefinitely;

(4) the increased price of petroleum is a major factor in recent inflationary trends;

(5) the strain on individuals' budgets inflicted by liquid fuel prices mandates the development of an alternative source of propulsion wherever possible;

(6) environmental pollution control is becoming more and more difficult and expensive with the use of gasoline-powered vehicles, and the steadily increasing numbers of such vehicles threaten the quality of the air even when strict controls are applied to individual vehicles;

(7) stationary sources of pollutants are potentially easier to control than moving vehicles, making it environmentally desirable for transportation systems to be powered from central sources;

(8) liquid-fuel-powered vehicles are a major source of urban noise pollution;

(9) electric-powered vehicles do not emit any significant pollutants and are far less noisy than conventional automobiles and trucks;

(10) new technologies of propulsion and control have made electric and hybrid vehicles more practicable than in the past, and developments in battery technology indicate that further progress is likely in the next decade;

(11) because electric and hybrid vehicles use little or no energy when stopped in urban traffic, they permit the conservation of energy currently wasted by conventional automobiles and trucks;

(12) the power demands of electric and hybrid vehicles would promote energy conservation by loading utilities in off-peak late night hours, permitting more efficient use of plant capacity;

(13) the depressed state of the current automobile industry would be alleviated by the introduction of new technologies more closely matching consumer needs; and

(14) because of the large capital needs of new transportation technology, and the built-in features of current highway and maintenance systems which tend to bias consumers toward conventional vehicles, a Federal role is required in promoting the development of the socially desirable electric and hybrid vehicle industry.

POLICY AND GOALS

SEC. 3. (a) It is declared to be the policy of the United States and the purpose of this Act to demonstrate the commercial feasibil-

ity of electric and hybrid vehicles for urban individual and business use, and to encourage research and development in new technologies for electric and hybrid vehicles with wider applications, in order to promote long-range conservation of liquid fuel and reduce environmental pollution.

(b) In carrying out the purpose of this Act it is the goal of the Federal Government—

(1) to promote the substitution of electric and hybrid vehicles for many gasoline- and diesel-powered vehicles currently used in routine short-haul, low-load applications;

(2) to implement this policy by removing institutional barriers to such substitution where otherwise practicable;

(3) to provide incentives for consumers and industry to adopt and utilize electric and hybrid vehicles whenever the use of such vehicles would be beneficial; and

(4) to provide a research and development background for further applications as rapidly as possible to meet the further tightening of liquid fuel availability.

DEFINITIONS

SEC. 4. For the purposes of this Act—

(1) The term "electric vehicle" means a vehicle which is powered by an electric motor drawing current from rechargeable storage batteries, fuel cells, or other portable sources of electrical current, and which may include also a nonelectrical source of power designated to charge batteries.

(2) The term "hybrid vehicle" means a vehicle propelled by a combination of an electric motor and an internal combustion engine or other alternative engine.

(3) The term "project" means the Electric Vehicle Research, Development, and Demonstration Project established within the Energy Research and Development Administration as provided in section 5.

(4) The term "Administrator" means the Administrator of the Energy Research and Development Administration.

MANAGEMENT

SEC. 5. (a) The Administrator shall promptly establish, as an organizational entity within the Energy Research and Development Administration, the Electric Vehicle Research, Development, and Demonstration Project.

(b) The overall management of the project shall be the responsibility of the Administrator, but he may enter into such arrangements and agreements with the National Aeronautics and Space Administration, the Secretary of Transportation, the National Science Foundation, the Environmental Protection Agency, the Secretary of Housing and Urban Development, and other Federal offices and agencies as he may deem necessary or appropriate for the conduct by them of parts or aspects of the project which are within their particular competence.

(c) In providing for the effective management of the project the Administrator shall have specific responsibility for—

(1) promoting basic and applied research on electric and hybrid vehicle batteries, controls, and motors;

(2) determining optimum overall electric and hybrid vehicle design;

(3) conducting demonstrations of the feasibility of commercial electric and hybrid vehicles by contracting for the practical manufacture of electric and hybrid vehicles and by developing arrangements with other agencies and nongovernmental entities for the operation of such vehicles;

(4) ascertaining consumer needs and desires so as to match the design of electric and hybrid vehicles to their potential market; and

(5) ascertaining the long-term changes in road design, urban planning, traffic management, maintenance facilities, utility rate structures, and tax policies which are needed to facilitate the manufacture and use of electric and hybrid vehicles.

RESEARCH AND DEVELOPMENT

SEC. 6. The Administrator, acting through appropriate agencies and contractors, shall initiate and provide for the conduct of research and development in areas related to electric and hybrid vehicles, including—

(1) energy storage technology, including batteries and their potential for convenient recharging;

(2) vehicle control systems and overall design for energy conservation, including the use of regenerative braking;

(3) urban design and traffic management for optimum transportation-related energy use and minimum transportation-related degradation of the environment; and

(4) vehicle design for maximum practical lifetime, ease of repair, and interchangeability and replaceability of parts.

DEMONSTRATION

SEC. 7. (a) The Administrator (subject to section 13(c)) shall enter into such contracts as may be necessary and appropriate—

(1) within one year after the date of the enactment of this Act, for the production of a reasonable number of urban passenger and commercial electric vehicles for the purpose of evaluation tests and initial in-use demonstration of current state-of-the-art;

(2) within fifteen months after such date, for the production of at least twenty-five hundred select urban passenger and commercial electric vehicles (meeting the initial standards and criteria developed under subsection (b)) with available components and designs; and

(3) within forty-two months after such date, for the production of at least five thousand urban passenger and commercial electric or hybrid vehicles (meeting the appropriate standards and criteria developed under subsection (b)) which have advanced components and designs.

(b)(1) Within one year after the date of the enactment of this Act, the Administrator shall develop or arrange for the development of initial performance standards and criteria which are suitable for the needs of urban private passenger vehicles and urban commercial vehicles (and which shall be applicable to the vehicles produced under subsection (a)(2)). The standards and criteria so developed shall not be designed simply to reflect the characteristics of current internal combustion engine automobiles and trucks, but shall also take into account the factors of energy conservation, urban traffic characteristics, patterns of use for "second" vehicles, consumer preferences, maintenance needs, battery recharging characteristics, materials demand and recyclability, vehicle safety and insurability, and other relevant considerations, as such factors and considerations particularly apply to or affect vehicles with electric or hybrid propulsion systems. Such standards and criteria are to be developed and determined utilizing the best current state-of-the-art and utilizing the state-of-the-art that would be projected to result from the research and development program described in section 6. These performance standards and criteria shall be revised periodically as the state-of-the-art improves. In developing such standards and criteria, the Administrator shall consult with appropriate authorities concerning design needs for electric and hybrid vehicles compatible with long-range urban planning, traffic management, and vehicle safety.

(2) Before entering into contracts for the production of vehicles under subsection (a)(3), the Administrator shall transmit to the Speaker of the House of Representatives and the President of the Senate and to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce of the Senate a full and complete statement of the standards and criteria developed under paragraph (1) as revised and currently in effect.

(c) The Administrator shall make such arrangements as may be necessary or appropriate—

(1) for the introduction of the electric and hybrid vehicles produced under subsection (a) into the vehicle fleets of State and local governments and Federal agencies;

(2) for the introduction of such vehicles into individual and business use, with the individuals and businesses involved being chosen by an equitable process (such as a lottery in each region or category) and being given the option of purchasing or leasing such vehicles under terms and conditions which will insure their widespread use;

(3) for the evaluation of electric and hybrid vehicle performance and of consumer reaction to electric and hybrid vehicles in use;

(4) for demonstration maintenance projects (including maintenance organization and equipment needs), and model training projects on maintenance procedures; and

(5) for the dissemination of data on electric and hybrid vehicle safety and operating characteristics (including nontechnical descriptive data made available through the Government Printing Office) to State and municipal consumer affairs agencies and groups.

USE OF ELECTRIC AND HYBRID VEHICLES BY FEDERAL AGENCIES

SEC. 8. The United States Postal Service, the General Services Administration, the Secretary of Defense, and the heads of other Federal agencies shall arrange for the introduction of electric and hybrid vehicles into their fleets as soon as possible. For competitive procurement purposes in purchasing such vehicles, life cycle costing and the beneficial emission characteristics of electric and hybrid vehicles shall be fully taken into account. In any case where (as determined by the head of the agency involved) electric or hybrid vehicles are practical but are not economically competitive with conventional vehicles, the Administrator may pay the incremental costs of the electric or hybrid vehicles (as part of the demonstration program under section 7) to insure that the maximum number of electric and hybrid vehicles are placed in use by Federal agencies.

INCENTIVES AND ASSESSMENTS

SEC. 9. (a) The Administrator shall conduct a study to determine the existence of any tax, regulatory, traffic, urban design, and other institutional factors which tend or may tend to bias surface transportation systems toward vehicles of particular characteristics, and shall report the results of such study to the Congress within one year after the date of the enactment of this Act.

(b) The Administrator shall conduct a continuing assessment of the long-range materials demand and pollution effects which may result from or in connection with the electrification of urban traffic, and shall include a statement of his current findings in each report submitted under section 12. Any environmental impact statement which may be filed under a Federal law with respect to research, development, or demonstration activities under this Act shall include reference to the matters which are subject to assessment under this subsection.

(c) In carrying out his functions under this Act, the Administrator shall perform or cause to be performed studies and research on incentives to promote broader utilization and consumer acceptance of electric and hybrid vehicle technologies.

(d) The Secretary of Transportation shall conduct a study on the current and future applicability of safety standards and regulations to electric and hybrid vehicles and shall report the results of such study to the Administrator within two hundred forty days after the date of the enactment of this Act.

ENCOURAGEMENT AND PROTECTION OF SMALL BUSINESS

SEC. 10. (a) In carrying out his functions under this Act, the Administrator shall take steps to assure that small business concerns and qualified individuals will have realistic and adequate opportunities to participate in the program under this Act to the maximum extent possible.

(b) To assist in accomplishing the objective of subsection (a), the Administrator shall reserve for contracts with small business concerns a reasonable portion of the funds made available pursuant to this Act for purposes of section 7(a).

(c) In addition, the Administrator—

(1) shall include in all contracts under section 7(a) such terms, conditions, and payment schedules as may assist in meeting the special needs of small business concerns, and shall take steps to avoid the inclusion in such contracts of any terms, conditions, or penalties which would tend to prevent such concerns from participating in the program under this Act; and

(2) shall make planning grants available to qualified small business concerns which require assistance in developing, submitting, and entering into such contracts.

LOAN GUARANTIES

SEC. 11. (a) It is the policy of the Congress to encourage and assist in the commercial development of electric and hybrid vehicles, and to ensure that small businesses are not excluded from participation in such development due to lack of adequate capital. Accordingly, it is the policy of the Congress to provide guaranties of loans made for such purposes.

(b) In order to encourage the commercial production of electric and hybrid vehicles, the Administrator is authorized to guarantee, and to enter into commitments to guarantee, lenders against loss of principal or interest on loans made by such lenders to qualified borrowers, primarily small business concerns, for the purposes of—

(1) research and development related to electric and hybrid vehicle technology;

(2) prototype development for such vehicles and parts thereof;

(3) construction of capital equipment related to research on and development and production of electric and hybrid vehicles and components; or

(4) initial operating expenses associated with the development and production of electric and hybrid vehicles and components.

(c) Any guaranty under this section shall apply only to so much of the principal amount of the loan involved as does not exceed 90 per centum of the aggregate cost of the activity with respect to which the loan is made.

(d) Loan guaranties under this section shall be on such terms and conditions as the Administrator determines, except that a guaranty shall be made under this section only if—

(1) the loan bears interest at a rate not to exceed such annual per centum on the principal obligation outstanding as the Administrator determines to be reasonable, taking into account the range of interest rates prevailing in the private sector for similar loans and risks by the United States;

(2) the terms of such loan require full repayment over a period not to exceed fifteen years;

(3) in the judgment of the Administrator, the amount of the loan (when combined with amounts available to the qualified borrower from other sources) will be sufficient to carry out the activity with respect to which the loan is made; and

(4) in the judgment of the Administrator, there is reasonable assurance of repayment of the loan by the qualified borrower.

(e) The aomunt of the guaranty of any loan for any single qualified borrower shall not exceed $3,000,000; and the aggregate amount of guaranties outstanding under this section at any one time shall not exceed $60,000,000.

(f) As used in this section, the term "qualified borrower" means any partnership, corporation, or other legal entity which (as determined by the Administrator) has presented satisfactory evidence of an interest in electric or hybrid vehicle technology and is capable of performing research or completing the development and production of electric or hybrid vehicles in an acceptable manner.

(g)(1) With respect to any loan guaranteed pursuant to this section, the Administrator (subject to section 13(c)) is authorized to enter into a contract to pay, and to pay, the lender for and on behalf of the borrower the interest charges which become due and payable on the unpaid balance of any such loan if the Administrator finds—

(A) that the borrower is unable to meet interest charges, that it is in the public interest to permit the borrower to continue to pursue the purposes of his project, and that the probable net cost to the Federal Government in paying such interest will be less than that which would result in the event of a default; and

(B) the amount of such interest charges which the Administrator is authorized to pay shall be no greater than the amount of interest which the borrower is obligated to pay under the loan agreement.

(2) In the event of any default by a qualified borrower on a guaranteed loan, the Administrator is authorized to make payment in accordance with the guaranty, and the Attorney General shall take such action as may be appropriate to recover the amounts of such payments (including any payment of interest under paragraph (1)) from such assets of the defaulting borrower as are associated with the activity with respect to which the loan was made or from any other surety included in the terms of the guaranty.

(h) No loan guaranties shall be made, or interest assistance contracts entered into, pursuant to this section, after the expiration of the 5-calendar-year period following the date of the enactment of this Act.

REPORTS TO CONGRESS

SEC. 12. The Administrator shall submit to the Congress semiannually a report on all activities being undertaken or carried out pursuant to the provisions of this Act, including (1) such projections and estimates as may be necessary to evaluate the progress of the program under this Act and to indicate the extent to which and pace at which the objectives of this Act are being achieved, and (2) a statement of the extent to which imported automobile chassis or components are being used, or are desirable, for the production of vehicles under section 7a), and of the extent to which restrictions imposed by law or regulation upon the importation or use of such chassis or components are impeding the achievement of the purpose of this Act. Each such report shall also include any recommendations which the Administrator may deem appropriate for legislation or related action which might further the purposes of this Act.

APPROPRIATIONS AND APPROPRIATION ACTS

SEC. 13. (a) There are authorized to be appropriated to the Administrator to carry out this Act (including the payment of loan guaranties and interest under section 11) not to exceed $10,000,000 for the fiscal year 1976, and the three-month transition period immediately following, not to exceed $40,000,000 for the fiscal year 1977, not to exceed $30,000,000 for the fiscal year 1978, not to exceed $60,000,000 for the fiscal year 1979, and not to exced $20,000,000 for the fiscal year 1980. Any amount appropriated pursuant to this section shall remain available until expended, and any amount authorized for any fiscal year (or period) prior to the fiscal year 1980 but not appropriated may be appropriated for any succeeding fiscal year through the fiscal year 1980.

(b) Any moneys received by the Administrator from vehicle sales or leases (or other activities) under this Act may be retained and used by him in carrying out this Act, notwithstanding the provisions of section 3617 of the Revised Statutes (31 U.S.C. 484), and may remain available until expended; but the amount authorized to be appropriated for any fiscal year (or period) under subsection (a) shall be reduced by the amount of the moneys to be so received in that year (or period).

(c) The authority of the Administrator to enter into contracts under section 7(a) or section 11(g)(1) shall be effective for any fiscal year (or period) only to such extent as is provided in appropriation Acts.

Mr. TEAGUE (during the reading). Mr. Chairman, I ask unanimous consent that the bill be considered as read, printed in the RECORD, and open for amendment at any point.

The CHAIRMAN. Is there objection to the request of the gentleman from Texas?

There was no objection.

COMMITTEE AMENDMENT

The CHAIRMAN. The Clerk will report the committee amendment.

The Clerk read as follows:

Committee amendment: Page 15, line 25, after "vehicles" insert "or any components thereof".

Mr. McCORMACK. Mr. Chairman, I simply wish to point out that the committee amendment provides clarifying language to establish that when we are speaking of vehicles, we are also speaking of component parts.

The committee amendment was agreed to.

AMENDMENT OFFERED BY MR. WAMPLER

Mr. WAMPLER. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. WAMPLER: Page 2, after line 6, insert the following new paragraph:

"(2) travel patterns of motor vehicles used on farms for agricultural production and rural travel, including automobiles, tractors and trucks, in many applications are within the capability of electric vehicles;"

And renumber the succeeding paragraphs accordingly.

Mr. TEAGUE. Mr. Chairman, will the gentleman yield?

Mr. WAMPLER. Yes; I yield to the gentleman from Texas.

Mr. TEAGUE. Mr. Chairman, we think the gentleman's amendment is an improvement to the bill and a very necessary amendment.

This side of the aisle would accept the gentleman's amendment.

Mr. WAMPLER. I thank the gentleman.

Mr. McCORMACK. Mr. Chairman, will the gentleman yield?

Mr. WAMPLER. Yes, I yield to the gentleman from Washington.

Mr. McCORMACK. Mr. Chairman, I want to concur in the remarks of our chairman and say that I have no objection to the amendment. I think that it does make a contribution to the bill.

I would like to ask this: Would the gentleman request that the Chair consider all of his amendments en bloc? I suggest that that be done.

However, I do want to make one comment. What we are talking about here is extending the scope of this bill into the agricultural community, and I think we should have in the RECORD a recognition that there are areas of agricultural work which are suitable for electric propulsion and those that are not, and that we are not suggesting that ERDA get into the business of trying to develop electric vehicles or devices that require great power or great torque, but, rather, we are talking about vehicles that can operate at about the same power levels as the vehicles we have been talking about for in-city use.

Is this consistent with the gentleman's recommendations?

Mr. WAMPLER. The gentleman from Washington is eminently correct. That is certainly my understanding of the intent of the bill.

Mr. McCORMACK. Mr. Chairman, I thank the gentleman. I have no objection to the amendment.

Mr. GOLDWATER. Mr. Chairman, will the gentleman yield?

Mr. WAMPLER. Yes, I yield to the gentleman from California.

Mr. GOLDWATER. Mr. Chairman, the minority has already discussed this addition to the language of the bill by the gentleman from Virginia (Mr. WAMPLER) and has no objection.

It appears to me to have been an oversight on our part that a significant portion of our fossil fuel consumption is devoted to agricultural use and that, obviously, this was an oversight on our part.

This amendment, as I understand, expands the scope of the demonstration and research to include farm application. Therefore, Mr. Chairman, this side of the aisle has no objection to the amendment.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Virginia (Mr. WAMPLER).

The amendment was agreed to.

AMENDMENTS OFFERED BY MR. WAMPLER

Mr. WAMPLER. Mr. Chairman, I offer six additional amendments, and I ask unanimous consent that the amendments be considered en bloc since they all relate to the one basic item in the bill.

The CHAIRMAN. Is there objection to the request of the gentleman from Virginia?

There was no objection.

The CHAIRMAN. The Clerk will report the remaining amendments.

The Clerk read as follows:

Amendments offered by Mr. WAMPLER: Page 2, after line 17, insert the following new paragraph:

"(7) the potential negative impact of continued motor vehicle fuel price increases on farm production mandates the development of alternate sources of farm vehicle propulsion whenever possible;"

and renumber the succeeding paragraphs accordingly.

Page 4, line 8, strike the comma and insert in lieu thereof: "and farm applications,".

Page 5, after line 19, insert the following new paragraph:

"(5) The term 'commercial electric vehicles' in section 7 includes motor vehicles used for business purposes on farms, such as tractors and trucks, for agricultural production and rural travel, in addition to vehicles used for commercial purposes in urban areas."

Page 6, line 6, after the comma, insert: "the Secretary of Agriculture,".

Page 9, line 4, after the comma, insert: "agricultural requirements,".

Page 10, line 8, after the comma, insert: "including farms,".

Page 10, line 25, strike the period and insert in lieu thereof: ", and Federal, State, and local farm and rural agencies and groups."

Page 11, line 21, after the comma, insert: "rural electrical".

Mr. MATSUNAGA (during the reading). Mr. Chairman, we understand the amendments. I ask unanimous consent that the remaining amendments be considered as read and printed in the RECORD.

The CHAIRMAN. Is there objection to the request of the gentleman from Hawaii?

There was no objection.

Mr. WAMPLER. Mr. Chairman, before I discuss these amendments, I would like to take this opportunity to welcome our colleague, the distinguished chairman of the Science and Technology Committee back to this Chamber. I know how important these bills today are to him and I certainly join my colleagues in commending him for them. I also am extremely pleased to see him here this morning and to see him looking so well.

Mr. Chairman, I have been following the progress of H.R. 8800, the Electric Vehicle Research, Development and Demonstration Act of 1975, with great interest. I believe the bill is a significant step in shifting away from our current dependence on imported oil, and our colleague from Texas and the Energy Research, Development and Demonstration Subcommittee are to be commended for reporting it. I do note that the bill as reported appears to focus primarily on urban applications. As a result, I am concerned that the bill would effectively exclude agricultural applications or at least dissuade ERDA from considering them fully in its implementation of the R. & D. and demonstration program. My amendments would remedy this situation.

To effect the remedy within H.R. 8800's legislative scheme, I am offering this series of amendments to the bill. Their effect would be threefold. First, they would clearly establish in the congressional findings and policy that the Federal electric vehicle program should include agricultural applications. Second, they would insure that the fine research and extension capabilities of the Department of Agriculture are included in the program, and inputs are obtained from the Department and fully considered in the R. & D. and demonstration program. Finally, they would expressly include for such applications in the demonstration program and provide for participation by farmers.

Briefly, let me discuss the justification for including agricultural applications for your background information. Staff research in the past month indicates that there are many agricultural applications which are compatible with electric vehicle capabilities today and in the future.

A Department of Agriculture, Economic Research Service study so concluded and provided substantial statistical data to support that conclusion. Let me quote briefly from that Economic Research Service Report:

There appear to be several areas where such (electric vehicle) applications are feasible, in both farm and farm related activities. Electrical vehicles may feasibly replace power units used on the farm for light chores or short trips. Many farmers retain older, smaller tractors for light utility and miscellaneous farm work which would underutilize a larger tractor. Some of the units are used for materials handling (feed and fertilizer, for example), for powering portable elevators and feed mixers, and for other tasks which do not generally require high torque output from the power units. Similarly, many farmers employ pick-up trucks and automobiles for light work on the farm. It appears that electrical vehicles would have the greatest applicability in these and the other light tasks mentioned above.

Now, I recognize that valid technical considerations probably will preclude use of electric propulsion for some uses on the farm. Again quoting briefly from the Economic Research Service report, I think it is important that we all appreciate that electric propulsion is not a panacea for all of the farmers' problems:

The economic feasibility of replacing gasoline and diesel fueled farm power units is greatest in those uses which place the least load on the power units. Many types of farming operations, for example, deep plowing, require high torque and low speed operation from the units providing the power for those operations. Large tractors with powerful hydraulic systems are the most efficient for these types of applications, for although electric motors can develop considerable torque, they do so at high speeds, not feasible for some types of farm operations.

But, it is important to remember that the report concluded that there are many applications on the farm which fall within the electric vehicle technological capability.

Also, the National Rural Electric Cooperative Association presented written testimony to your committee during the H.R. 8800 hearings and urged that the bill be expanded to include such applications. As you know, the NRECA represents 950 consumer-owned cooperatives which provide electric service to about 25 million people in the rural and sparsely populated agricultural areas of 46 States, and in 2,600 of the Nation's 3,100 counties. In fact, NRECA member rural electric systems at their annual meeting in January of this year—attended by 10,529 delegates and officials—adopted the following resolution:

Electric Vehicle Research—A viable electric vehicle would significantly reduce the consumption of nonrenewable resources and help to eliminate the major source of air pollution. Research toward developing such a vehicle is now underway, and the successful completion of such efforts could significantly affect the load patterns and requirements of rural electric systems. We support electric vehicle research efforts now underway and urge further involvement and effort by others, including the Federal government, to expedite this important development. We also urge that in conjunction with this research, studies be undertaken to determine the changes in electric system loads that may result from such a development.

In the testimony submitted to the Science and Technology Committee, NRECA stated the following:

Rural electric systems have long been interested in electric vehicle development for several reasons:

1. Rural electric cooperatives serve well over half of the farms in the nation and these farms produce over 65% of total agricultural products (78% of the wheat). Farms present an unusual, and excellent opportunity to test and use electric vehicles, particularly in the initial stages of development. Farmers have the expertise and the mechanical ability to evaluate and properly maintain such equipment.

2. Farms offer a good potential market for a wide variety of electric vehicles with medium to slow speeds and short range characteristics.

3. Rural electric systems serve a large number of rural people who work in nearby communities but have no access to mass transportation and therefore must commute in private autos.

4. Rural electric systems serve predominantly farm and rural residences with few industries and commercial establishments and therefore because of lack of load diversity, generally have lower load factors than other metropolitan based utilities. Electric vehicles, with batteries charged at off-peak hours could add substantially to their overall efficiency of power distribution.

We believe, because of the need and opportunity for on-the-farm use of electric vehicles, a special effort should be made to develop a vehicle or vehicles for this market. Most farmers have need for a small service vehicle, perhaps a small pick-up truck, designed for hauling small loads (fuel, feed, produce, etc.) or just running errands around the farmstead. A 50 mile range would be adequate for most tasks and speeds of 40 to 50 mph would rarely be exceeded. Tractors or full sized pick-up trucks usually used for these duties are not only inconvenient but are costly to maintain.

Specialized farming (dairying, poultry, swine, truck farming) offers many possibilities for electric vehicles designed specifically to help automate farming operations. Batteries and electronic controls developed for use in electric passenger and commercial vehicles could substantially enhance the development and use of specialized electric work vehicles on the farm.

We note that the language of H.R. 5470 frequently refers to "*urban* private passenger vehicles and *urban* commercial vehicles." Because of the potential for extensive farm and rural use of electric vehicles, we respectfully request that the. . . .

We also urge that a statement be included in response to the NRECA membership resolution requiring that "studies be undertaken to determine the changes in electric system loads that may result from such development."

Finally we urge ERDA to give special attention to the need for a good public information program, and that "data on electric vehicle safety and operating characteristics" be disseminated as widely as possible via public information media and also to electric utilities.

Discussions with the Agricultural Research Service, the Rural Electrification Administration, and the Rural Development Service also confirmed the potential for agricultural applications of electric vehicles and acquired the support of each of those agencies for the concept of including the applications in the ERDA program. I think it is particularly important to note that an increasing number of farmers nationwide are reporting that fuel prices are now becoming a limiting factor in agricultural production.

In fact, only a few weeks ago CBS television news interviewed farmers on the impact of deregulation of domestic oil and the statements all indicated that fuel prices were going to actually limit the number of acres farmed unless something were done to reverse the current trend. I suggest that my amendments will do just that.

Let me give you a few facts on farm vehicle costs, fuel usage, and operations to clearly place this problem in perspective.

In 1973 farm machinery figures: tractors, 4,387,000; trucks, 2,915,000; and autos, 2,688,000.

In 1973, farm fuel usage for vehicles:

Tractors: 1.9 billion gallons of gasoline and 2.3 billion gallons of diesel fuel.

Farm trucks: 1.3 billion gallons of gasoline, and some diesel.

Farm autos: 1.45 billion gallons of gasoline, of which 25 percent or 362 million gallons approximately are for business.

Total: 7 billion gallons or approximately 175 million barrels or approximately a half a million barrels per day or 3 percent of the Nation's total oil consumption.

Projected 1980 fuel consumption: Tractors, 3.035 billion gallons; autos and trucks, 2.797 billion gallons, 1.4 to 1.6 of this will be for export production.

Fuel costs, 1973: $1.87 billion—other vehicle operating expenses equal $1.6 billion.

Fuel costs, 1974: $2.67 billion—other vehicle operating expenses equal $1.8 billion.

Capital expenditures for motor vehicles, 1974: Tractors, $1.93 billion; trucks, $0.76 billion;* autos, $0.35 billion;* total, $3.04 billion.

As you can see, this is not a small problem. We, the Congress, must act and we must act now.

I believe it is imperative that the Federal Government begin an effort to develop alternative propulsion sources for agricultural vehicles, and H.R. 8800 can and should be the vehicle for that effort. In fact, the Agricultural Research Service is currently participating in a similar way in ERDA programs in the solar, wind, and bioconversion areas by focusing for ERDA on the farm and rural application aspects of the development of these new technologies. Additionally, the Agricultural Extension Service provides a natural vehicle for public education regarding electric vehicle applications in the farm and rural areas. Many of the individuals approached on the concept in ARS and the Extension Service also pointed out that the demonstration vehicles would be a decided bonus for the program.

I recognize that the primary focus of the demonstration program should be on the urban automobile application, consistent with petroleum fuel consumption patterns. Accordingly, I have not included any specific number of requirements for agricultural demonstration units. In light of relative fuel consumption percentages between urban and agricultural applications—a ratio of approximately 12 to 1—a reasonable agricultural portion of the demonstration might be 10 percent or 250 units in the "second buy" phase and 500 units in the "third buy" phase. I would certainly appreciate the comments of the distinguished committee chairman and subcommittee chairman on this matter and I think it is important that we discuss it here to give a clear legislative history for the administration's implementation of the act.

Let me conclude by commenting specifically on the amendments I am offering so there is no mistake as to our action here this morning. The amendments to section 2 merely state that we have in fact recognized that electric vehicles have potential applications on the farm and that full consideration of that potential is merited in light of the problems which farmers are facing and will face for the foreseeable future. The amendment to section 3 broadens our policy statement to include the farming application in the program.

The additional definition added to section 4, "commercial electric vehicles" in section 7, is the key amendment in this package. It would have the effect of requiring ERDA to include farm applications in the 7,500 vehicle, three-phase demonstration program. The amendment to section 5 will expressly add the Department of Agriculture into the program's management structure, which I think is important in light of the fine capability of the Agricultural Research Service and Agriculture Extension Service to implement much of the agricultural portions of the program. The amendments to section 7 add the agricultural applications concept to the demonstration project's planning and implementation. The first one—page 9, line 4—will insure that agriculture requirements are considered and included in the criteria for the demonstration procurements. The second—page 10, line 8—will add farmers to the list of participants who actually will operate the demonstration vehicles. The third—page 10, line 25—will add rural and agricultural agencies and organizations to the groups which will be disseminating the information on electric vehicles to the farm community.

Let me pause for a moment on this amendment. I think it is important that we recognize how quickly and efficiently information can flow to the farmer on electric vehicles. He is now just plain naturally interested in new equipments as a part of his being and, with ever-increasing fuel prices, he is economically motivated to give full consideration to this concept, perhaps more so than his urban brothers and sisters. And, I do note from an earlier statement in this Chamber by our distinguished colleague from California and the ranking minority member on the Energy Subcommittee here this morning, that preliminary data from the Postal Service's use of electric mail trucks in his great State indicates that savings in maintenance

*Assumes business purposes=74% truck and 25% auto.

and spare parts costs, as well as fuel, may well make those vehicles' cost competitive on a life cycle basis with today's technology.

Also, the Extension Service provides an excellent capability for effectively and quickly getting the message to the farmer. In short, it is a unique opportunity to accelerate the demonstration and ultimate commercialization of the resulting technology in the farm sector.

The final amendment would direct ERDA to give full consideration to the impact of farm vehicle electrification on the rural electrical situation and to focus generally on the institutional factors associated with rural, as opposed to urban, electrification.

Mr. Chairman, these amendments together will effectively implement the agricultural application concept. The amendments have been drafted with the kind assistance of the Science Committee staff, for which I thank the chairmen of the committee and subcommittee and the ranking minority members. These amendments will positively affect the remedy not only to a major energy problem, but also to a rapidly developing agricultural problem, which, of course, is of great personal concern to me and the Committee on Agriculture.

Again, I commend the committee for its outstanding work on this bill and offer my sincere regards to its great chairman. I urge your support of these amendments, and would be happy to answer any questions you may have.

The CHAIRMAN. The question is on the amendments offered by the gentleman from Virginia (Mr. WAMPLER).

The amendments were agreed to.

AMENDMENT OFFERED BY MR. DINGELL

Mr. DINGELL. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. DINGELL: On page 10, after line 25, insert the following new subsection:

"(d) Every contract entered into pursuant to this section shall be subject to the provisions of the Buy American Act (41 U.S.C. 10a through 10d) and contain the provision required by the Act for public works."

Mr. TEAGUE. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I am delighted to yield to my friend the gentleman from Texas (Mr. TEAGUE).

Mr. TEAGUE. Mr. Chairman, the committee has been informed by the general counsel of ERDA that they are covered now under the law by the Buy American Act and therefore, I do not think it requires the adoption of the amendment the gentleman from Michigan is offering.

Mr. DINGELL. Mr. Chairman, I want to thank my friend, the chairman of the full committee the gentleman from Texas (Mr. TEAGUE). I have offered this amendment with the full expectation of engaging in a colloquy precisely of this kind with my good friend. I think his statement is most helpful when the gentleman says that the purpose of the amendment is already covered, and that they will continue to apply the purposes of this amendment under the Buy American Act to contracts of the kind that are alluded to in this particular section of the bill relating to the procurement of electric automobiles. Therefore, since, as my good friend the chairman of the committee has talked to me and told me that he has been advised that he and his committee have been informed by the general counsel of ERDA that this is indeed covered, and that this kind of a contract very specifically would be covered by the bill under the Buy American Act without the necessity for the amendment, therefore I see no need for the adoption of the amendment after having created this kind of legislative history.

Mr. OTTINGER. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I yield to the gentleman from New York.

Mr. OTTINGER. Mr. Chairman, I would just like to make it clear to the gentleman from Michigan that, as I am sure the gentleman knows, there is already a very advanced state of the art presently in the production of electric vehicles at the present time, and, as a result, I am sure we will want to purchase some of those Japanese automobiles in order to be able to evaluate them and perhaps introduce some of the technology developed over there in our own development of electric vehicles in this country. I want to make sure that this amendment is not intended to interfere with that.

Mr. DINGELL. It does not interfere with such procurement unless that would be the case under the Buy American Act, and in their procurement they are subject to the provisions of the Buy American Act which does permit the acquisition of vehicles of this kind in our countries where they are not available from within the United States.

Mr. Chairman, having created that legislative history in the record, I would ask unanimous consent to withdraw the amendment.

The CHAIRMAN. Is there objection to the request of the gentleman from Michigan?

There was no objection.

AMENDMENTS OFFERED BY MR. DINGELL

Mr. DINGELL. Mr. Chairman, I offer two other amendments, and, in view of the fact that the bill is open to amendment at any point, and in view of the fact that the time is short, and since I do not believe the amendments are controversial, I would ask unanimous consent that the amendments be considered en bloc.

The CHAIRMAN. The Clerk will report the amendments.

The Clerk read as follows:

Amendments offered by Mr. DINGELL: On page 17, between lines 4 and 5 insert the following:

"(i) An applicant for a loan guarantee must be a citizen or national of the United States. A corporation, partnership, or association shall not be deemed a citizen of the United States unless the Administrator determines that it satisfactorily meets all the requirements of 46 U.S.C. 802 for determining the United States citizenship of such entities operating a vessel in the coastwide trade."

On page 12, line 19, after "Administrator" insert "and to the Congress".

The CHAIRMAN. Is there objection to the request of the gentleman from Michigan?

There was no objection.

Mr. TEAGUE. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I yield to the gentleman from Texas.

Mr. TEAGUE. Mr. Chairman, as far as I know there is no objction to the amendments from this side of the aisle and we will be glad to accept the amendments.

Mr. GOLDWATER. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I yield to the gentleman from California.

Mr. GOLDWATER. Mr. Chairman, I wonder if the gentleman from Michigan would state the purpose of these two amendments?

Mr. DINGELL. Mr. Chairman, I would be most pleased to do so.

The second amendment which I have offered, which appears at page 17, between lines 4 and 5, sets out the general criteria for receiving loan guarantees under the bill that would be required to be met for persons who engage in the operations of vessels in coastwise trade.

Those requirements, briefly, are that the corporation or the individual must be American. The corporation would be required under the Intercoastal Shipping Act to have, I believe the figure is, 75 percent of its stock held by American citizens and effective control by American citizens of the board of directors. This amendment would impose the same requirement on a person or corporation getting a guarantee under the provisions of this bill so that we would not be engaging in guarantees to foreigners or to foreign corporations to derive the benefits of American loan guarantees and at the same time achieve the benefits of the research, development, and technology for benefit of foreign nations.

Mr. GOLDWATER. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I yield to the gentleman from California.

Mr. GOLDWATER. I thank the gentleman for yielding.

Mr. Chairman, there is no objection to these amendments on this side. However, I think it would be important to point out the ERDA has registered some objections to this Amendment No. 2, I believe on the basis that they are looking for meaningful contributions to accelerate research, development, and demonstration of the electric vehicle, and the provisions of this amendment would, therefore, prohibit I believe certain subsidiaries of foreign corporations that are now involved in this country in the electric vehicle from making those meaningful contributions. To what extent this may cripple or hinder our efforts in this area I am not able to evaluate, but I think it is important to make that clear, that ERDA does object to this, and it may prevent ERDA from pursuing more aggressively the receipt of any input that foreign subsidiaries may have.

Mr. DINGELL. I am pleased to hear the comments that the gentleman has made that there is no objection on that side of the aisle.

Mr. MYERS of Pennsylvania. Mr. Chairman, will the gentleman yield?

Mr. DINGELL. I yield to the gentleman from Pennsylvania.

Mr. MYERS of Pennsylvania. I thank the gentleman for yielding.

For further classification, does this prevent a U.S. national from obtaining a loan guarantee and using those funds at a foreign facility?

Mr. DINGELL. I did not hear the gentleman's question.

Mr. MYERS of Pennsylvania. Under the amendment that the gentleman has, does that prevent a situation developing whereby an American national can obtain a loan guarantee and use that loan guarantee at a foreign facility?

Mr. DINGELL. No. The language of the amendment simply says:

An applicant for a loan guarantee must be a citizen or national of the United States.

Then it goes on to say:

A corporation, partnership, or association shall not be deemed a citizen of the United States unless the Administrator determines that it satisfactorily meets all the requirements of 46 U.S.C. 302 for determining the United States citizenship of such entities operating a vessel in the coastwise trade.

The amendment is silent as to the question of where the work would be done, but I assume that, given the normal prudence, that the Administrator would look with great disfavor on having this provision for loan guarantees being used to stimulate research abroad.

The CHAIRMAN. The time of the gentleman has expired.

(By unanimous consent (Mr. DINGELL) was allowed to proceed for 1 additional minute.)

Mr. DINGELL. The second amendment to which the gentleman alluded is the requirement that reports as set forth by the bill be made available not only to the Administrator but also to the Congress so that the Committee on Science and Technology and the House of Representatives and the Senate will have full appreciation of what is going on.

Mr. Chairman, I yield back the remainder of my time.

The CHAIRMAN. The question is on the amendments offered by the gentleman from Michigan (Mr. DINGELL).

The amendments were agreed to.

The CHAIRMAN. If there are no further amendments, under the rule, the Committee rises.

Accordingly the Committee rose; and the Speaker having resumed the chair, Mr. MURPHY of Illinois, Chairman of the Committee of the Whole House on the State of the Union, reported that that Committee having had under consideration the bill (H.R. 8800) to authorize in the Energy Research and Development Administration a Federal program of research, development, and demonstration designed to promote electric vehicle technologies and to demonstrate the commercial feasibility of electric vehicles, pursuant to House Resolution 694, he reported the bill back to the House with sundry amendments adopted by the Committee of the Whole.

The SPEAKER. Under the rule, the previous question is ordered.

Is a separate vote demanded on any amendment? If not, the Chair will put them en gros.

The amendments were agreed to.

The SPEAKER. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed and read a third time, and was read the third time.

The SPEAKER. The question is on the passage of the bill.

The question was taken; and the Speaker announced that the ayes appeared to have it.

Mr. BELL. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER. Evidently a quorum is not present.

The Sergeant at Arms will notify absent Members.

The vote was taken by electronic device, and there were—yeas 308, nays 60, not voting 65, as follows:

[Roll No. 496]

YEAS—308

Abdnor	Delaney	Howard
Abzug	Dellums	Howe
Adams	Derrick	Hughes
Alexander	Dingell	Hyde
Ambro	Dodd	Ichord
Anderson, Calif.	Downey, N.Y.	Jacobs
Anderson, Ill.	Downing, Va.	Jenrette
Andrews, N.C.	Drinan	Johnson, Calif.
Andrews, N. Dak.	Duncan, Tenn.	Johnson, Colo.
Annunzio	du Pont	Johnson, Pa.
Ashley	Early	Jones, Ala.
Aspin	Eckhardt	Jones, N.C.
AuCoin	Edgar	Jones, Okla.
Badillo	Edwards, Calif.	Jordan
Bafalis	Eilberg	Karth
Baucus	Emery	Kasten
Beard, R.I.	English	Kastenmeier
Bedell	Esch	Kazen
Bell	Evans, Colo.	Keys
Bennett	Evins, Tenn.	Krebs
Bergland	Fascell	Krueger
Blanchard	Fenwick	LaFalce
Blouin	Fish	Lagomarsino
Boggs	Fisher	Landrum
Boland	Fithian	Leggett
Bolling	Flood	Lehman
Bonker	Florio	Lent
Bowen	Flowers	Litton
Brademas	Flynt	Lloyd, Calif.
Breckinridge	Foley	Lloyd, Tenn.
Brodhead	Ford, Mich.	Long, La.
Brooks	Forsythe	Lujan
Broomfield	Fountain	McCormack
Brown, Calif.	Frenzel	McDade
Brown, Ohio	Frey	McFall
Burgener	Fuqua	McHugh
Burke, Calif.	Gaydos	McKinney
Burke, Mass.	Giaimo	Madden
Burlison, Mo.	Gilman	Madigan
Burton, John	Ginn	Maguire
Burton, Phillip	Goldwater	Mahon
Byron	Gonzalez	Mann
Carney	Goodling	Martin
Carr	Grassley	Matsunaga
Carter	Green	Mazzoli
Cederberg	Gude	Meeds
Chappell	Guyer	Melcher
Clausen, Don H.	Hagedorn	Meyner
Clay	Haley	Mezvinsky
Cleveland	Hall	Mikva
Cochran	Hammer-schmidt	Milford
Cohen	Hanley	Miller, Calif.
Collins, Ill.	Hannaford	Miller, Ohio
Collins, Tex.	Harkin	Mills
Conlan	Harris	Mineta
Conte	Hastings	Minish
Conyers	Hawkins	Mink
Cornell	Hayes, Ind.	Mitchell, Md.
Cotter	Hechler, W. Va.	Mitchell, N.Y.
Coughlin	Heckler, Mass.	Moakley
D'Amours	Heinz	Moffett
Daniel, R. W.	Helstoski	Mollohan
Daniels, N.J.	Hicks	Moorhead, Calif.
Danielson	Hightower	Moorhead, Pa.
Davis	Hillis	Mosher
de la Garza	Hinshaw	Moss
	Holland	Mottl
	Holtzman	Murphy, Ill.
	Murphy, N.Y.	Rodino
	Myers, Pa.	Roe
	Natcher	Rogers
	Neal	Roncalio
	Nedzi	Rooney
	Nix	Rose
	Nolan	Rosenthal
	Nowak	Rostenkowski
	Oberstar	Roush
	O'Hara	Roybal
	O'Neill	Runnels
	Ottinger	Russo
	Patman, Tex.	Ryan
	Patten, N.J.	St Germain
	Pattison, N.Y.	Santini
	Perkins	Sarasin
	Pettis	Sarbanes
	Pickle	Scheuer
	Pike	Schroeder
	Poage	Schulze
	Pressler	Seiberling
	Preyer	Sharp
	Price	Simon
	Quie	Slack
	Quillen	Smith, Iowa
	Railsback	Solarz
	Randall	Spellman
	Rangel	Spence
	Rees	Staggers
	Regula	Stanton, J. William
	Reuss	Stanton, James V.
	Richmond	Stark
	Rinaldo	Steed
	Risenhoover	Steelman
	Roberts	Steiger, Wis.
	Robinson	Stephens
		Stokes
		Stratton
		Stuckey
		Studds
		Sullivan
		Symington
		Talcott
		Taylor, N.C.
		Teague
		Thompson
		Thone
		Thornton
		Traxler
		Ullman
		Vander Jagt
		Vander Veen
		Vanik
		Vigorito
		Wampler
		Waxman
		Weaver
		White
		Whitehurst
		Whitten
		Wilson, Bob
		Wilson, C. H.
		Winn
		Wirth
		Wright
		Yates
		Yatron
		Young, Fla.
		Young, Tex.
		Zablocki

NAYS—60

Archer	Ford, Tenn.	Myers, Ind.
Armstrong	Gibbons	Nichols
Ashbrook	Gradison	O'Brien
Bauman	Hansen	Passman
Beard, Tenn.	Hefner	Ruppe
Bevill	Henderson	Satterfield
Breaux	Holt	Schneebeli
Brown, Mich.	Hubbard	Sebelius
Buchanan	Hutchinson	Shriver
Burleson, Tex.	Kemp	Shuster
Butler	Kindness	Sikes
Casey	Latta	Skubitz
Clawson, Del	Levitas	Smith, Nebr.
Crane	Lott	Snyder
Daniel, Dan	McCollister	Steiger, Ariz.
Devine	McDonald	Taylor, Mo.
Dickinson	Mathis	Treen
Erlenborn	Michel	Waggonner
Evans, Ind.	Montgomery	Wolff
Findley	Moore	Wylie

NOT VOTING—65

Addabbo	Harrington	Patterson, Calif.
Baldus	Harsha	Pepper
Barrett	Hays, Ohio	Peyser
Biaggi	Hébert	Pritchard
Biester	Horton	Rhodes
Bingham	Hungate	Riegle
Brinkley	Jarman	Rousselot
Broyhill	Jeffords	Shipley
Burke, Fla.	Jones, Tenn.	Sisk
Chisholm	Kelly	Symms
Clancy	Ketchum	Tsongas
Conable	Koch	Udall
Corman	Long, Md.	Van Deerlin
Dent	McClory	Walsh
Derwinski	McCloskey	Whalen
Diggs	McEwen	Wiggins
Duncan, Oreg.	McKay	Wilson, Tex.
Edwards, Ala.	Macdonald	Wydler
Eshleman	Metcalfe	Young, Alaska
Fary	Morgan	Young, Ga.
Fraser	Murtha	Zeferetti
Hamilton	Obey	

So the bill was passed.

The Clerk announced the following pairs:

Mr. Hébert with Mr. Broyhill.
Mr. Addabbo with Mr. Derwinski.
Mr. Zeferetti with Mr. Clancy.
Mr. Hays of Ohio with Mr. Edwards of Alabama.
Mr. Riegle with Mr. Diggs.
Mr. Morgan with Mr. Harsha.
Mrs. Chisholm with Mr. Fary.
Mr. Koch with Mr. Biester.
Mr. Barrett with Mr. Duncan of Oregon.
Mr. Biaggi with Mr. Eshleman.
Mr. Bingham with Mr. Horton.
Mr. Dent with Mr. Burke of Florida.
Mr. Corman with Mr. McClory.
Mr. Hamilton with Mr. Jarman.
Mr. Shipley with Mr. Conable.

Mr. Sisk with Mr. McKay.
Mr. Udall with Mr. Ketchum.
Mr. Baldus with Mr. Kelly.
Mr. Van Deerlin with Mr. Jeffords.
Mr. Murtha with Mr. Pritchard.
Mr. Metcalfe with Mr. McCloskey.
Mr. Brinkley with Mr. Patterson of California.
Mr. Long of Maryland with Mr. Symms.
Mr. Pepper with Mr. McEwen.
Mr. Fraser with Mr. Rousselot.
Mr. Harrington with Mr. Peyser.
Mr. Hungate with Mr. Tsongas.
Mr. Jones of Tennessee with Mr. Walsh.
Mr. Macdonald of Massachusetts with Mr. Young of Alaska.
Mr. Obey with Mr. Whalen.
Mr. Charles Wilson of Texas with Mr. Wydler.
Mr. Young of Georgia with Mr. Wiggins.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

GENERAL LEAVE

Mr. TEAGUE. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks on the bill just passed.

The SPEAKER. Is there objection to the request of the gentleman from Texas?

There was no objection.

GENERAL LEAVE

Mr. TEAGUE. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks on H.R. 8674, the Metric Conversion Act of 1975.

The SPEAKER. Is there objection to the request of the gentleman from Texas?

There was no objection.

METRIC CONVERSION ACT OF 1975

Mr. TEAGUE. Mr. Speaker, I move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 8674) to declare a national policy of converting to the metric system in the United States, and to establish a U.S. Metric Board to coordinate the voluntary conversion to the metric system.

The SPEAKER. The question is on the motion offered by the gentleman from Texas.

The motion was agreed to.

IN THE COMMITTEE OF THE WHOLE

Accordingly the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill H.R. 8674, with Mr. JONES of Oklahoma in the chair.

The Clerk read the title of the bill.

By unanimous consent, the first reading of the bill was dispensed with.

The CHAIRMAN. Under the rule, the gentleman from Texas (Mr. TEAGUE) will be recognized for 30 minutes, and the gentleman from Ohio (Mr. MOSHER) will be recognized for 30 minutes.

The Chair recognizes the gentleman from Texas (Mr. TEAGUE).

Mr. TEAGUE. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I rise in support of H.R. 8674, the Metric Conversion Act. I wish to commend the Chairman of the Subcommittee on Science, Research and Technology, Congressman SYMINGTON and the ranking minority member, Congressman MOSHER, as well as Congressman FUQUA, and Congressman LLOYD for their hard work in bringing this bill to the floor.

This bill was reported out unanimously by the Committee on Science and Technology. It has the support of the administration.

The United States is a world leader in almost all aspects of technology. However, we have been slow to adopt the measurement system of the rest of the world. In fact, with the exception of four small nations, Yemen, Burma, Brunei, and Liberia, none of which are important industrial powers, the United States is the only major, nonmetric country in the world which has not formed an official mechanism for coordinating the change to the metric system.

Twenty-five years ago, many of our important trading powers, including Canada and England, were still using the customary measures. Today, each are changing to the metric system, and only America has not officially established a governmental body to coordinate the change.

The United States is now well into the early stages of converting to the metric system. Many industries have already announced that they are changing the sizes of their products and the standards to which they are manufactured to the metric system. Major American automotive concerns have decided that all automobiles manufactured by them, including the parts and components made by their subcontractors and other suppliers, will be made on the basis of the metric system within the next few years. All 50 States are now committed to changing to the metric system in their educational departments. The school systems of a number of States have announced that textbooks will be entirely changed to the metric system by the year 1976. The pharmaceutical industry is largely using the metric system—as does the medical profession.

American industry has thus begun to adopt the metric system in growing numbers, and those companies which are going metric are doing so because it makes economic sense. Even though the change involves costs, they are going ahead because, in the long run, they believe the change will pay for itself.

In the United States, the process of changing to the metric system is proceeding in an uncoordinated manner, with the result that the total cost of going metric is greater than it need be. The Metric Information Office of the National Bureau of Standards and the American National Metric Council, which is a private industry-sponsored organization, are attempting to keep abreast of the conversion activities and serve as a source of information. This bill provides the mechanism to bring about the important coordinating function as the conversion process proceeds.

The choice before the Congress is not whether we should move to the metric system. That conversion is underway. The choice is between continuing the conversion process in an entirely uncoordinated fashion, as is the case now, or going forward with the conversion process on a coordinated basis. The testimony heard by the committee indicated that there is wide agreement on the desirability of going forward on a coordinated basis.

The bill provides a response to the problems created by the increasing use of the metric system. It would establish an independent U.S. Metric Board, broadly representative of society, to devise and carry out a broad program of planning and coordination of the increasing use of the metric system and to conduct public education consistent with other national interests.

The Metric Board shall be composed of 21 persons from the public who will be appointed by the President. The members shall serve at the pleasure of the President and they shall serve such terms as he specifies. They shall be broadly representative of those groups in American society which will be affected by the change to the metric system, and they shall include representatives of industry, labor, business, including small business, agriculture, commerce, the consumer, education, State and local government, science and engineering, the construction industry and other affected groups. The membership shall include, in addition, two Members of the House of Representatives and two Members from the Senate of the United States. The President shall designate one of the noncongressional members to serve as chairman and another to serve as vice chairman of the Board.

The bill further provides that unless otherwise provided by the Congress, the Board shall have no compulsory powers. The Board shall cease to exist when the Congress determines that its mission is accomplished.

The bill provides that the Board shall perform the following three major functions: First, develop a broad program of planning and coordination on the increasing use of the metric system; second, conduct research and submit recommendations to the President and to the Congress; and third, conduct a program of public education in the metric system at all levels from elementary to adult education in order that the American people may become familiar with the meaning and use of metric terms and measures in their daily lives.

The Board shall consult with and take into account the interests and views of industry, labor, business, including small business, commerce, science and engineering, education, government agencies at the Federal, State and local levels, and the consumer and other groups which would be affected by the changeover to the metric system. The intent of this consultation process is that each sector or industry in the country shall be asked, on a voluntary basis, to develop, if it elects to participate, its own plan for the conversion to the metric system in such a time period as that group feels to be in its own best interest insofar as efficiency and minimum costs are concerned. The Board is further directed to consult with existing organizations in the field of standards development and coordination.

The Board shall develop procedures whereby industry groups can come together on a voluntary basis under the auspices of the Board to discuss and agree on the best dimensions and configurations in the metric system, or other measurements for general use which are consistent with the needs and capabilities of the manufacturers, suppliers, consumers, and other interested and affected groups and the time schedule for the conversion process for each group.

The Board shall encourage the development of new or revised engineering standards based on metric measurements in those specific fields or areas where such standards will result in improved design or increases in economy consistent with the efficient use of energy and the conservation of natural resources.

The Board shall encourage the retention, in new metric language, of those U.S. engineering standards, practices, and conventions that are internationally accepted or which embody superior technology.

The Board shall cooperate with foreign governments and international organizations which have become concerned with the encouragement and coordination of the metric system with the objective of gaining international recognition for metric standards proposed by the United States.

The Board shall consult with foreign governments and organizations and groups in other countries, including international standards organizations, to the extent it determines appropriate. Such contacts by the Board shall be accomplished through consultation with the Department of State.

The Board shall carry out programs of public education and information aimed at making every citizen of the United States familiar with the metric system. These programs shall include public information activities conducted by the Board itself through the use of newspapers, magazines, radio, television and other media; consultation by the Secretary of Health, Education, and Welfare, the Secretary of Labor, the Administrator of the Small Business Administration, and the Director of the National Science Foundation with education associations and other education groups to insure that the metric system is made a part of the curriculum in all of the Nation's educational institutions and that teachers are trained to teach the metric system; consultation by the Secretary of Commerce with the National Conference of Weights and Measures to assure that weights and measures officials in each State and local jurisdiction are fully involved of the metric changeover activities in the country and are assisted in their efforts to bring about timely amendments to weights and measures laws; and such other public information activities by any Federal agency which could relate to the mission of the agency.

The Board shall also collect, analyze, and publicize information about the extent to which the metric system is being used. It shall evaluate the benefits and costs of such metric usage, and shall make efforts to minimize any adverse effects resulting from the increasing metric usage.

The Board shall conduct research on any unresolved problems associated with the conversion to and use of the metric system and shall publicize the results of this research. An important function of the Board shall be to recommend to the President and to the Congress specific legislative actions to deal with unresolved problems associated with metric usage.

The bill provides that the Board shall submit annual reports of its activities and progress under the act to the President and to the Congress. The report shall include a status report on the conversion process as well as projections for the conversion process, and may include recommendations covering any legislative or executive actions needed to implement programs of conversions accepted by the Board.

The Board is authorized to conduct hearings at such times and in such places as it deems appropriate in the furtherance of the policies of the act.

I want to stress that H.R. 8674 would preserve the right of each individual and each business firm to decide whether to go metric. The bill provides that the adoption of the metric system shall be entirely voluntary.

I am convinced that this bill is good for the country. Perhaps I will never learn the total metric system myself, but there is no doubt that today's school children will learn it sooner or later, and before long the housewife who goes shopping will understand it.

Mr. Chairman, H.R. 8674 is a step in the right direction for America. I urge its adoption by the House today.

Mr. Chairman, I yield 10 minutes to the chairman of the subcommittee, the gentleman from Missouri (Mr. SYMINGTON), who has done an excellent job on this bill.

Mr. SYMINGTON. Mr. Chairman, I rise in support of H.R. 8674, the Metric Conversion Act of 1975.

Earlier this year the Science, Research, and Technology Subcommittee, which it is my privilege to chair, held 2 weeks of comprehensive hearings on various bills which had been introduced in the House in the 94th Congress. A wide cross-section of the national community was represented including industry, small business, labor, industrial and professional organizations, State government, State educational officials, agriculture, and others. The viewpoints and suggestions provided were of valuable assistance to the committee in its deliberations, and in the development of the provisions of H.R. 8674.

I wish to emphasize at the outset that under this bill the change to the metric system would be entirely voluntary in nature. The bill has no compulsory powers which would force a business, an industry, or an individual to adopt and use the metric system. It provides specifically that the Metric Board would have no compulsory powers.

The national metric policy which would be established by this bill covers four specific points. The policy under these four points would be:

First, to plan to coordinate the increasing use of the metric system;

Second, to encourage voluntary participation of affected sectors or groups;

Third, to encourage efficiency and minimize costs to society; and

Fourth, to assist in developing a broad educational program which will assist all Americans in becoming familiar with the metric system.

Mr. Chairman, I would note at this point that the bill before the Committee today has gone through a number of changes. The policy statement I just described has evolved through several changes, but it is not clearly reflected in the long title of the bill, and we have concluded that a more accurate title for this bill would be the following:

(A bill) "to declare a national policy of coordinating the increasing use of the metric system in the United States, and to establish a United States Metric Board to coordinate the voluntary conversion to the metric system"

I want to advise the Members that, in the event this bill is adopted by the House, the committee intends to offer an amendment to incorporate this new long title for the bill. If adopted, this change would obviously also apply to the sections of the committee report where the purpose and policy of the bill is set forth.

The metric conversion bill would establish a U.S. Metric Board consisting of four Members of Congress and 21 Presidentially appointed members broadly representative of American society. The Board would be charged with carrying out a broad program of planning, coordination, and public education consistent with the policies of the act.

Although the duties of the Board are numerous, I would like to discuss some of the more important ones.

The Board will consult with various affected groups and sectors of the national economy and develop a procedure through which these groups and sectors may formulate and recommend metric programs to the Board. Participation in such group and sector activities will, of course, be voluntary. The Board will publicize the proposed programs and will be receptive to comments from groups or individuals.

The Board will assist the public—through broad-based information and education programs—to become familiar with the metric system and its use in our daily lives. These programs shall be based on consultation with appropriate individuals and groups, and the collection and analysis of published information.

An important function of the Board be the conduct of research on the impact which the adoption of the metric system is having. This research will cover all aspects of the national economy including the impact on consumers and individual workers as well as industries and commerce and education. If, as a result of these studies, the Board concludes that further action is called for, the Board is specifically authorized to recommend to the President and the Congress specific Executive or legislative action

The Board will report on its activities annually to the Congress and to the President. This status report may also include recommendations covering legislation or executive action needed to implement the metric activities of the Board.

Before yielding the floor, I would like

to respond to some questions which have been raised about this bill.

Does the policy of H.R. 8674 mandate a change to the metric system?

The answer is that rather than mandating a change to the metric system, the policy of H.R. 8674 responds to the problems associated with the increasing use of the metric system. The bill would do this by establishing a mechanism to coordinate the metric conversion activities, by studying the associated problems, and by educating the public on the usage of the metric system.

In fact, one of the reasons for changing the title of the bill is to place the chief emphasis on the voluntary nature of the adoption of the metric system. By eliminating any reference in the title to a policy of adopting the metric system, and emphasizing the coordination function of the Government's role, we expect to make it clear that the bill does not mandate the change, but only aims at providing coordination based on voluntary participation.

When the words "change" or "conversion" to the metric system appear in the bill or the report, does this mean a total changeover to the metric system?

The committee views the words "change" or "conversion" as describing the ongoing nature of the increasing usage of the metric system. The committee recognizes that some sectors of the national community may move rapidly to metric while others will move more slowly and yet others may elect not to make the change. The committee feels strongly that in any sector, the marketplace—not the Congress or the Metric Board—should provide the impetus in deciding whether, when and how metric conversion activities should proceed.

How do the provisions of H.R. 8674 reflect the results of the Department of Commerce study "A Metric America"?

The study served to focus the committee's and the Congress' attention on the fact that the metric system would be used more widely in the United States. It is certainly a fact that today we are seeing more metric measurements in our everyday lives than we were in 1971. However, the country has changed drastically in other ways in the last 5 years—and those changes are primarily economic. The committee feels that the projections of 1971 would not be the projections of today. With this in mind the committee felt that it was unwise to mandate a conversion to the metric system within a specified time frame and to make it a goal for the conversion that the country become predominantly metric within that time period. Therefore, these recommendations of the Metric Study were not adopted. Although the bill refers to these and other recommendations in the section on findings, they have not been included in the policy section or in the section setting forth the duties of the Metric Board.

Mr. Chairman, this bill goes a long way toward making the ongoing change to the metric system a little easier for every citizen. It will help reduce the overall cost to our society of making the change. I am glad to join Chairman TEAGUE in urging its favorable consideration and adoption by the House.

Mr. MATSUNAGA. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from Hawaii.

Mr. MATSUNAGA. Mr. Chairman, I wish first to commend the gentleman in the well for having worked so assiduously on this bill and for his efforts in bringing it onto the floor.

As the gentleman knows, last year I objected strenuously to the bill because it lacked two provisions and because I had hoped to offer amendments. One of those provisions was to protect small businessmen in the conversion process.

It is my understanding that the concern of the small businessman has been taken care of in this bill. Am I correct in my understanding?

Mr. SYMINGTON. Absolutely correct; the gentleman is correct.

We have been in touch with the small business representatives, including John Motley of the National Federation of Independent Businessmen, and very recently we were assured by them that this bill meets the problems that they thought the prior bill presented.

Mr. MATSUNAGA. In what way will the small businessman be taken care of?

Mr. SYMINGTON. There were two principal moves that we made. One was to assure small business that there would be proper representation of their interest on the Metric Board, whose job it will be to determine what kind of impact metrication would have on small business or any other sector of society. The Board can make recommendations to the Congress, to the President, to the Government concerning appropriate assistance to any detrimentally affected sector of society, of which small business could well be one, although we think the way we have written the bill, it is unlikely that they will suffer, because we have taken the time frame out. We have also made it the number one mandate of the Metric Board to lubricate everybody's adjustment to the metric system, including small business.

Mr. MATSUNAGA. My second concern, as the gentleman knows, was with reference to labor, particularly labor involved in the use of tools, individual tools. Has this been properly provided for in the bill?

Mr. SYMINGTON. This has also been provided for in this way, with the concurrence of labor representatives. I may say in that respect that I am placing in the RECORD a series of rather lengthy comments which I do not think need be made here, in the interest of time, but which clarify very specifically the intent of the committee and therefore of the Congress in the passage of this bill with respect to a whole range of things that labor was interested in. These ideas were worked out in consultation with them. However, specifically in response to the gentleman's question, again, the Metric Board has an obligation under this bill to study the harmful effects that any metric move made in this country could have on any element of society, and of course, none more importantly than the working people who own their own tools.

Some industries are more fortunate in this regard, and the worker is provided for. For example, in General Motors they provide a "tool crib," and the worker can borrow for any length of time the tool he needs.

We are talking and the gentleman from Hawaii is talking about independent workers. Here again, it is something that we anticipate could occur. Therefore, we have mandated the Metric Board to study to see if it does occur, and if it does, to recommend the kind of assistance which I think the gentleman would find appropriate.

Mr. MATSUNAGA. Mr. Chairman, the gentleman from Missouri has answered my questions to my full satisfaction and I am very pleased to express my support for H.R. 8674, the proposed Metric Conversion Act of 1975.

The gentleman from Missouri (Mr. SYMINGTON), the gentleman from Texas (Mr. TEAGUE) and the other members of the Committee on Science and Technology deserve a great deal of credit for their perseverance and thoughtful efforts in bringing this legislation to the floor.

The bill under consideration is the fruition of many years of hard work on the part of many persons, both in and out of Congress. For many years, our former colleague, the Honorable George Miller of California, was the driving force in Congress in the attempt to have the Federal Government come to grips with the problems associated with metric conversion.

Now, I believe, there is general consensus on a few basic facts:

That the United States is the only major industrial country in the world where metric is not the predominant system of measurement.

That our country's eventual conversion to the metric system is inevitable.

That conversion without some coordination at the national level would be costlier and less efficient than with some rational plan as a guide.

That the process of converting to metric measurement should be a voluntary one, with persons and companies taking such steps as are in their own economic interests.

In my judgment, Mr. Chairman, H.R. 8674 embodies all of these principles. Additionally, the bill wisely leaves open-ended the conversion period, which will vary widely among the various segments of our complex economy.

For several Congresses, Mr. Chairman, I have sponsored legislation along the lines of the bill reported by the Committee, and I am pleased that the House is in a position today to pass this important legislation.

I am pleased, also, that the U.S. Metric Board, the coordinating unit established under the legislation, will be charged with investigating conversion problems, and with recommending to Congress and the President appropriate legislation whenever necessary. Specifically mentioned in the bill as areas for the Board to study are the possible impact on workers, such as costs of tools and training, and effects on small business. These matters are those I was so concerned about last year during consideration of parallel legislation. I believe the Committee has responded to both the language and the spirit of my concerns in those areas.

Metric conversion will be no easy task, Mr. Chairman. But it is an inescapable task. We may find, as several other countries have, that the burden will not be as great as now envisioned, but we must be in a position to minimize whatever confusion and extra costs are generated in this process.

Passage of H.R. 8674 is a giant step forward in the right direction. I urge the House to approve it overwhelmingly.

Mr. MOSHER. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. Yes; I will be happy to yield to the distinguished gentleman from Ohio (Mr. MOSHER), my good friend and a great helper on this bill.

Mr. MOSHER. Mr. Chairman, I thank the gentleman for yielding.

I think the colloquy between the gentleman from Hawaii (Mr. MATSUNAGA) and the gentleman from Missouri (Mr. SYMINGTON) is very useful.

As all of us know, the gentleman from Hawaii last year expressed some very genuine concerns about this legislation when it was then before us. This colloquy, for the RECORD, certainly clarifies the fact, as we understand it on our side, that the objections from last year are now reconciled, and the interests of labor and small business people in general are being protected, and they are in support of this legislation.

Mr. Chairman, speaking for myself, I want to make the comment that this legislation is really needed and is deeply rooted in good, old-fashioned, American commonsense. It has a lot of practicality to it.

The CHAIRMAN. The time of the gentleman has expired.

Mr. TEAGUE. I yield 5 additional minutes to the gentleman from Missouri.

Mr. SYMINGTON. I yield further to the gentleman from Ohio.

Mr. MOSHER. Mr. Chairman, as I was saying, I believe this legislation makes good commonsense. The movement toward conversion to the metric system already has a tremendous momentum in this country and it is so imperative and necessary. Yet we must avoid a chaotic movement. We must have an orderly process.

What we are trying to do here today has practicality in that it encourages efficiency and I am convinced it is going to lower the cost of conversion. It is on that basis that I commend the gentleman in the well from Missouri (Mr. SYMINGTON) upon the excellent job the gentleman has done in our committee in providing the leadership needed for this important move.

Mr. MOSHER. Mr. Chairman, I strongly support this legislation. H.R. 8674 is meant to coordinate and harmonize the voluntary conversion of the United States to the metric system of weights and measures.

Metrication will bring the simplicity of using a single basic unit—the meter—for measuring both large and small distances in multiples of 10. In similar fashion a single unit of mass—the gram—will be used to measure both large and small amounts in multiplies of 10.

Thus conversion to the metric system will introduce the same straightforwardness into our measure of weight and length that we currently enjoy with our monetary units. The metric conversion program is a superb example of old fashioned American commonsense and practicality. It is a move for greater accuracy, efficiency, economy, and rationality.

So, I enthusiastically join with the Science Committee and Subcommittee chairmen, Messrs. TEAGUE and SYMINGTON, and all the members of our committee in endorsing this bill. H.R. 8674 is the outgrowth and synthesis of years of study.

Several added weeks of hearings were held on this year's bill, to be certain that it accommodates the concerns of all interested parties. The bill seeks to expedite metric conversion without sacrificing isolated groups which might be put to some slight, temporary disadvantage because of the conversion.

The focal point of our proposed program will be the U.S. Metric Board, which will have three major duties. First, to formulate a comprehensive program for conversion to the metric system. Second, to conduct research directed toward that goal, and submit recommendations to the executive and legislative branches. Third, to undertake a broad public education program ranging from elementary to adult education.

The Board will be composed of 21 members chosen from the public in such a way that it reflects the broadest spectrum of interested parties. We expect the Board to include representatives from industry, labor, small business, State and local government, and other affected groups. In addition, two Members of the House of Representatives and two Members of the Senate will serve on the Board.

In the last 20 years the metric system has become the dominant language of measurement in the world. The United States stands almost alone in its failure to go metric. It is anomalous that the most advanced nation in the world is still clinging to an impractical and outmoded system of measurement.

But even within our country, the metric system is slowly but steadily increasing in use. There is increasing momentum for conversion. And therein lies the problem. The growing use of the metric system is proceeding in a relatively haphazard and unplanned way. Individual companies, industries, and local governments are making the changeover whenever and however it appears advantageous to do so.

Therefore the conversion to date has often been accompanied by confusion and misdirection. H.R. 8674 seeks to provide the necessary direction to produce orderly coordination in our country's continuing conversion to make it as efficient and inexpensive and productive as possible.

Our primary motivation for the legislation is not only to bring order to an otherwise chaotic conversion already in progress, but to enable our citizens to reap the rewards of being in step with the worldwide system of measurement.

There is a significant potential for increased exports of our manufactured products made to metric specifications. And such increased export trade is crucially important to our Nation today and for the future. It is in fact imperative.

The people and industries in countries that are chiefly metric prefer to purchase metric designed products. Our Committee heard evidence of American businessmen who were at a serious disadvantage in bidding on foreign projects because they had to undergo the extra expense to converting their blueprints to metric. This extra cost is translated into either lower profits or lost business.

There is the potential for savings when a common design can be used for products both here and internationally. Global uniformity in manufacturing procedures will allow us to conserve our resources. It affords the opportunity of greatly reducing the excessive varieties and sizes of products. Not only can money be saved because of reduced inventories and greater production, but materials can be saved.

The objective of this legislation is not complete conversion regardless of costs. It is instead metric conversion, on a voluntary basis, to the extent practical and reasonable and at a minimum cost.

The point is that the conversion will proceed in some sectors at a relatively rapid pace while in others at a slower pace.

The Board will submit annual reports to the Congress on the progress of its work. There will be ample opportunity for us to modify any of the Board's programs or activities which the Congress believes not in the best national interest.

Mr. Chairman, the longer the United States waits to convert to the metric system, the longer this country will have to pay the extra costs associated with maintaining and operating a dual measurement system.

Clearly, it is time to get on with the business of conversion. The time has come for a national decision on a positive course of action and I sincerely welcome the opportunity to lend my support to this initiative.

Mr. FUQUA. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from Florida.

Mr. FUQUA. Mr. Chairman, I thank the gentleman for yielding me this time and I rise in support of H.R. 8674.

First of all, Mr. Chairman, I would like to commend the gentleman from Missouri (Mr. SYMINGTON) upon the fine leadership he has exerted as chairman of the subcommittee and upon the many hours of work that he has put in and the dedication that he has shown in trying to bring this bill to the point where we now have it before the Members today. I am sure that without the leadership of the gentleman from Missouri, this measure would not be here today. Again I say that the gentleman from Missouri deserves a great deal of credit.

Mr. Chairman, the question of potential costs related to the increasing use of the metric system is one that commands considerable interest and legitimate concern. In the context of our debate today, we need to look at three aspects of this question: First, the costs for the Nation at large of using metric measurements; second, the direct costs of this bill; and third, any indirect costs of the bill.

Consider first the costs versus benefits of increased metric usage for the Nation at large. Since the United States is already experiencing this change, we can stop speculating about costs and start looking at real information. Our automobile industry is in the process of going metric, as is much of our computer industry. Our steel industry is now prepared to provide some of its products in metric sizes, and some of our fastener manufacturers now offer bolts and nuts in metric sizes. Incidentally, these bolts and nuts are being made to a new metric standard—a modernized series of sizes that cuts approximately in half the number of sizes needed. For manufacturers of mechanical products, who generally need to stock all of the available sizes, the use of these new metric fasteners will bring a large dollar savings in the cost of carrying inventory—once they have switched over to working in metric.

Since we have as yet no national policy related to metric conversion, these firms have obviously decided to go metric strictly as a result of their own considerations. Further, since it is well known that such companies give primary consideration to the effect of their decisions on profits, we must infer that each of them calculated that the benefits to be reaped by going metric would exceed any costs entailed. As another example, when was the last time you saw an auto repair shop that stated, "We do not service foreign autos?" Now that an estimated 30 percent of the automobiles already on our highways have some metric parts, most shops have decided not to pass up that much potential business. They have bought a set of metric wrenches—in order to make money.

We now have even more specific information about costs of going metric in manufacturing. The design and manufacture of automobiles is a highly measurement-sensitive activity. One of our Big Three auto companies that has now been designing all new parts in metric for 2½ years, and is currently manufacturing many parts to metric specifications, has stated that the costs of change have turned out to be far lower than anticipated. Where they had expected to have to replace at least half of the lead screws on their lathes and milling machines, they have yet to replace any. This has been the reported experience of most manufacturing companies in the other countries that have been going through a metric changeover in England, Australia, South Africa, and New Zealand. Invariably costs have proven to be far less than expected.

Thus, metric conversion in the United States is now proceeding on a money-making—not money-spending basis. However, this uncoordinated change is beginning to engender hidden costs. The steel industry must add metric sized products to its inch sizes that it must continue to manufacture and store until their use is phased out entirely. This will cause some temporary added cost to the industry, and thus to users of steel and to our economy at large. The same is true of the fastener industry—and will happen in other industries as they adapt to meet growing demand for metric sized standard materials and parts.

We must keep in mind that these costs to our economy are being caused by the changes that have already occurred. The only way to minimize them is to minimize the time during which we are using both measurement languages in manufacturing and in other commercial activities—and that is precisely the purpose of coordinating the increasing use of metric measurement units for our customary ones. H.R. 8674 will serve to minimize in the most efficient way the extent and costs of dual measurement usage.

At the same time, while providing coordination and guidance, the conversion activities that will be facilitated by H.R. 8674 will be entirely voluntary. The bill does not contain, and does not give to the U.S. Metric Board any power to force anyone to go metric. Thus, in no way can it be said to impose costs on anyone. Consensus target dates will be established by sectors of industry and commerce—and, wherever a company or organization can benefit by planning its own metric moves around such target dates, presumably the company or organization will make use of the guideline plan and its customers or participants will accordingly benefit. Thus, this bill can only bring benefits and not costs, to the Nation at large.

The only costs attendant to the enactment of H.R. 8674 will be the direct operating costs of the mechanism for coordination, public education and public information—for the administration of the U.S. Metric Board, its staff, the various sector coordinating committees, and for developing and promulgating the information materials needed to acquaint all Americans with the 10 or so new measurement terms involved in using the metric system for everyday activities. Such costs are expected to be approximately $3 million a year for the first few years—surely a small price to pay for the substantial and permanently recurring economic benefits we will thereafter reap from increased exports; lowered costs of production; use of a simpler, easier to understand measurement language; and reduced dual inventories of standard materials and parts.

Mr. HECHLER of West Virginia. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I am glad to yield to the gentleman from West Virginia.

Mr. HECHLER of West Virginia. Mr. Chairman, I would point out that I note in a report to the Congress called the metric amendment that 5 years ago the countries of Barbados, Burma, Gambia, Ghana, Jamaica, Liberia, Muscat and Oman, Nauru, Sierra Leone, Southern Yemen, Tonga, Trinidad, and the United States of America were the only countries without the metric system. I note today that the number has been narrowed so that only now Yemen, Burma, Brunei, Liberia, and the United States are not on the metric system.

We are making progress and I commend the gentleman from Missouri (Mr. SYMINGTON) for his leadership, as well as the leadership of the chairman of the full committee, the gentleman from Texas (Mr. TEAGUE) and the ranking minority member, the gentleman from Ohio (Mr. MOSHER) and others.

I trust also that passage of this legislation will add many centimeters to the political stature of the gentleman in the well.

Mr. SYMINGTON. I thank the gentleman from West Virginia. I would like to say that we would hope that the United States, in the interest of competing in world trade would not be the last nation in the world to adopt the metric system.

Mr. BELL. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from California.

Mr. BELL. Mr. Chairman, I would like to commend the gentleman from Missouri (Mr. SYMINGTON) for the outstanding leadership that gentleman has shown in this work, as well as all members of the committee. I believe the way the gentleman from Missouri has handled this bill has been outstanding. In that connection I would also like to commend our minority member on the subcommittee, the gentleman from Ohio (Mr. MOSHER) for his fine efforts.

Mr. Chairman, I rise in support of this legislation. I would like to urge my colleagues to unanimously support H.R. 8674, the Metric Conversion Act of 1975.

As a long time supporter of metric conversion for this country, I can assure my colleagues that this legislation is both necessary and beneficial.

This bill would provide for the orderly conversion of our Nation's economy from the present system to the system used most exclusively around the world—the metric system.

Because of the external pressure from our trading partners throughout the world, the United States is already gradually changing to metric.

However, this bill will provide for an orderly and coordinated changeover.

Obviously many headaches and much economic loss will be avoided by the Congress adopting a national policy to smooth the path of conversion.

As a primary feature, this bill establishes a U.S. Metric Board which will be composed of 21 persons from the public and four Members of Congress.

These public members appointed by the President, will come from all walks of life and will represent all interests in this conversion to metric.

This broad base of representation will be important because the Board will be charged with drawing up a plan to coordinate the Nation's conversion to metric, conduct any necessary research, and to educate the public in general to the new metric system.

I am happy to note that the cost to our Nation's economy is expected to be minimal.

The activities of the Board in coordinating our conversion will have an appreciable impact and should reduce the overall costs substantially.

The report accompanying this bill

notes that other countries such as Australia and Canada have been particularly successful in their conversion and their costs have been substantially less than even their most modest estimates.

Also, many companies are absorbing costs as part of normal operating budgets, without special allocations.

In conclusion, I wish to urge my colleagues to support this Metric Conversion Act of 1975.

Let us establish a clear national policy which will expedite and coordinate our inevitable switch to metric.

Mr. WINN. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from Kansas.

Mr. WINN. Mr. Chairman, I rise in support of H.R. 8674 because there is no doubt in my mind after sitting through several hours of hearings that the adoption of the metric system will help modernize America. As is well known in our schools today many children are being taught the metric system and it will soon be just like learning their ABC's to them.

I commend the gentleman from Missouri (Mr. SYMINGTON), and the gentleman from Ohio (Mr. MOSHER), upon the work that they have done on this bill.

Mr. Chairman, I wish to give the metric conversion legislation my fullest support. The adoption of the metric system will help modernize America. In past decades, the United States has displayed world leadership in many fields—in outer space exploration, in the arts, in science, in the promotion of peace and international cooperation, and in the achievement of a better quality of life for Americans and for different peoples around the globe. But Mr. Chairman, when it comes to our system of weights and measurements we have fallen behind the rest of the world. We are still back in the horse-and-buggy days.

The United States is the only remaining major industrial nation that does not use the metric system. In addition to the United States, there are only eight other nations—all relatively small and underdeveloped—that have not yet begun metrication. My point is that the legislation before us represents a long overdue step toward metrication. It is a step that will entail costs, but it is also a leap into the 20th century that will bring benefits far outweighing the temporary expense and short-term inconveniences. The benefits to which I refer are not merely the increases in our balance-of-payments that will result from expanding foreign trade. They are also the long-term advantages of being more in tune with other nations in a world that is now becoming increasingly interdependent.

The bill adopts a policy of completely voluntary conversion. Though costs are to lie where they fall, no industry, no corporation, no partnership, nor proprietorship will be forced to convert to metric. Metrication will occur only in those sectors of our economy when it is advantageous to do so. The voluntary policy means that the dislocation resulting from conversion will be minimized.

The bill also provides for the establishment of the National Metric Conversion Board. In some sectors, metrication has proceeded rapidly. In others, conversion has not yet begun. If continued, this uncoordinated process will prolong and aggravate the costs of adopting the metric system. The Board will help organize metrication by planning, consultation and by promoting cooperation among firms, industries, and groups. The Board will provide a broad program designed to render assistance to the public, the educational system, labor, and business. The efforts by the Board will supply a much needed framework to guide the Nation through the difficulties of metrication.

If this legislation does not pass and if the Board is not established, I fear that conversion will be a long and painful process for the American people. Mr. Chairman, I wish to stress to my colleagues that the United States will eventually adopt the metric system whether or not this legislation is passed. I suggest that we make plans now. It is the responsibility of the Congress to act in the best interests of the American people. The Congress should make provisions for the change that is coming so that the United States is not subjected to the vicissitudes of unplanned, uncoordinated conversion.

The legislation before us puts the burden of metrication on no single sector of the economy, but, because of the policy of voluntary conversion, envisions the even distribution of costs and inconvenience. I am confident that no group or industry will be unduly harmed or disadvantaged. In the long run, adopting the metric system will help maintain a high standard of living for all Americans, and it will help assure the continued prominence of the United States in international affairs. I say, let us modernize America and vote for the metric conversion legislation.

Mr. SYMINGTON. Mr. Chairman, I appreciate the remarks of the gentleman from Kansas (Mr. WINN) and thank him for his interest, his hard work and his support for this legislation.

Mr. ROGERS. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from Florida.

Mr. ROGERS. I thank the gentleman for yielding.

I, too, rise in support of the legislation. I commend the gentleman from Missouri and the gentleman from Ohio for the work they have done on the subcommittee and full committee, and the distinguished chairman.

I particularly want to say about the gentleman from Missouri now in the well that his leadership in this area certainly has brought this legislation to the point that the House is able to vote on it and make progress, and I commend him for his leadership not only in this field but in many other fields. I am personally aware of the work that he has done on the Public Health and Environment Subcommittee. His outstanding contributions in those areas certainly contribute to the leadership that he has asserted in so many areas in the Congress. I commend him, and I urge passage of this bill.

Mr. SYMINGTON. I thank the gentleman for his comments which are deeply appreciated.

The CHAIRMAN. The time of the gentleman has expired.

Mr. TEAGUE. Mr. Chairman, I yield 2 additional minutes to the gentleman from Missouri (Mr. SYMINGTON).

Mr. HOLLAND. Mr. Chairman, will the gentleman yield?

Mr. SYMINGTON. I yield to the gentleman from South Carolina.

(By unanimous consent, Mr. HOLLAND was allowed to speak out of order.)

NATIONAL BICENTENNIAL COMMISSION DESIGNATES TODAY SOUTH CAROLINA DAY

Mr. HOLLAND. Mr. Chairman, the National Bicentennial Commission has designated this day as South Carolina Day in celebration of our Nation's 200th birthday. In conjunction with that celebration by Mayor Washington and this House, many dignitaries from the Government and the State of South Carolina, the Camden, S.C., Band from my hometown, and many other groups are visiting Washington. On behalf of all of these visitors, I would express my appreciation to this House, to the Bicentennial Commission, and to all others interested in this celebration.

Mr. SYMINGTON. Mr. Chairman, I yield back the remainder of my time.

Mr. MOSHER. Mr. Chairman, I yield myself such time as I may consume. I wish to particularly mention, because he is not presently on the floor, the contribution of the gentleman from Illinois (Mr. MCCLORY). Although he is not on our committee, over the years he has been a tremendously energetic, useful, intelligent exponent of metric conversion, and I want the record to recognize that fact in his absence today.

Mr. PICKLE. Mr. Chairman, will the gentleman yield?

Mr. MOSHER. I yield to the gentleman from Texas.

Mr. PICKLE. I thank the gentleman for yielding.

I am glad the gentleman mentioned our colleague, the gentleman from Illinois (Mr. MCCLORY) because he has shown a very strong interest in this measure.

I would also like to recall to our membership here the very strong work done by another colleague, the gentleman from Georgia (Mr. DAVIS) who has given leadership in this field for many years, and who was truly one of the outstanding Members of this body. So it is good we recall the gentlemen who led the fight for these measures in the earlier years.

Mr. MOSHER. The gentleman from Texas is absolutely right. It is extremely important that the gentleman from Georgia (Mr. DAVIS) be recognized, as well as the gentleman from Illinois (Mr. MCCLORY). I suggest also the gentleman from California (Mr. MILLER) who was chairman of our committee for such a long time and set a precedent which the gentleman from Texas (Mr. TEAGUE) is following.

The gentleman from California (Mr.

MILLER) was a great exponent of metrication for many years, and it is important that he be recognized.

Mr. Chairman, I yield such time as he may consume to the gentleman from California (Mr. GOLDWATER).

Mr. GOLDWATER. Mr. Chairman, I also rise in support of the metrication bill, and join my colleagues on the committee in enthusiastically advocating metric conversion.

I am convinced that the benefits are here, the need has been demonstrated, and I think there is a certain sense of urgency.

Mr. Chairman, although I do support this legislation I have expressed concern that the legislation does not go as far as I would perhaps like to see it go. I would like to ask the chairman of the subcommittee, the gentleman from Missouri (Mr. SYMINGTON), why in the drafting of this legislation by his subcommittee it was determined it would not be necessary to adopt certain time limitations both on the board itself as well as a time certain that we will become a metric country.

Mr. SYMINGTON. I will be happy to respond to the gentleman. I will preface my response by thanking the gentleman for his arduous work on this bill in the committee.

I think this is a good opportunity to explain this very point, because this was at the nub of the work we did this year. There are really two reasons why I think the time frame was either not needed or perhaps even detrimental. The gentleman is familiar with Parkinson's law whereby work expands to fill the time allotted. It was felt by a great many of us that the momentum of metrication is already at such a level that a 10-year time frame might actually be too long to achieve metrication in certain industries and sectors of the economy. We would not want the leaders of those sectors of our society to get the impression that they could slow down the efforts they are already making for one reason or another. So in one sense we felt the 10-year time frame might be a little on the long side.

On the other hand we are a dynamic society with many changes coming in laterally and fusing our efforts in various activities. Every industry has its own peculiar and unique problems, especially in a nation of some 212 million people with many geographic differences and with transportation problems in getting our products to market. So it was felt no single time frame would really fit the whole spectrum and that indeed there might even be certain areas of society which would have difficulty in conforming to a 10-year time frame.

So, Mr. Chairman, for those reasons we felt it might be best to create a Metric Board whose job it is to lubricate the entire economic spectrum in America to the end that the metrication that is already occurring will achieve its objectives in the shortest possible time with a minimum of adverse impact.

It was because of these considerations that we decided not to place a limit on the life of the Board itself which has to make these judgments from year to year. If we put a limit on the Board, that would almost negate the absence of the limit on the metrication itself. It is our feeling, and certainly it is my personal view, that once a Metric Board is established we are going to see a new wave of interest, a rush of activity at the outset as people realize that, for the first time since Thomas Jefferson made the first effort some time back to begin this change, the Federal Government is going to help in the area where most of the world is pressing on us to do this thing.

In that fashon I hope I have responded to the gentleman's question.

Mr. GOLDWATER. I am hopeful that the chairman's optimism is realized and that there will be an increased move to metrication when Congress creates the Board.

Mr. SYMINGTON. If I may respond further out, very briefly, it is our impression from the testimony of foreign experts including the Canadians, the Australians, and the South Africans, I believe, and especially with regard to Australia, it was clear that they seem to be moving at a much more rapid pace in some areas than they had any hope of doing when they were projecting their thinking, and they are somewhere near three-quarters along in their efforts instead of 50 percent which they had expected to achieve at this time.

The Canadian representative, Mr. Terrell, told us that the cost of the metric system in Canada proved a little less, and sometimes a good deal less, than the lowest anticipated cost; so again, the gentleman is correct.

I think we should entrust the movement to the commonsense and sensibility of our economic system and its sensitivity to world reality, insofar as I would like to see progress made quickly.

Mr. GOLDWATER. Mr. Chairman, I am hopeful again that the gentleman's optimism is found to be true. I am under the unusual habit, I guess, that when I decide that I am going to do something, I set a goal for myself. I think most Americans tend to be this way; however, going metric in the Nation appears to be a more difficult proposition than an individual trying to achieve a certain goal, because in going metric we are involving diverse industries and interests. Unless there is a certain amount of coordination and, hopefully, through the Board's activity there will be coordination, and unless there is a time set definition, there will be no impetus, no reason for some segment of the industry to go metric. In order to create this orderly transition period, it would be a little more helpful if everybody could say yes, by this time we have to gear up and make this transition and convert to the metric system.

It is important to note that many industries through their activities are cooperating with one another. What one industry does has a ricochet, a domino kind of effect, and unless there is some kind of coordination, unless there is time certain set, perhaps we may see frustration that will produce a needlessly prolonged metric conversion period.

Now, Mr. Chairman, I only raise the point because it appears to me that this piece of legislation would be greatly improved if, in fact, we had established some time frame within which the board would be in existence, as well as a time frame in which this country would go metric.

I do support the legislation, but I think it has been weakened because the committee has not found fit to include this kind of incentive, at least a point in time when all Americans can strive to become a metric country. Nevertheless, Mr. Chairman, in spite of my reservation about this bill, because of the lack of these provisions, I join my colleague and commend the gentleman from Missouri (Mr. SYMINGTON) for his leadership and support of this legislation.

Mr. MOSHER. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I just want to comment favorably on what the gentleman from California has just said. I personally understand and share the urgency that the gentleman from California (Mr. GOLDWATER) was just emphasizing. I, too, would have welcomed a more definite time schedule.

I think commonsense is going to prevail here and the American people are going to become increasingly aware of the urgency of this conversion effort.

Mr. LLOYD of California. Mr. Chairman, I rise in support of H.R. 8674, the Metric Conversion Act of 1975. I would first like to express my appreciation to Chairman TEAGUE and Congressman SYMINGTON for their leadership in this matter. Because of their patience and foresight, I believe that we have a metric bill which a majority of my colleagues and the American public can support.

It is important to recognize that this bill does not make metrication mandatory, but voluntary, and does recognize that there will be some initial conversion costs and is written in such manner as to allow for an incremental approach to metrication.

In other words, although a 25-member National Metric Board is established to help coordinate voluntary conversion to metrics, the Board will have no compulsory powers and will cease to exist when Congress determines its mission accomplished. This bill remains flexible and does not predetermine that congressional policy will make metric units the predominant language of measurement. Let legislative history show that this bill is in effect saying that it is the policy of Congress to study metrication and then decide the correct course of action.

Failure to metricate will, in the long run, cost the United States untold amounts of dollars in world trade and place us at a competitive disadvantage with other industrialized nations which are writing trade agreements based on metric measures. The cost of conversion should be considered an investment which will be profitable. Our export potential will be enhanced by eliminating the need to produce a separate line of products for export: it will simplify computations; and improve communication between scientists and engineers.

Further, adoption of metrics would benefit the consumer and buyer, since price comparisons of packages would be simplified. The same is true in commerce

where estimating and pricing of commodities would be expedited.

During the first day of hearings on this subject, I stated, and I remain of this position, that I would vigorously oppose any bill which would allow metric conversion costs to "lie where they fall." This would certainly burden the American worker and consumer. In response to this objection, the committee stated that minimum costs would be incurred if conversion were accomplished, in general, without Federal subsidies.

This action should not be interpreted as an endorsement of "letting costs lie where they fall." This "in general" clause was meant to imply that Congress, upon review of the board's yearly report, would be the body that would determine if Federal subsidies would be in order for any sector of the economy. The committee did not want to set into motion a subsidy program which would prove fiscally irresponsible and unfair to the already overburdened American taxpayer. On the other hand, the committee wanted to give Congress a free hand to consider the effect of initial conversion costs upon the many sectors of the economy.

No doubt there will be significant conversion costs in some sectors of the economy, but I am confident that this bill will trigger tax incentives or other programs to make the eventual transition smooth, efficient and economical. In the final analysis, Mr. Speaker, I support this bill because it represents a moderate position reflective of this Congress and the American public, and because it represents the realization that we trade in a world community that demands our full participation. To place ourselves at a competitive disadvantage with other nations would be irresponsible and would prove disastrous to the economy of the United States.

Mr. MYERS of Pennsylvania. Mr. Chairman, it is my conviction that Congress must act to facilitate the voluntary switch to metric measurements for interested American industries.

This conviction is based on a number of factors, Mr. Chairman, including my evaluation of testimony before the Science and Technology Committee of the House, on which I serve, and the frustration that I have felt as a graduate engineer wrestling with the problems of using the two international measuring systems. The problems are both mind-boggling and needless.

We are also losing business, Mr. Chairman, in being out of step with the rest of the world, and our small manufacturers certainly will suffer if the common market in 1977 adopts its plan of doing future business only with those firms using metric measurements.

Losing business means losing jobs, Mr. Chairman, and we can ill afford any more of that in America today.

Mr. McCLORY. Mr. Chairman, I rise in enthusiastic support of this legislation, a companion measure of which I have joined in cosponsoring with the distinguished chairman of the committee.

Mr. Chairman, in presenting brief remarks today, I will refrain from the type of statement which I have made during the past two sessions of the Congress in support of metric conversion legislation. The time for reviewing the history of our system of weights and measurements and the experiences we have had in our efforts to convert to metric standards or some comparable system does not need repeating here today. The rest of the industrialized world has already adopted the metric system or is in the process of adopting it and applying metric standards in its industry, education and other institutions of its society. The 1968 report of the National Bureau of Standards—which culminated in the 3-year study which the Congress authorized, deserves implementation by positive and prompt action of the Congress.

I have long since lost interest in developing the precise form of legislation which this Congress should enact. Let me say simply that H.R. 8674 provides a reasonable, simple mechanism that we must adopt today if we are to avert the continuing confusion, the uncertainty and, yes, the expenses which our delays entail. Mr. Chairman, this measure charts a practical and responsible way in which the Congress of the United States can support the people of the Nation in accomplishing a largely voluntary and comprehensive conversion to the metric system over a fixed period of time. Also, this legislation provides the essential leadership and the vital coordination which national conversion to metric measurement require. I am only sorry that this bill fails to set a reasonable time limit for conversion—such as the 10-year period contained in legislation which I had introduced earlier this session.

We are aware that without the benefit of such a measure, large segments of American industry are adopting the metric system in their operations—General Motors, Ford, Caterpillar Tractor, International Harvester, and IBM, to mention just a few.

Mr. Chairman, inevitable confusion is bound to occur if other portions of the industrial community are omitted from a program of conversion and they end up a few years hence with their entire operations employing our traditional system while the rest of the industrial community is operating in accordance with metric standards. Certainly, it is even redundant to observe that businesses which conduct any foreign trade are bound to convert to the metric system or to make plans to discontinue operations in the foreign markets. In this respect, I think it most appropriate that the committee has called for development of procedures which would exempt businesses from antitrust liability for the limited purpose of formulating industrywide conversion plans.

Mr. Chairman, of equal concern, it seems to me, is the need for providing a mechanism to coordinate the educational systems of our Nation to an orderly and coordinated conversion to the metric system. A number of States have already established their own timetables with target dates for a complete changeover in the teaching process so that the schools of the entire State will be operated uniformly insofar as our system of weights and measures is concerned. Certainly, when the State of Illinois sets a target date of July 1, 1975, and the State of California sets a different target date for converting their entire educational program to the metric system, the need for coordination would seem obvious. The State legislatures are endeavoring to handle these problems to the best of their ability, and I have before me information furnished by the National Bureau of Standards indicating what the legislatures or boards of education of the 50 States are doing. Suffice it to say that there is no uniformity or correlation in the actions being taken throughout the 50 States. This in itself would seem to make it imperative that we establish the kind of coordinating mechanism which this metric conversion legislation can provide.

Mr. Chairman, it is inevitable that arguments will again be made to this House that the costs of conversion are prohibitive—that additional delays should be entertained or that programs of subsidy for business and labor must be established if the Congress is to act in this area. Let me state first of all that in the experience of every country which has come to my attention where a metric conversion program has been established, the costs of conversion were far lower than even the most modest estimates. In addition, in every case, cost savings were effected in the process of working out a metric conversion.

Mr. Chairman, I am reassured that this measure authorizes the expenditure of funds solely for the purpose of administering the metric conversion program. Let us recall that up to the present time, the entire conversion which already has taken place here has been voluntary. All but the most unusual cases of hardship ought to be dealt with by allowing the costs of conversion to lie where they fall. That, indeed, is the recommendation of the Study Commission, and it is my belief that this is the proper course to follow. What we need is not Federal appropriations in the form of subsidies but Federal direction and leadership—and the establishment of a U.S. Metric Board which can guide and coordinate an orderly and early conversion to the metric system throughout our Nation.

Finally, Mr. Chairman, I want to compliment the distinguished chairman of the Committee on Science and Technology, Mr. TEAGUE, for his enlightened leadership in bringing this measure to the floor for consideration by the full House. I encourage all my colleagues to act promptly and favorably on this most necessary legislation.

Mr. ANDERSON of Illinois. Mr. Chairman, I rise in strong support of H.R. 8674, the Metric Conversion Act of 1975. I am pleased that we are this year bringing this bill to the House under an open rule. You will recall that in the last Congress the Rules Committee granted a rule on a similar bill, but, because that rule made in order an otherwise nongermane amendment, the chairman of the Science Committee attempted to

bring the bill up under suspension—which permits no amendments—and the bill failed to receive the requisite two-thirds vote for passage.

The title of this bill—Metric Conversion—is somewhat misleading in that it may give the impression that this legislation is necessary to initiate this country's converson to the metric system. The fact is, the Congress authorized the use of the metric system well over 100 years ago, way back in 1866. And, in recent years, the conversion process has been going forward at a very rapid rate, without further congressional action. As the committee report points out, the major automotive firms have decided to go metric; all 50 States have initiated metric programs in their education systems. Most U.S. firms which export their products are using the metric system. And yet, the sad fact is that the United States is the only major industrial country in the world which has not adopted a national policy of converting to the metric system. While conversion is going forward in many sectors of our society, it is being done in a very uncoordinated fashion. The purpose of the legislation before us today is to declare that it is the policy of the United States to go metric in a coordinated manner.

To facilitate this process, the bill would establish a 21-member U.S. Metric Board to be appointed by the President from representatives of every sector in our society. Essentially, the duties of the Board would be three-fold: To execute a broad program of planning and coordinating the conversion to the metric system; to conduct research and submit recommendations to the President and the Congress; and to conduct a program of public education in the metric system at all levels from elementary to adult education. It is important to emphasize here that the Board will have no compulsory powers and that the entire conversion process shall be carried out by means of the voluntary participation of each affected sector and group in the Nation.

Mr. Chairman, the Congress has often been criticized for only taking action when a crisis is upon us—of not having sufficient foresight or fortitude to engage in long-range planning and decision-making. Today we have an opportunity to prove to the contrary that we are capable of taking necessary action in advance of a crisis to move our country in the right direction. The alternative to taking the necessary action today is to wait until we are faced with a real metric crisis in the future. I am proud to claim as a constituent one of this country's foremost experts on metrication, Mr. Kenyon Taylor of Beloit Tool Corp., who has written two books and numerous articles on this subject. In his testimony before the House Science Committee in the last Congress, he summed it all up this way:

> Conversion to the metric system is inevitable. As the world becomes smaller, as competition for trade increases, the United States—to date the only major power not utilizing the metric system—will find itself involved in an expensive crash program which no doubt will result in too little, too late, unless we begin planning now.

Mr. Chairman, there will be some who will argue today that metric conversion is too costly and confusing a process and that we should therefore defeat this bill. But I would submit, as the committee report correctly points out, that the alternative we confront today is not whether or not we should go metric, but whether we should do so in a coordinated fashion or with no framework to guide the Nation. And if we opt today to reject the type of coordinated approach provided in this legislation, this Nation will be faced with greater costs and confusion in the future. I therefore strongly urge my colleagues to vote for this vital legislation which will help to bring this country—the world's greatest industrial power—into the 20th century and the international community.

Mr. PICKLE. Mr. Chairman, in the tide and crunch of legislative duties and crisis situations, it is easy to forget the more subtle—yet still crucial—changes going on.

One of these is the change to the metric system.

Contrary to popular belief, this is not something we will decide whether to do or not. The change is already taking place—in industry, in Government, and even creeping into our private lives.

Our decision is not whether or not to change to the metric system. Our decision is whether to let this change go on in a haphazard and costly way—and perhaps have it, too, on the crisis list down the road—or whether to make up our minds and go ahead and orchestrate the change over a reasonable period and at minimal cost.

I think the latter approach would be the best approach for our Nation, and I, therefore, urge passage of this metric conversion bill.

This is an issue which has been before this body for years. Some of you who have been here a while know that I have taken to the floor and called in committee for over 5 years for action in this field. And I was not the first on the scene.

The bill before us today will not embody everything that each of us individually would want to have. It is a little different from the approach I have argued for over the years. But, having served on the House Science Committee before, I know that they have done their best to find the most acceptable approach that would get the job done. I say it is time for all of us to pull together and get the job done for the country.

Let us have no more debates. Let us have metrics.

Mr. FREY. Mr. Chairman, I rise in support of the metric legislation. The thorough work of the Committee on Science and Technology has convinced me that the most effective means of converting to the metric system is through a national commitment to be coordinated, but voluntary, changeover. It is clear to me that our Nation should begin to adopt the metric system so as to facilitate U.S. participation in developing the expanding body of international engineering standards that serve to regulate world trade in scientific and technological products.

Congress has considered urging the adoption of the metric system many times. Since 1959, bills designed to prompt metrication have been introduced in every Congress. To a large extent, these earlier initiatives failed because metric was not then in use by our major trading partners. Also, critics of metric conversion saw little reason to change. They wondered why we should have to adopt Celsius and centimeters when it was far more sensible to have foreigners start using feet and Fahrenheit. But, things have changed since the early 1960's. Now, every major nation in the world either uses metric, or is committed to metrication. The United States is one of the nine remaining countries not using the metric system.

The logic that has compelled foreign nations to begin conversion applies here in America. The Commerce Department estimates that we will increase our exports by $60 million per year if we switch to metric. To the average American, that $60 million per year means more jobs, more wealth, and a stronger dollar. Metric is a more rational language of weights and measures than our inch-pound system. Because metric is more sensible, it is easier to teach, simpler to learn, and therefore more practical to use.

Ultimately, the United States will have to convert to metric. It is important to shorten the period when we operate under a dual system of measurement. Presently, some sectors of the economy, like the pharmaceutical industry, are wholly metrified. Other sectors have not begun conversion. I am convinced we need to carefully plan the transition to metric so as to help the different sectors of our economy adjust and guide our relationships abroad. This legislation provides such a plan, and gives new impetus to metrication in the United States.

Included in H.R. 8674 is a statement of policy that calls for increasing, but voluntary adoption of the metric system. This statement reflects the so-called rule of reason that conversion will be accomplished in a manner that encourages efficiency and minimizes the costs to society. This policy statement represents a clear declaration that the Congress wishes metrication to proceed rapidly. The statement provides the leadership and guidance our Nation needs to spur conversion, so we will begin to enjoy the benefits of metrication sooner. Without this signal to the American people, I am afraid the metric effort will languish.

The bill also establishes a Metric Board that is authorized to coordinate and facilitate the conversion process. The Board is to consist of 21 members drawn from many different sectors of American society. These members will be appointed by the President.

As specified in the bill, the Board will have authority to initiate a broad program of consultation, planning, coordination, and public education. Extensive review of the interests, views, and prospective conversion costs of business, labor, and educational sector and many others will be undertaken. Public information programs will be conducted, and assistance will be provided to educational associations, labor education com-

mittees, and other groups involved in education. The Board is also directed to provide procedures for firms within each industry to meet and discuss conversion plans. If meetings are conducted under the auspices of the Board, these firms will not be subject to antitrust action, and conversion will proceed sensibly and rapidly.

The Board is also authorized to conduct research on problems associated with metric conversion. Finally, it is directed to consult with foreign governments in order to gain international recognition for metric standards proposed by the United States.

Mr. Chairman, the Committee on Science and Technology has spent many years studying metrication. The conclusion reinforced by virtually everyone with whom we have worked is that the United States should begin adopting the metric system. Further we have determined it is in the best interests of our Nation that conversion be accomplished in a deliberate and careful fashion through a coordinated national effort. H.R. 8674 reflects the firm commitment of the Congress to a much needed positive program. This important legislation deserves our support, and I urge its passage.

Mr. FRENZEL. Mr. Chairman, I rise in enthusiastic support of H.R. 8674. I have been a strong supporter of the principle of metric conversion, and have authored similar bills each session.

The country is already in a conversion process. No matter what Congress does, or does not do, the process will continue. In fact, it will accelerate. The passage of this bill merely provides a forum and a means of collecting and disseminating information on metric conversion.

The bill establishes a national policy, but it is voluntary, rather than coercive. It will provide guidance to those least able to get it on their own. Overall, it will merely provide an orderly development for a process already underway. I urge that it be promptly passed.

Mr. GUDE. Mr. Chairman, I rise in support of the Metric Conversion Act of 1975. The United States is the only major nation in the world not committed to the metric system. If American industry is to continue to be competitive, in the international arena we must put our system of measurement into a competitive framework.

The conversion can proceed in one of two ways: Either casually and without guidance or formally in a systematic manner. I prefer the latter because less confusion would result, less expense would be entailed, and there could be broader public understanding and appreciation of the conversion through education programs for both business and consumers.

The U.S. Metric Board, as established in this act, will be available to assist the American public in better understanding the nature of metric conversion. Such a Board will, as I see it, maximize public awareness and minimize expense. This Board will be well worth the relatively small cost involved in its operation.

Let us get the United States away from foot-dragging posture and into the forefront of the metric world.

Mr. EMERY. Mr. Chairman, I support the legislation being considered today. The Committee on Science and Technology has been studying approaches to metric conversion for several years. Our conclusion is that the United States should change to the metric system in a careful and planned manner. This conclusion is substantiated by the examples of Canada, New Zealand, Australia, South Africa and Great Britain. With planning and coordination, metrication in these countries has proceeded smoothly and quickly. Additionally, our decision favoring deliberate conversion is supported by volumes of testimony from representatives of nearly every component of society.

An ambulatory method of conversion will lengthen the period when we need to maintain dual inventories, dual production facilities, dual systems of education and dual ways of thinking. In contrast to this prospect, the legislation before us provides for a coordinated program to be established by the proposed National Metric Conversion Board. The Board will supply the needed impetus and framework for an efficient conversion.

I have two reservations about the bill. First, the legislation contains no limit on the life of the Metric Board. Since 1935 the Federal bureaucracy has grown at an astounding and, in more recent times, alarming rate. In order to finance these agencies and councils, the taxpayer has had his taxes raised again and again. Mr. Chairman, I think the Congress should stem the growth of the mammoth Federal bureaucracy and guard against the establishment of an even larger bureaucratic jungle. My point is that without a specific termination date, the Metric Board may exist for many years after its job has been finished.

It will become part of the Federal bureaucratic complex that seems to provide remarkably little for the billions of dollars spent. I believe that the metric bill should have a provision that will provide a termination for the Board.

My second reservation concerning this legislation pertains to the lack of a suggested date when Congress expects predominant, though not exclusive, metrication in the United States. It seems that it always takes as long to accomplish a task as there is time allotted for it. I believe that if the Congress clearly states that metrication should be the predominate language of weights and measures by 1985, and if it provides means and incentive for a rapid conversion process, then metrication will be achieved in 10 years or less. Without this date or guidepost, I am afraid that metrication will fall victim to those who are unwilling to change.

Despite these two important reservations, I support the metric conversion legislation. The United States has already begun metrication, but it is proceeding in a random and uneconomical fashion. I believe it is time for a national program for change. This legislation anticipates the need to provide for broad consultation among industry, labor, and business so that the Nation will be prepared for the increasing use of the metric system. The bill provides means for needed international cooperation and consultation so that conversion will be orderly. It calls for an extensive program of public education that will utilize national media and tap the resources of Federal, State, and local organizations. Finally, the legislation requires that the Board conduct ongoing studies and research in order that metrication be as rational and efficient as possible.

Mr. Chairman, I will vote for H.R. 8674. It is a strong and practical measure that advances the best interest of Americans everywhere. I welcome the opportunity to support this initiative.

Mr. DODD. Mr. Chairman, I rise in support of H.R. 8674, the metric conversion bill. As a cosponsor of this legislation and as a member of the Science and Technology Committee, I have worked closely on the development of this legislation.

I feel H.R. 8674 provides a workable voluntary method of converting our present system of weights and measurements to the metric system. Throughout testimony on this bill, the same argument was reiterated by all the witnesses, the need for this country to have a system of measurement that is in line with the rest of the world.

In the last 10 years, we have seen the remaining "English system" industrial nations convert to metric. India, Japan, New Zealand, Australia, and even our closest friends, the United Kingdom and Canada have joined the ranks of nations that use the metric system. Also, in each of these countries, the conversion has progressed smoothly and without disruption.

In H.R. 8674, a policy is set forth which will provide for the voluntary conversion to the metric system. The implementation of this program will be overseen by a U.S. Metric Board. This board shall include representatives from labor, small business, construction, commerce, education, consumer, engineering, and other affected groups. There shall also be two Members of the House and two Members of the Senate on the Board.

Each representative from an affected sector shall coordinate his area's conversion. By allowing such areas as construction, small business, and labor to have representatives on the board, we insure that the special problems these sectors may have in conversion will be considered.

In addition, Mr. Chairman, no sector of our economy will be forced into conversion nor will any time limit be set on an industry's conversion to metric.

In creating a U.S. Metric Board, we provide a vehicle to coordinate both public and private efforts toward conversion. Also, the Metric Board shall work closely with every sector of the economy, allowing each industry and group to proceed with conversion at a voluntary pace.

Mr. Chairman, H.R. 8674 will set in motion a national policy of voluntary conversion to the metric system. It will not require any industry to complete conversion within a set period of time.

Therefore, I urge my colleagues to support H.R. 8674 so that we not only bring the United States into line with the rest of the industrial world, but we also provide Americans with a simpler, more convenient method of measurement.

Mr. MOSHER. Mr. Chairman, I have no further requests for time. I reserve the balance of my time.

Mr. TEAGUE. Mr. Chairman, I have no further requests for time.

The CHAIRMAN. The Clerk will read.

The Clerk read as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Metric Conversion Act of 1975".

FINDINGS

SEC. 2. The Congress finds that—

(1) the use of the metric system of weights and measures in the United States has been legal but not mandatory as a result of the Act of July 28, 1866 (14 Stat. 339); and

(2) the United States was one of the original signatories to the Convention of the Meter (20 Stat. 709), which established the General Conference of Weights and Measures, the International Committee of Weights and Measures, and the International Bureau of Weights and Measures; and

(3) the metric measurement standards recognized and developed by the International Bureau of Weights and Measures have been adopted as the fundamental measurement standards of the United States and the customary units of weights and measures used in the United States have been since 1893 based upon such metric measurement standards; and

(4) the Governments of Australia, Canada, United Kingdom, India, Japan, New Zealand, and the Republic of South Africa have determined to convert, are converting, or have converted to the use of the metric system in their respective jurisdictions; and

(5) the United States is the only industrially developed nation which has not established a national policy committing itself to and facilitating conversion to the metric system; and

(6) as a result of the study to determine the advantages and disadvantages of increased use of the metric system in the United States authorized by Public Law 90-472 (82 Stat. 693), the Secretary of Commerce has found that increased use of the metric system in the United States is inevitable; that maximum efficiency will result and minimum costs to effect the conversion will be incurred if the conversion is accomplished through a coordinated national program carried out, in general, without Federal subsidies; that the goal for the conversion should be a Nation predominantly, although not exclusively, metric; that a central planning and coordinating body be estabilshed and assigned to plan and coordinate metric conversion activities in cooperation with all sectors of our society; and that immediate attention be given to education of the public and to effective United States participation in measurement-related international standards activities.

STATEMENT OF POLICY

SEC. 3. It is therefore declared that the policy of the United States shall be—

(1) to plan to coordinate the increasing use of the metric system of measurement in the United States, and to plan and coordinate the voluntary substitution of metric measurement units for customary measurement units in education, trade, commerce, and all the other sectors of the economy of the United States;

(2) to encourage voluntary participation of the members of each affected sector and group in the Nation in the activities of the Metric Board;

(3) to encourage efficiency and minimize overall costs to society; and

(4) to assist in the development of a broad educational program to be carried out in the Nation's elementary and secondary schools and institutions of higher learning, as well as with the public at large, designed to enable all Americans to become familiar with the meaning and applicability of metric terms and measurements in daily life, in a manner consistent with, but not limited to, the provisions of section 403 of Public Law 93-380, "The Education Amendments of 1974" (88 Stat. 546; 20 U.S.C. 1862), relating to metric education.

DEFINITIONS

SEC. 4. For the purposes of this Act—

(a) The term "metric system of measurement" means the International System of Units as established by the General Conference of Weights and Measures in 1960 and interpreted or modified for the United States by the Secretary of Commerce.

(b) The term "engineering standard" means a standard which prescribes a concise set of conditions and requirements to be satisfied by a material product, process, procedure, convention, or test method, and the physical, functional, performance and/or conformance characteristics thereof.

(c) The term "international standard or recommendation" means an engineering standard or recommendation formulated and promulgated by an international organization and recommended for adoption by individual nations as a national standard.

ESTABLISHMENT OF UNITED STATES METRIC BOARD

SEC. 5. There is hereby established a United States Metric Board, hereinafter referred to as the "Board," to implement the policy set out in this Act.

SEC. 6. The composition of the Board shall be as follows:

(a) Twenty-one persons appointed by the President, who shall serve at his pleasure and for such terms as he shall specify, who shall be broadly representative of American society, including industry, labor, business, including small business, agriculture, commerce, the consumer, education, State and local government, science and engineering, the construction industry, and other affected groups. The President shall designate one of the members appointed by him to serve as Chairman and another to serve as Vice Chairman of the Board.

(b) Two Members of the House of Representatives who shall not be members of the same political party, and who shall be appointed by the Speaker of the House of Representatives.

(c) Two members of the Senate who shall not be members of the same political party, and who shall be appointed by the President of the Senate.

SEC. 7. No vacancy on the Board shall impair the right of the remaining members to exercise all the powers of the Board. A simple majority of the Board membership shall constitute a quorum for transaction of business.

SEC. 8. Unless otherwise provided by the Congress, the Board shall have no compulsory powers.

SEC. 9. The Board shall cease to exist when the Congress, by laws, determines that its mission has been accomplished.

DUTIES OF THE BOARD

SEC. 10. It shall be the function of the Board to devise and carry out a broad program of planning, coordination, and public education, consistent with other national policy and interests, with the aim of implementing the policy set forth in this Act. In carrying out this program the Board shall—

(a) consult with and take into account the interests, views, and conversion costs of United States commerce and industry, including small business, science, engineering, labor, education, consumers, government agencies at the Federal, State, and local level, nationally recognized standards developing and coordinating organizations, metric conversion planning and coordinating groups, and such other individuals or groups as are considered appropriate by the Board to the carrying out of the purposes of this Act. The Board will take into account activities underway in the private sector so as not to duplicate unnecessarily such activities;

(b) provide for appropriate procedures whereby various groups, under the auspices of the Board, may formulate and recommend to the Board specific programs for coordinating conversion in each industry and segment thereof and for suggesting specific dimensions and configurations in the Metric System and other measurements for general use, consistent with the needs, interests, and capabilities of manufacturers large and small, suppliers, labor, consumers, educators, and other interested groups, and further consistent with the national interest;

(c) publicize, in an appropriate manner, proposed programs and provide an opportunity for interested groups or individuals to submit comments on such programs. At the request of interested parties, the Board, in its discretion, may hold hearings with regard to such programs. Comments provided by public review and hearings will be considered by the Board;

(d) encourage activities of standardization organizations to develop or revise as rapidly as practicable engineering standards to a metric measurement basis and to take advantage of opportunities to promote rationalization or simplification of relationships, improvements of design, reductions of size variations, increases in economy, and any opportunities to promote the efficient use of energy and the conservation of natural resources;

(e) encourage the retention, in new metric language standards, of those United States engineering designs, practices, and conventions that are internationally acceptable or embody superior technology;

(f) consult and cooperate with foreign governments, and intergovernmental organizations, in collaboration with the Department of State, and, through appropriate member bodies, with private international organizations which are or become concerned with the encouragement and coordination of increased use of metric measurement units or engineering standards based on such units, or both. Such consultation shall include efforts, where appropriate, to gain international recognition for metric standards proposed by the United States, and, during the United States conversion, to encourage retention of equivalent customary units, usually by way of dual dimensions, in international standards or recommendations;

(g) assist the public through information and education programs, to become familiar with the meaning and applicability of metric terms and measures in daily life. Programs hereunder shall include—

(1) public information programs conducted by the Board through the use of newspapers, magazines, radio, television, and other media, and through talks before appropriate citizens' groups and public organizations;

(2) counseling and consultation by the Secretary of Health, Education, and Welfare, the Secretary of Labor, the Administrator of the Small Business Administration, and the Director of the National Science Foundation, with educational associations, labor education committees, apprentice training committees, and other interested groups, so as

to assure that the metric system of measurement is made a part of the curriculums of the Nation's educational institutions and that teachers and other appropriate personnel are properly trained to teach the metric system of measurement;

(3) consultation by the Secretary of Commerce with the National Conference of Weights and Measures so as to assure that State and local weights and measures officials are appropriately involved in metric conversion activities and are thus assisted in their efforts to bring about timely amendments to weights and measures laws; and

(4) such other public information programs by any Federal agency in support of this Act as relate to the mission of the agency;

(h) collect, analyze, and publish information about the extent of usage of metric measurements; evaluate the costs and benefits of metric usage; and make efforts to minimize any adverse effects resulting from increasing metric usage;

(i) conduct research including appropriate surveys, publish the results of this research, and recommend to the President and to the Congress whatever action may be appropriate to deal with any unresolved problems associated with metric usage, including but not limited to the impact on workers, such as costs of tools and training, and on different occupations and industries, possible increased costs to consumers, the impact on society and the economy, effects on small business, the impact on the United States international trade position, the appropriateness of using Federal procurement to effect conversion to the metric system, the proper conversion or transition period in particular sectors, and effects on national defense; and

(j) submit annually to the President and to both Houses of Congress a report on its activities, which shall include a status report on the conversion process as well as projections for the conversion process. Such report may include recommendations covering any legislation or executive action needed to implement the programs of conversion accepted by the Board.

AUTHORITY OF THE BOARD

SEC. 11. In carrying out its duties the Board is authorized to—

(a) establish an Executive Committee, and such other committees as it deems desirable;

(b) establish such committees and advisory panels as it deems necessary to work with the various sectors of the American economy and governmental agencies in the development and implementation of detailed conversion plans for those sectors; and reimburse as may be authorized by law the members of such committees;

(c) conduct hearings at such times and places as it deems appropriate;

(d) enter into contracts in accordance with the Federal Property and Administrative Services Act of 1949, as amended, with Federal or State agencies, private firms, institutions, and individuals for the conduct of research or surveys, the preparation of reports, and other activities necessary to the discharge of its duties;

(e) delegate to the Executive Director such authority as it deems advisable; and

(f) perform such other acts as may be necessary to carry out the duties prescribed by this Act.

SEC. 12. (a) The Board is hereby authorized to accept, hold, administer, and utilize gifts, donations, and bequests of property, both real and personal, and personal services, for the purpose of aiding or facilitating the work of the Board. Gifts and bequests of money and the proceeds from sales of other property received as gifts or bequests shall be deposited in the Treasury in a separate fund and shall be disbursed upon order of the Board.

(b) For purpose of Federal income, estate, and gift taxes, property accepted under subsection (a) of this section shall be considered as a gift or bequest to or for the use of the United States.

(c) Upon the request of the Board, the Secretary of the Treasury may invest and reinvest in securities of the United States any moneys contained in the fund herein authorized. Income accruing from such securities, and from any other property accepted to the credit of the fund authorized herein, shall be disbursed upon the order of the Board.

(d) Funds not expended by the Board at the time of its expiration shall revert to the Treasury of the United States.

COMPENSATION OF THE BOARD

SEC. 13. Members of the Board who are not in the regular full-time employ of the United States shall, while attending meetings or conferences of the Board or otherwise engaged in the business of the Board, be entitled to receive compensation at a rate not to exceed the daily rate currently being paid grade 18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime. While so serving on the business of the Board away from their homes or regular places of business, members of the Board may be allowed travel expenses including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons employed intermittently in the Government service. Payments under this section shall not render members of the Board employees or officials of the United States for any purpose. Members of the Board who are in the employ of the United States shall be entitled to travel expenses when traveling on the business of the Board.

STAFF SERVICES

SEC. 14. (a) An Executive Director of the Board shall be appointed by the President. The Executive Director shall be responsible to the Board for carrying out the metric conversion program according to the provisions of this Act and the policies established by the Board.

(b) The Executive Director of the Board shall serve full time and be subject to the provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code. The annual salary of the Executive Director shall not exceed level III of the Executive Schedule under section 5314 of such title.

SEC. 15. (a) The Board is authorized to appoint and fix the compensation of such staff personnel as may be necessary to carry out the provisions of this Act in accordance with the provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code.

(b) The Board is authorized to employ experts and consultants or organizations thereof as authorized by section 3109 of title 5, United States Code, compensate individuals so employed at rates not in excess of the rate currently being paid grade 18 of the General Schedule under section 5332 of such title, including traveltime, and allow them, while away from their homes or regular places of business, travel expenses (including per diem in lieu of subsistence) as authorized by section 5703 of said title 5 for persons in the Government service employed: *Provided, however,* That contracts for such temporary employment may be renewed annually.

SEC. 16. Financial and administrative services, including those related to budgeting, accounting, financial reporting, personnel, and procurement, and such other staff services as may be needed by the Board, may be obtained by the Board from the Department of Commerce or other appropriate sources in the Federal Government for which payment shall be made in advance, or by reimbursement, from funds of the Board in such amounts as may be agreed upon by the Chairman of the Board and the source of the services being rendered.

FUNDS FOR THE BOARD

SEC. 17. There are hereby authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act. Appropriations to carry out the provisions of this Act may remain available for obligation and expenditure for such period or periods as may be specified in the Acts making such appropriations.

Mr. TEAGUE (during the reading). Mr. Chairman, I ask unanimous consent that the bill be considered as read, printed in the RECORD, and open to amendment at any point.

The CHAIRMAN. Is there objection to the request of the gentleman from Texas?

There was no objection.

The CHAIRMAN. Are there any amendments? There being no amendments, under the rule, the committee rises.

Accordingly the Committee rose; and the Speaker having resumed the chair, Mr. JONES of Oklahoma, Chairman of the Committee of the Whole House on the State of the Union, reported that that Committee having had under consideration the bill (H.R. 8674) to declare a national policy of converting to the metric system in the United States, and to establish a U.S. Metric Board to coordinate the voluntary conversion to the metric system, pursuant to House Resolution 693, he reported the bill back to the House.

The SPEAKER. Under the rule, the previous question is ordered.

The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed and read a third time, and was read the third time.

The SPEAKER. The question is on the passage of the bill.

The question was taken; and the Speaker announced that the ayes appeared to have it.

Mr. BELL. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER. Evidently a quorum is not present.

The Sergeant at Arms will notify absent Members.

The vote was taken by electronic device, and there were—yeas 300, nays 63, not voting 70, as follows:

[Roll No. 497]

YEAS—300

Abzug	Bennett	Burke, Mass.
Adams	Bergland	Burlison, Mo.
Alexander	Blanchard	Burton, John
Ambro	Blouin	Burton, Phillip
Anderson, Calif.	Boggs	Butler
	Boland	Byron
Anderson, Ill.	Bolling	Carney
Andrews, N.C.	Bonker	Carr
Annunzio	Brademas	Carter
Archer	Breaux	Casey
Ashley	Breckinridge	Cederberg
Aspin	Brodhead	Clausen, Don H.
AuCoin	Brooks	
Badillo	Broomfield	Clawson, Del
Bafalis	Brown, Calif.	Clay
Baucus	Brown, Mich.	Cleveland
Beard, R.I.	Brown, Ohio	Cochran
Beard, Tenn.	Buchanan	Cohen
Bedell	Burgener	Collins, Ill.
Bell	Burke, Calif.	Conte

Conyers	Johnson, Pa.	Quillen
Corman	Jones, Ala.	Railsback
Cornell	Jones, N.C.	Rangel
Coughlin	Jones, Okla.	Regula
D'Amours	Jordan	Reuss
Daniel, R. W.	Karth	Richmond
Daniels, N.J.	Kasten	Rinaldo
Danielson	Kastenmeier	Robinson
Davis	Kemp	Rodino
de la Garza	Keys	Roe
Delaney	Krebs	Rogers
Dellums	Krueger	Roncalio
Dingell	LaFalce	Rooney
Dodd	Lagomarsino	Rosenthal
Downey, N.Y.	Leggett	Rostenkowski
Downing, Va.	Lehman	Roush
Drinan	Lent	Roybal
du Pont	Levitas	Ruppe
Early	Litton	Russo
Eckhardt	Lloyd, Calif.	Ryan
Edgar	Lloyd, Tenn.	St Germain
Edwards, Calif.	Long, La.	Santini
Eilberg	McCormack	Sarasin
Emery	McDade	Sarbanes
Erlenborn	McFall	Scheuer
Esch	McHugh	Schneebeli
Evans, Colo.	McKinney	Schroeder
Evans, Ind.	Madigan	Schulze
Fascell	Maguire	Seiberling
Fenwick	Mann	Sharp
Findley	Martin	Shriver
Fish	Matsunaga	Shuster
Fisher	Mazzoli	Simon
Fithian	Meeds	Slack
Flood	Melcher	Smith, Iowa
Flowers	Meyner	Solarz
Foley	Mezvinsky	Spellman
Ford, Mich.	Michel	Staggers
Ford, Tenn.	Mikva	Stanton,
Forsythe	Milford	J. William
Fountain	Miller, Calif.	Stanton,
Frenzel	Miller, Ohio	James V.
Frey	Mineta	Stark
Fuqua	Minish	Steelman
Giaimo	Mink	Steiger, Wis.
Gibbons	Mitchell, Md.	Stephens
Goldwater	Mitchell, N.Y.	Stokes
Gonzalez	Moakley	Stratton
Gradison	Moffett	Studds
Grassley	Mollohan	Sullivan
Green	Montgomery	Symington
Gude	Moore	Talcott
Guyer	Moorhead, Pa.	Taylor, N.C.
Hagedorn	Mosher	Teague
Hall	Moss	Thompson
Hanley	Murphy, Ill.	Thone
Hannaford	Murphy, N.Y.	Treen
Hansen	Myers, Ind.	Udall
Harkin	Myers, Pa.	Ullman
Harris	Natcher	Vander Jagt
Hastings	Neal	Vander Veen
Hawkins	Nedzi	Vanik
Hayes, Ind.	Nichols	Vigorito
Hechler, W. Va.	Nix	Waggonner
Heckler, Mass.	Nolan	Wampler
Heinz	Nowak	Waxman
Helstoski	Oberstar	Weaver
Hicks	O'Brien	White
Hillis	O'Hara	Whitehurst
Hinshaw	O'Neill	Wilson, Bob
Holland	Ottinger	Wilson, C. H.
Holt	Patman, Tex.	Winn
Holtzman	Patten, N.J.	Wirth
Howard	Pattison, N.Y.	Wolff
Howe	Perkins	Wright
Hughes	Pettis	Wylie
Hyde	Pickle	Yates
Ichord	Pike	Yatron
Jacobs	Poage	Young, Tex.
Jeffords	Pressler	Zablocki
Johnson, Calif.	Preyer	
Johnson, Colo.	Price	

NAYS—63

Abdnor	Gaydos	Moorhead,
Andrews,	Gilman	Calif.
N. Dak.	Ginn	Mottl
Armstrong	Goodling	Passman
Ashbrook	Haley	Randall
Bauman	Hammer-	Risenhoover
Bevill	schmidt	Roberts
Bowen	Hefner	Rose
Burleson, Tex.	Henderson	Runnels
Chappell	Hightower	Satterfield
Collins, Tex.	Hubbard	Sebelius
Conlan	Hutchinson	Sikes
Crane	Jenrette	Skubitz
Daniel, Dan	Kazen	Smith, Nebr.
Derrick	Kindness	Snyder
Devine	Landrum	Spence
Dickinson	Latta	Steed
Duncan, Tenn.	Lott	Steiger, Ariz.
English	Lujan	Stuckey
Evins, Tenn.	McCollister	Taylor, Mo.
Fiorio	McDonald	Whitten
Flynt	Mahon	Young, Fla.

NOT VOTING—70

Addabbo	Hays, Ohio	Pepper
Baldus	Hébert	Peyser
Barrett	Horton	Pritchard
Biaggi	Hungate	Quie
Biester	Jarman	Rees
Bingham	Jones, Tenn.	Rhodes
Brinkley	Kelly	Riegle
Broyhill	Ketchum	Rousselot
Burke, Fla.	Koch	Shipley
Chisholm	Long, Md.	Sisk
Clancy	McClory	Symms
Conable	McCloskey	Thornton
Cotter	McEwen	Traxler
Dent	McKay	Tsongas
Derwinski	Macdonald	Van Deerlin
Diggs	Madden	Walsh
Duncan, Oreg.	Mathis	Whalen
Edwards, Ala.	Metcalfe	Wiggins
Eshleman	Mills	Wilson, Tex.
Fary	Morgan	Wydler
Fraser	Murtha	Young, Alaska
Hamilton	Obey	Young, Ga.
Harrington	Patterson,	Zeferetti
Harsha	Calif.	

So the bill was passed.

The Clerk announced the following pairs:

On this vote:

Mr. Addabbo for, with Mr. Hays of Ohio against.

Mr. Shipley for, with Mr. Zeferetti against.

Mr. McClory for, with Mr. Biaggi against.

Mr. Koch for, with Mr. Jones of Tennessee against.

Mr. Bingham for, with Mr. Rousselot against.

Mr. Baldus for, with Mr. Eshleman against.

Mr. McEwen for, with Mr. Symms against.

Mr. Quie for, with Mr. Clancy against.

Until further notice:

Mr. Dent with Mr. Charles Wilson of Texas.

Mr. Cotter with Mr. Hungate.

Mr. Hébert with Mr. Riegle.

Mr. Sisk with Mr. Hamilton.

Mr. Morgan with Mr. Brinkley.

Mr. Obey with Mrs. Chisholm.

Mr. Pepper with Mr. Biester.

Mr. Barrett with Mr. Broyhill.

Mr. Macdonald of Massachusetts with Mr. Derwinski.

Mr. Van Deerlin with Mr. Burke of Florida.

Mr. Conable with Mr. Fary.

Mr. Diggs with Mr. Duncan of Oregon.

Mr. Fraser with Mr. Edwards of Alabama.

Mr. Harrington with Mr. Jarman.

Mr. Harsha with Mr. Kelly.

Mr. Horton with Mr. Madden.

Mr. Long of Maryland with Mr. Mathis.

Mr. McCloskey with Mr. McKay.

Mr. Patterson of California with Mr. Murtha.

Mr. Metcalfe with Mr. Mills.

Mr. Peyser with Mr. Rees.

Mr. Pritchard with Mr. Thornton.

Mr. Traxler with Mr. Tsongas.

Mr. Whalen with Mr. Walsh.

Mr. Young of Georgia with Mr. Wiggins.

Mr. Wydler with Mr. Young of Alaska.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

TITLE AMENDMENT OFFERED BY MR. TEAGUE

Mr. TEAGUE. Mr. Speaker, I offer an amendment to the title.

The Clerk read as follows:

Title amendment offered by Mr. TEAGUE: Amend the title so as to read: "To declare a national policy of coordinating the increasing use of the metric system in the United States, and to establish a United States Metric Board to coordinate the voluntary conversion to the metric system."

The title amendment was agreed to.

A motion to reconsider was laid on the table.

LEGISLATIVE PROGRAM

(Mr. MICHEL asked and was given permission to address the House for 1 minute.)

Mr. MICHEL. Mr. Speaker, I have taken this time for the purpose of inquiring of the distinguished majority leader, the gentleman from Massachusetts (Mr. O'NEILL) the program for the balance of this week, if any and for next week.

Mr. O'NEILL. Mr. Speaker, will the gentleman yield?

Mr. MICHEL. I am delighted to yield to the distinguished majority leader.

Mr. O'NEILL. Mr. Speaker, I thank the distinguished acting minority leader, the gentleman from Illinois (Mr. MICHEL) for yielding to me. In response to the inquiry of the gentleman from Illinois, let me say that we have completed the legislative program for this week except for one item which will be coming up shortly, and that the schedule for the week of September 8, 1975, is as follows:

Monday is District day and there are no bills.

We will have H.R. 8650, energy conservation in buildings under an open rule with 1 hour of debate, followed by H.R. 6673, American Folklife Center, also under an open rule with 1 hour of debate.

On Tuesday we will consider H.R. 5901, the Education Division appropriations for fiscal year 1976, and this, of course, is the vote on the veto override. I might add that we are delighted at the support that we know that we are going to get from the other side of the aisle.

This will be followed by suspensions, and votes on the suspensions will be postponed until the end of the consideration of all suspensions. The suspensions that we will take up are as follows:

H.R. 1073, war risk insurance;

House Joint Resolution 209, National Hunting and Fishing Day;

House Joint Resolution 597, St. Elizabeth Seton Day; and

S. 331, commemorating Veterans Day on November 11.

For Wednesday and the balance of the week:

H.R. 9005, international development and food assistance, subject to a rule being granted.

I am sure the gentleman from Illinois is aware that that is what we used to call the foreign aid bill.

We will then consider S. 1849, emergency petroleum allocation extension. That is the vote for the veto override if the Senate overrides the veto.

House Resolution 335, Select Committee for Missing in Action Servicemen in Southeast Asia.

H.R. 7590, audit of the Federal Reserve System, subject to a rule being granted, and H.R. 8150, Drug Abuse Office and Treatment, also subject to a rule being granted.

Of course, conference reports may be brought up at any time and any further program will be announced later.

May I say that we do anticipate a Friday session. I am sure the gentleman from Illinois is aware of the Jewish holidays on Monday and Tuesday of the week following and there is no anticipated business for either of those days, by

agreement of the leadership on both sides.

Mr. MICHEL. Could the distinguished gentleman from Massachusetts elaborate on what the gentleman might think would be the situation for Friday on this particular program, would it possibly be the same next week as this week, coming in at 10 in the morning as we did today in order to complete the business earlier?

Mr. O'NEILL. I would say that would have to be up to the will of the Congress. If the legislation were to be completed prior to Friday then of course I would anticipate there would be no Friday session. But as I say, we are scheduling a Friday session. I am saying that now so that the Members may make their plans accordingly, and so that they cannot say that they have made other plans for the Friday since I say that I believe there will be a Friday session. So if they make arrangements otherwise, then they do so at their own peril.

Mr. MICHEL. I thank the distinguished majority leader.

ADJOURNMENT TO MONDAY, SEPTEMBER 8, 1975

Mr. O'NEILL. Mr. Speaker, I ask unanimous consent that when the House adjourns today it adjourn to meet on Monday next.

The SPEAKER. Is there objection to the request of the gentleman from Massachusetts?

There was no objection.

DISPENSING WITH BUSINESS IN ORDER UNDER THE CALENDAR WEDNESDAY RULE ON WEDNESDAY NEXT

Mr. O'NEILL. Mr. Speaker, I ask unanimous consent that the business in order under the Calendar Wednesday Rule may be dispensed with on Wednesday next.

The SPEAKER. Is there objection to the request of the gentleman from Massachusetts?

There was no objection.

TO PROVIDE FOR APPOINTMENT OF JOINT COMMITTEE ON ARRANGEMENTS FOR COMMEMORATION OF BICENTENNIAL OF UNITED STATES OF AMERICA

Mr. LONG of Louisiana. Mr. Speaker, I ask unanimous consent to take from the Speaker's table Senate Concurrent Resolution 44 with a Senate amendment to the House amendment thereto, and concur in the Senate amendment.

The Clerk read the title of the Concurrent Resolution.

The Clerk read the Senate amendment to the House amendment, as follows:

In lieu of the matter proposed to be inserted by the House engrossed amendment, insert:

That the Congress should play a significant and substantive role in honoring the Nation's two hundredth anniversary and in assisting the American Revolution Bicentennial Administration.

SEC. 2. (a) There is hereby established a joint congressional committee to be known as the Joint Committee on Arrangements for the Commemoration of the Bicentennial of the United States of America (hereinafter referred to as the "joint committee").

(b) The joint committee shall be composed of twelve members as follows:

(i) the majority and minority leaders of the House of Representatives and of the Senate;

(ii) the Members of Congress who are members of the American Revolution Bicentennial Board;

(iii) two Members of the House of Representatives appointed by the Speaker of the House of Representatives. Members appointed under this paragraph shall not be of the same political party; and

(iv) two Members of the Senate appointed by the President of the Senate. Members appointed under this paragraph shall not be of the same political party.

(c) The joint committee shall select a chairman from among its members. Five members of the joint committee shall constitute a quorum. Any vacancy in the membership of the joint committee shall not affect its authority and shall be filled in the same manner in which the original appointment was made.

(d) For purposes of paragraph 6 of rule XXV of the Standing Rules of the Senate, service of a Senator as a member of the joint committee, or as chairman of the joint committee, shall not be taken into account.

SEC. 3. The joint committee shall—

(1) coordinate the planning and implementation of Bicentennial activities and events of the Congress with the activities and events of other governmental and nongovernmental groups;

(2) consult with the Speaker of the House of Representatives and the President of the Senate to provide for representation of the Congress at appropriate Bicentennial ceremonies and events; and

(3) develop and implement programs to inform and emphasize to the Nation the role of the Congress, as the representative of the people, from its historic beginnings in prerevolution days through two hundred years of growth, challenge, and change.

SEC. 4. The joint committee may—

(1) appoint such staff as may be necessary;

(2) adopt rules respecting its organization and procedures;

(3) sit and act at such times or places as it shall deem appropriate;

(4) procure the temporary or intermittent services of individual consultants, or organizations thereof, in the same manner and under the same conditions as a standing committee of the Senate may procure such services under subsection (i) of section 202 of the Legislative Reorganization Act of 1946;

(5) hold hearings;

(6) procure printing and binding; and

(7) with the prior consent of the agency concerned, use on a reimbursable basis the services of personnel, information, and facilities of any such agency.

SEC. 5. The expenses of the joint committee shall be paid from the contingent fund of the Senate upon vouchers approved by the chairman of the joint committee.

The SPEAKER. Is there objection to the request of the gentleman from Louisiana?

There was no objection.

The Senate amendment to the House amendment was concurred in.

A motion to reconsider was laid on the table.

ANNOUNCEMENT BY THE SPEAKER

The SPEAKER. Pursuant to the provisions of section 2(b), Senate Concurrent Resolution 44, 94th Congress, the Chair appoints as members of the joint committee on arrangements for the commemoration of the Bicentennial of the United States of America to serve with the majority and the minority leaders of the House and the House Members of the American Revolution Bicentennial Board the following Members on the part of the House. The gentleman from Texas, Mr. PICKLE and the gentleman from Michigan, Mr. ESCH.

STATEMENT OF HON. JOHN P. HAMMERSCHMIDT IN COSPONSORING A 3-YEAR EXTENSION OF THE PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965, AS AMENDED

(Mr. HAMMERSCHMIDT asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. HAMMERSCHMIDT. Mr. Speaker, I am pleased today to cosponsor a 3-year extension of the Public Works and Economic Development Act of 1965, as amended. This extension represents a new era for EDA for the administration has requested this action. This is a departure from previous attempts by the previous administration to severely modify or eliminate EDA.

Since 1971, the committee has fought successfully for the life of this highly successful and proven program and on three separate occasions has prevailed with both the Congress and the administration for its continuation. We have compromised on three occasions to accommodate the objections to EDA, and we have added provisions in the act that gave new direction to economic development. The title III State functions are new, giving responsibility to States for planning and supplemental grant authority. Title IX provides grants to eligible recipients for economic adjustment to give preventative or anticipatory economic assistance where it is needed. Both of these provisions, as well as others, were included in the 1974 amendments. I am anxious to review the results of these provisions to see if the new direction will be as fruitful as those time tested programs that have proven track records.

Since the inception of the act the agency has not been afforded full funding of authorized levels. Historically the agency has been provided only about 30 percent of the authorized levels. Last year we provided reduced authorizations in order to give the agency a more realistic outlook toward what might be expected in actual outlays. I am pleased to note that the Senate Appropriations Committee has recommended vastly increased funding for the titles under EDA, and specifically those traditional public works grants, loans and business development loans that have been the mainstays of the EDA. When the conferees meet on this appropriations bill, I will urge adoption of the increased funding levels and will work toward that end.

EDA is a worthwhile investment program providing money for jobs and incentive for people to better their economic conditions. It is a true Federal-local partnership in action; it allows decisions to be made at the local level.

In the months to follow I will urge the subcommittee to proceed with hearings on this extension. Undoubtedly there will be some changes in the current law that committee members and Members of Congress will suggest. We will afford an opportunity to everyone interested in this legislation to put forward their suggestions. As ranking minority member on the Subcommittee on Economic Development, I have an open mind to the changes that may be needed in the current legislation and I will entertain any suggestions and give them full consideration.

INVESTIGATION PROVES GEORGE HANSEN HONESTY

The SPEAKER pro tempore (Mr. McFALL). Under the previous order of the House, the gentleman from Illinois (Mr. CRANE) is recognized for 5 minutes.

Mr. CRANE. Mr. Speaker, in any controversy, especially where partisan politics are involved, speculation often obscures the truth. To set the record straight publicly regarding my colleague GEORGE HANSEN's 1974 primary election campaign finance problems in the Second Congressional District of Idaho, I submit the following pertinent extracts from the official transcript of his final appearance in the U.S. District Court for the District of Columbia of Friday, April 25, 1975. Presiding was the Honorable George L. Hart, chief judge, and appearing for GEORGE HANSEN was his Washington, D.C., attorney, Robert S. Bennett.

After some legal discussion and reexamination of information, the court in dialog with Mr. Bennett stated:

I can't conceive that the Government would have brought this case if that's all that was involved in it.

Mr. BENNETT. Well, Your Honor, let me respond to that in a couple of ways.

Your Honor, I think it is important for you to know that Congressman Hansen kept very careful receipts, and very careful records, all of which were made available to the Government.

At this point in time there is no question that monies have been accounted for, and there has been no finding of siphoning off, no finding of improper use, no finding that these monies were improperly used in any manner or fashion.

Now, Your Honor, Congressman Hansen made a mistake.

He should have said he received the funds at least to the first count, Your Honor, but those funds were reported by the committee.

He didn't report twice. He should have reported as to the first court that he received them, but he considered himself and the committee in a sense, to be one and the same.

Now I ask you this, Judge: If a man is going to try to commit illegal activity, which this statute tries to prevent, he's going to set up dummy committees, he's going to have committees that are not readily identifiable.

George Hansen reported all monies involved through the committee for Hansen, a readily identifiable committee. I mean it is inconceivable that any wrongdoing was attempted to be concealed by using your very name to report these funds, funds which were reported, Judge, prior to the election, prior to the primary, prior to any investigation.

After further statement of fact, Mr. Bennett concluded by saying:

Congressman Hansen was spending his own money to finance this election. Congressman Hansen did not have the luxury, if Your Honor please, of having a large staff with an accountant working full time on these things. He was running as a non-incumbent with his wife and with his children, and he made mistakes, but we're saying they are not the kinds of mistakes that he should go to jail for.

After some additional dialog, the Court then stated:

I must say that when this case came along, it seemed to me a proper case to try by deterrents to stop some of the things that had been going on. Now, if I have used the improper technique to do this, then I will reconsider the matter.

I can't conceive that if all that was done in this case was simply to make a mistake between reporting properly personally and reporting properly by committee, and that it was properly reported in all, that the Government would have brought the case. I just can't conceive it.

Mr. BENNETT. May I make one observation in that regard, Your Honor, and it is this: The Department of Justice, now the Department of Justice—and Your Honor knows this better than any of us—must react and act when something is reported to them.

Again we have no fault with the Department of Justice. I think one reason, Your Honor, in response to your question, why many persons are not before you, is because many alleged violations are not reported to the Justice Department. For example, Your Honor, the other four candidates in Idaho had no complaint made against them.

The COURT. According to the Justice Department, they have been in all the newspapers, they can read.

Mr. BENNETT. Your Honor, I would like to point out one simple fact, Your Honor. You hate to get into the motivations of people, but Justice has to act when something is brought to their attention. And the man that Congressman Hansen defeated in the primary, a Mr. Orville Hansen, who was no relation to him, is on the very committee, Your Honor, that reported this matter to the Justice Department.

That is a fact which I think is more than coincidental.

Also, Your Honor, I would point out a letter from the acting Attorney General, Mr. Keeney, who told Mr. Hayes, Congressman Hayes, in reference to your letters of—citing a number of dates—we have thoroughly—I am paraphrasing, Your Honor, and I want that understood, but you have the letter. I have attached it as an exhibit—that after an exhaustive investigation that there were no felonies found, and that there was only one or more possible misdemeanors violations; and the Government has stuck with their position.

That was not the result of plea bargaining, that was not the result of what we have seen in some recent cases where someone comes in and the Justice Department says, well, we can get you on 20 counts, so you cop out to one or two misdemeanors.

What's before Your Honor right now is what is the end product of a very exhaustive investigation.

Now, Your Honor, I appreciate the importance of deterrents, Your Honor. And I can assure you, Your Honor, from my involvement in this case, I bet you the day after you rendered your sentence every Congressman and every Senator pulled out his own reports and pulled out his own forms; and I think there is a deterrence.

Following further discussion between the Court, Mr. Bennett, and the attorney representing the Department of Justice, the Court asked:

Mr. Hansen, is there anything you wish to say?

Mr. HANSEN. Your Honor, I appreciate this opportunity to reappear before your.

I would state this, that I guess in this country I've always felt that this was a place where little people could work, they could operate.

Maybe we were too freewheeling. We should have sought counsel. We should have sought professional advice. I can see these things now.

It is very difficult for a man to be the candidate and the professional bookkeeper, and the newsman and all of the number of things that happen in a major candidacy, and I regret very much that I didn't take proper steps and that I perhaps was not careful.

I do feel that I, in many cases, performed these tasks and did these things with proper intent, not with the intent to deceive. But I can see where, as we have gone through this, that certainly it could create much anticipation and problem, and I'm very humble, very concerned about this, and I apologize very much to everyone concerned, that anything that I may have done may have become a problem of major proportion, because this was certainly not intended to be the case, Your Honor. And I apologize.

I am very humble about this matter, and I put myself at your mercy.

The COURT. All right.

It now appears to the Court insofar as it is possible for the Court to ascertain, that while Mr. Hansen handled his funds negligently, he didn't handle them in a fashion that could be deemed to be evil or felonious.

Insofar as the Court can ascertain, although the wrong named committee made the report of the receipts and expenditures, that a correct reporting of the receipts and expenditures was made. And there seems to be no indication that any of the money for campaign contributions went into Mr. Hansen's pocket.

For that reason, the Court will set aside its previous sentence in this case, and it will fine Mr. Hansen $1,000 on each count.

Mr. Speaker, three things come through loud and clear from the court's final deliberations:

(1) It seemed to me (the Court) a proper case to try by deterrents to stop some of the things that have been going on (in federal elections). Now, if I have used the improper technique to do this, then I will reconsider the matter.

(2) I can't conceive that if all that was done in this case was simply to make a mistake between reporting properly personally and reporting properly by committee, and that it was properly reported in all, that the government would have brought the case.

(3) Insofar as the Court can ascertain, although the wrong named committee made the report of receipts and expenditures, that a correct reporting of receipts and expenditures was made.

Simply stated, the court admitted its amazement that the case was even considered, and acknowledged that a correct reporting of receipts and expenditures was made. The integrity of GEORGE HANSEN is intact.

LEGISLATION TO INCLUDE SECRETARY OF LABOR AS FULL MEMBER OF ENERGY RESOURCES COUNCIL

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from California (Mr. BELL) is recognized for 10 minutes.

Mr. BELL. Mr. Speaker, the Federal Government is currently working from many different angles to try and meet the Nation's growing energy needs and to cope with the problems which a lack of useable energy resources has created. In October of 1974, the Congress recognized the need for communication and coordination between the diverse Federal agencies dealing with energy and energy-related matters by creating the Energy Resources Council within the Executive Office of the President.

Implicit in the legislative mandate creating the ERC was the realization that, in order for the Council to be effective, its members must include representatives of all Federal agencies working with the problems of energy. The President, in view of such congressional intent, expanded the Council's membership from its original 5 to 24.

However, one Federal agency which represents a very significant part of the American population has been neglected by both the Congress and the President: The Department of Labor. I am today introducing legislation which will correct this oversight by making the Secretary of Labor a full member of the Energy Resources Council.

The need for the Secretary's membership is clear when one recognizes that the energy situation in this country has an important effect upon the employment situation. Two interdependent linkages may be cited: A production linkage and a consumption linkage.

The production linkage stems from energy's role as a raw material in the production of all goods and services. The energy scarcity itself, as well as the scarcity induced rise in energy prices, make it very difficult for business and industry to operate at full capacity. As production declines, the economy as a whole slows down and jobs are lost.

Producers will naturally pass some of their increasing operating costs on to the consumer in the form of higher prices for goods and services. The consumption linkage now becomes significant because as prices rise consumers buy less. Higher prices mean fewer sales, fewer sales mean lower production, and lower production means fewer jobs.

Furthermore, the rising costs of production and the declining number of goods and services consumed will stimulate a reduction in profits. Lower profits will decrease producers' ability to increase wages. Since real wages fall in the face of rising prices, consumption will decline further and the vicious circle begins again.

The Bureau of Labor Statistics reported in January 1975 that—

> There was a loss of between 150,000 to 225,000 jobs from November 1973 to March 1974 (the period of the Arab oil embargo) as a direct result of shortages of fuel and petroleum available to employers . . . Employment fell an additional 275,000 in industries indirectly affected by the energy crisis . . .

These 400,000 jobs have not yet been recovered.

Beyond the attributable effects of the oil embargo are the hidden repercussive contributions of the energy crisis in causing the recession which has sent unemployment up almost 4 percentage points in the past 2 years. One can only speculate as to its magnitude, but surely it is significant.

Looking toward the future, all is not bleak. The development and implementation of new energy sources will involve a massive effort by both Government and industry. It will entail the creation of more jobs in both the development and implementation stages as more abundant energy resources ease the current pressure on the economy.

The then Atomic Energy Commission estimated in January 1974 that—

> The energy R&D program would employ 40,000 scientists, engineers, and technicians.

Note that this is only on the Federal level and that it does not include the employment effects of the energy programs once they are implemented.

The Secretary of Labor is the one individual in Government who has the responsibility for dealing with the manpower and employment aspects of the energy crisis. Presently, his vital input into the Energy Resources Council is lacking. The resultant suboptimal sensitivity to the labor viewpoint could cause the Nation problems in the future.

The Secretary of Labor's inclusion on the Energy Resources Council is a simple but effective way of insuring that the employment and manpower effects of energy policies are considered by the members of the ERC as they supervise the development and implementation of national energy policies.

The text of my legislation follows:

JOINT RESOLUTION TO INCLUDE THE SECRETARY OF LABOR IN THE MEMBERSHIP OF THE ENERGY RESOURCES COUNCIL

Whereas the Energy Resources Council was established by the Energy Reorganization Act of 1974 (Public Law 93-438) "to insure communication and coordination among the agencies of the Federal Government which have responsibilities for the development and implementation of energy policy or for the management of energy resources"; and

Whereas it is desirable to include as members of the Energy Resources Council representatives of Federal agencies serving constituencies which are affected by the development or implementation of energy policies; and

Whereas the Department of Labor is such an agency by virtue of its representation of a substantial number of men and women in America; and

Whereas an understanding of the manpower and employment implications of energy policies is crucial to the effective development and implementation of such policies: Now, therefore, be it

Resolved by the Senate and the House of Representatives of the United States of America in Congress assembled, That section 108(a) of the Energy Reorganization Act of 1974 (Public Law 93-438) is amended by inserting "the Secretary of Labor," immediately after "the Director, Office of Management and Budget,".

METRIC CONVERSION ACT OF 1975

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Illinois (Mr. RAILSBACK) is recognized for 5 minutes.

Mr. RAILSBACK. Mr. Speaker, as one who has cosponsored similar legislation, I would like to add my full support to the bill, H.R. 8674, the Metric Conversion Act of 1975.

As we are all aware, as far back as 1866, the U.S. Congress legalized the metric system, and a few years later the United States was a party to "the Treaty of the Meter." By signing this treaty, our country, along with every other major country in the world, endorsed the metric system as "the internationally preferred system of weights and measures." However, our Government then made no concerted effort to authorize a program to actually provide for the conversion to such a system.

I am convinced we must proceed for a number of reasons.

First, the metric system is already used by the Government of our country for several purposes, including tariff matters and weighing foreign mail.

Second, many private industries use metric measures. Deere & Co. which has offices in my congressional district, began its own conversion nearly 10 years ago—using dual dimensions in many of their technical drawings.

Third, most of the States, if not all of them, now have some type of metric activity underway, and let me point out that there is also growing support for this changeover at the Federal level. I personally participated in a joint State-Federal transportation agencies meeting on the importance of the metric system this June.

And, finally, we are the only industrial developed nation which has not yet established a national policy committing itself to the metric system. At a time of integrated commerce which has been of such benefit to American businessmen and farmers—and thus in turn to the American consumer—it is only prudent for the United States to adjust its systems to those internationally accepted. By 1978, nonmetric products are not even expected to be allowed to enter the European Economic Community; so the metric system seems clearly in our own best interests.

The bill before us will insure careful planning on an action that will affect every American citizen, and I urge its immediate enactment.

HUSSEIN LETTER ON HAWK MISSILES

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Illinois (Mr. FINDLEY) is recognized for 10 minutes.

Mr. FINDLEY. Mr. Speaker, the situation in the Middle East has finally reached a turning point on the road to peace. Enormous progress has been made, largely at the initiative of our Government. As a result, U.S. influence in Saudi Arabia has been dramatically enhanced to the great discomfort of the Soviet Union. The significance of this cannot be overstated.

Now, with the blush of success still fresh, Congress may deeply impair our relations with one of our oldest and most reliable friends in the Middle East and Israel's most reasonable neighbor—Jordan. The disapproval by Congress of the

sale of Hawk missiles to that country would be a tragic mistake which might well undo much of the good that has been done by our Government in recent weeks.

Of all the Middle Eastern countries, Jordan has long posed the fewest problems for Israel. Jordan's participation in the 1967 and 1973 wars was minimal or nonexistent. More than any other country, it has controlled the unconscionable acts of terrorism against Israel engaged in by fanatical elements of the Palestinians. Jordan seems very willing to live peaceably with Israel and carry on normal trade and diplomatic relations.

If Congress were to deny Jordan the Hawk missiles requested, while at the same time supplying Israel with the military hardware promised in the latest agreement, the incongruity and unfairness of our position would be untenable. In fact, in a personal letter to me, King Hussein has promised that if the United States does not sell Jordan the missiles, he will be forced, reluctantly, to buy them from the Soviet Union.

If the Congress forces Jordan to that position, we will have done irreparable harm to Israel. We will have forced Jordan into a stronger alliance with Syria and the Soviet Union and minimized our own influence upon our oldest Arab friend. A greater disservice to Israel is difficult to imagine.

Following is the text of the King's letter to me. I urge all of my colleagues to read it and ponder the implications of what he says:

SEPTEMBER 2, 1974.

DEAR CONGRESSMAN: It is my privilege to enclose herewith a personal letter addressed to you by His Majesty King Hussein I, concerning the proposed sale of an air defense system to Jordan.

After consulting with His Majesty in Amman and upon hearing my report on the deliberations last July on this subject by your colleagues in the Senate Foreign Relations Committee and the House Committee on International Relations, His Majesty commanded me to communicate to you this letter which in language and contents reflects the true and sincere desire of the people of Jordan to preserve and strenghten the ties of friendship between our two countries.

His Majesty, as a friend of this country, is appealing to you to judge this proposed sale within this context. It is hoped that you will view this very moderate and legitimate request with positive consideration.

Yours sincerely,

ABDULLAH SALAH,
Ambassador.

THE ROYAL PALACE,
Amman, Jordan, August 25, 1975.

Hon. Congressman PAUL FINDLEY,
The Capitol, Washington, D.C.

DEAR CONGRESSMAN: I write to you in your capacity as a representative of the great American people. In all of my years at the helm of Jordan I have been a long time believer in the fundamental principles and ideals which your forefathers adopted to create the greatest and strongest nation of all times. As true friends of America, my country and my people were, for two decades, the only supporters the United States had in the Arab World. We have always been openly proud of our friendship and voiced it with courage. We felt that we shared with you the belief in the basic right of peoples to freedom, Justice, dignity and a better life.

My country has continuously adopted a moderate non-aggressive policy which we hope we will be enabled to continue to pursue. We have contributed greatly to maintaining stability and moderation in our area, and served the cause of peace in the Middle East in every possible way. We depended on your friendship and support in our various endeavours to prevent the polarization of the Middle East conflict between the super-powers. We cooperated very closely with your government, at considerable cost to my country and its people, in our common search for a just and lasting peace in the Middle East.

Yet now, my country, its government, people and armed forces, find ourselves on the horns of a dilemma. Can we preserve the friendship which existed betwen the United States and ourselves and which we cherished so much, or are we going to be left with no other alternative than to seek another course?

What brought matters to this sad crossroad is the opposition in some Congressional quarters, which we sincerely believe to be unwarranted, to the sale of fourteen batteries of Advanced Hawk missiles to Jordan. I hope you will bear with me as we review some of the facts.

Jordan is the only state in the area without an air-defence system of any kind. The fourteen Hawk batteries are the minimum requirement for our legitimate self-defence, as was established by the American Military Delegations which visited Jordan for the purpose of studying our air-defence requirements. The system we agreed with your government on is a very modest one compared to what our neighbours have, and, we feel, will in no way affect the balance of power in the Middle East, which is overwhelmingly in Israel's favour. The Hawks will be used to defend the area of our capital and a few of our major fixed installations.

We in Jordan have always looked to the United States for military equipment, and relied on you as our friends who generously helped us whenever possible, and within the limits of our ability, to purchase arms for our legitimate self-defence. We have had to be strong to survive, since weakness invites aggression. We do feel threatened, and the record of Israel's expansion since its creation in 1948 justifies those fears.

Perhaps not everyone knows that our capital city of Amman is within range of the American built Israeli heavy artillery, and that all our vital points are at the mercy of American built Israeli aircraft, which are free to violate, as they continuously do, our airspace as they please.

This situation, and the recent opposition by some congressional quarters to the sale of the Hawks to Jordan has distressed, dismayed and worried me to the point that I felt it necessary to write to you and infringe on your valuable time.

The matter is in your hands now. If your decision to provide Jordan with the urgently needed fourteen batteries of Advanced Hawk missiles is a positive one, then no one will be more pleased or satisfied than I, your old and traditional friend.

But if your decision is a negative one, I regret to inform you that I have no other choice but to seek the best comparable system, which is available only in the Soviet Union. It would be a tragic decision on your part if you chose to push your friend and ally to adopt such a course—one which I am duty-bound to follow with the greatest of sorrow. As a friend, allow me to say that such a development will not only affect your interests in the Middle East, but will also incur irreparable damage to the United States credibility and reliability, not only in the Arab World, but perhaps throughout the world. It would indeed be tragic to have anything occur which would cast doubt upon your role as a peace-maker in the area.

Finally, it is common knowledge that the United States has granted Israel billions of dollars worth of arms over the years, especially since the 1973 war, and is now about to consider an additional Israeli request for more billions of your tax payers money. We understand this is to be spent on some of the most sophisticated and offensive weapons in the U.S. Arsenal, such as the F. 15 Eagle class of aircraft, and the Lance ground to ground missile. As a result the United States might well be accused of adopting a policy of double-standards, and not the even-handed constructive policy which is needed if you are to play an effective role in establishing peace in the Middle East.

Please forgive my candor, but I write as a true friend who is doing his utmost to preserve our traditional ties and close association.

I hope you will kindly accept my warm regards and personal best wishes.

Yours sincerely,

KING HUSSEIN.

THE UNITED STATES, ISRAEL, AND THE UNITED NATIONS

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Wisconsin (Mr. KASTEN) is recognized for 5 minutes.

Mr. KASTEN. Mr. Speaker, I am a cosponsor of House Resolution 687, which states that the U.S. House of Representatives disapproves of all efforts to suspend or expel Israel from the General Assembly of the United Nations or any other U.N. agencies.

As one of the founders of the United Nations in 1945, the United States has an obligation to promote respect for the Charter and mission of the United Nations which today are as valid and compelling as they were 30 years ago. It is to this end, that we must uphold the concept of universality as stated in article 4 of the Charter. All sovereign states have the right to membership in the United Nations, including Israel. Our concern as to the right of membership in the United Nations has nothing to do with the practices or policies of the particular governments. Our position is that the action contemplated would be illegal.

Presently efforts are being made to expel or suspend Israel's participation in the United Nations or in the U.N. General Assembly, with blatant disregard for articles 5 and 6 of the Charter. If the United Nations begins to depart from the Charter, where suspension and expulsion are clearly specified prerogatives of the Security Council, in the first instance, before consideration by the General Assembly, the position of Israel and of the United States, as well as the integrity and survival of the United Nations itself, are all in danger.

The question of peace in the Middle East has been on the U.N. agenda since 1947. From May 14, 1948, when the state of Israel was proclaimed, to the present day the United Nations has been involved in working toward a peaceful settlement of the Arab-Israeli conflict. Although the problem has been resolved, the United Nations has been responsible for many important gains in this area. The attempts to expel or suspend Israel from U.N. participation have placed these gains in jeopardy. Israel's Foreign Minister Yigal Allon has stated that Israel

would break off all relations with the United Nations if it were suspended. This would cutoff Israel from the rest of the world and lead to a breakdown of proposed interim agreements.

Encouraging, however, is the moderate resolution that the Organization of African Unity Assembly approved on August 1, 1975, requesting all member states to take adequate measures to reinforce the pressure exerted on Israel at the United Nations and its agencies, including the possibility of eventually depriving it of membership. The decision to accept this weaker, more conciliatory resolution over two more strongly worded proposals calling for suspension or expulsion will hopefully initiate a trend within the third world toward more responsible actions and away from the detrimental bloc voting that has been so prevalent in recent U.N. General Assembly sessions. If, however, the signs of moderation do not prevail, and action is taken against Israel, the United States must, as House Resolution 687 states, be prepared to "reassess its relationship with and commitments to the United Nations General Assembly, looking to its possible withdrawal from that body."

Mr. Speaker, I would like to take this opportunity to express my appreciation for the fine work being done by Representative YATES in organizing the support for this resolution. To date, over 250 Members of the House of Representatives have cosponsored this legislation. I would also like to share with colleagues a letter to Representative YATES from the U.S. Representative to the United Nations, the Honorable Daniel P. Moynihan.

Mr. Speaker, I would like the text of this letter printed in the RECORD at this point:

AUGUST 14, 1975.

Hon. SIDNEY R. YATES,
Rayburn House Office Building, House of Representatives, Washington, D.C.

DEAR SID: Thanks for sending me a copy of House Resolution 673. This and similar resolutions help make it publicly clear in advance to those nations who would target Israel for explusion or suspension from the United Nations General Assembly that the American public will not turn a blind eye to their actions. I hope that our fellow members of the United Nations will take this fact seriously. But if the issue does arise, I fully intend to meet it in fighting form.

Best regards.

Sincerely yours,

DANIEL P. MOYNIHAN.

LEGISLATION TO PROHIBIT RETROACTIVE APPLICATION OF REVENUE RULING 73-395

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Illinois (Mr. ROSTENKOWSKI) is recognized for 5 minutes.

Mr. ROSTENKOWSKI. Mr. Speaker, I have today introduced a bill which would prohibit the retroactive application of Revenue Ruling 73-395 which would deny to publishers the option to deduct prepublication expenditures incurred for the writing and editing of textbooks and the design and art work of visual teaching aids. That ruling held that such costs would no longer constitute research or experimental expenditures which are deductible under section 174 of the Internal Revenue Code. The bill would also amend section 174 to make clear for the future that product development and improvement costs of publishers are deductible as research or experimental expenditures.

For many years, it has been the consistent tax practice of most publishers to deduct currently their prepublication costs and, until recently, this practice was generally accepted on audit by the Internal Revenue Service.

Section 174, as enacted by Congress in 1954, grants business taxpayers the option to currently deduct research or experimental expenditures for the development or improvement of their products. The accompanying reports of the Ways and Means Committee and the Committee on Finance in 1954 explained that the purpose of section 174 was to "eliminate uncertainty and to encourage taxpayers to carry on research and experimentation."

There is no suggestion in these reports that section 174 would not apply to the costs of research and experimentation necessary to develop products of book publishers, such as textbooks, visual aids, and other teaching aids merely because the taxpayers' business is publishing or because the teaching aid or other product of a publisher is in the form of a printed book rather than in the form of a mechanical device. Rather, the purpose of enacting section 174 in 1954 was to reaffirm the Service's prior administrative practice of permitting the current deduction of research or experimental expenditures.

Most publishers, for many years both before and after the enactment of section 174, have consistently deducted most of their prepublication costs for developing and improving their products and this practice was generally accepted by the IRS on audit. The bill will merely reaffirm this consistent tax audit experience.

It should also be pointed out that for nontax financial statement purposes, publishing companies generally charge their prepublication expenditures against current income and do not capitalize or otherwise defer such charges. Such an accounting practice, consistently applied over a period of time, clearly reflects income. In revenue ruling 73-395, therefore, the IRS imposes tax accounting concepts on the publishing industry that are at variance with sound financial accounting concepts. Indeed, to require a change in such practice at this time would result in a distortion of income.

A sentence in the Treasury regulations under section 174 provides that the term "research or experimental expenditures" does not include expenditures "for research in connection with literary, historical, or similar projects." This regulatory exclusion should be confined to its proper scope, for example, to preclude the amateur novelist from deducting his essentially personal expenses in the guise of business research expenses. This interpretation conforms with the legislative history of section 174 and the longstanding tax accounting practice of publishers both before and after the enactment of section 174.

The expenditures covered by the bill include the costs of writing, editing, compiling, illustrating, designing, and other costs of developing and improving books, teaching aids, and similar products, such as texts published in microfilm. These costs include the costs of the specifically named activities and other activities properly characterized as development or improvement, but do not include the taxpayer's cost of printing or manufacturing books, teaching aids, or similar products.

The bill, unlike Revenue Ruling 73-395, is not retroactive. For taxable years ending before the date of the enactment, the bill merely applies a "do not disturb rule." Under this rule the Internal Revenue Service is prohibited from compelling a change in the method of accounting for any expenditure covered by the bill which was treated consistently from year to year under the taxpayer's method of accounting for Federal income tax purposes. This "do not disturb rule" applies to prohibit any such change in an "open" year whether or not the taxpayer has been audited. On the other hand, if claim for credit or refund is barred for the year of the change by any law or rule of law, the bill does not override the bar to provide relief.

U.S. SUPPORT FOR BALTIC STATES SHOULD NOT BE AFFECTED BY HELSINKI AGREEMENTS

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Illinois (Mr. ANNUNZIO) is recognized for 5 minutes.

Mr. ANNUNZIO. Mr. Speaker, on August 1, 1975, President Ford, on behalf of the United States, signed the "Final Act of the Conference on Security and Cooperation in Europe" at the close of the European security conference in Helsinki. Many people have interpreted the President's action as extending de facto, if not de jure, recognition to Soviet claims to a number of territories in Eastern Europe, among them the formerly independent Baltic States of Lithuania, Latvia, and Estonia.

I have introduced today two House concurrent resolutions that make it absolutely clear that the United States continues to refuse to recognize the illegitimate claims of the Soviet Union to the Baltic States. This has been our policy ever since the Red Army illegally imposed Communist rule in these countries in 1940. Since that time the free peoples of Lithuania, Latvia, and Estonia have been deprived of their liberty by their Russian rulers and the once fiercely independent Baltic States have become "the captive nations."

Through a policy of deportation and "Russification" the Soviets have attempted to snuff out all nationalistic and resistance movements within the Baltic States. Millions have been deported from their native lands to Siberia. At the same time the Soviets have introduced large numbers of Russians into the Baltic States in order "to Russify" them further.

The United States has long supported the hopes of the peoples of the Baltic States to be rid of the shackles of com-

munism and regain once more the fruits of freedom and liberty. The long-suffering citizens of the captive nations have always turned to this country for inspiration and all freedom-loving people hope that they will eventually be able to throw off the Russian yoke and take their rightful place among the independent nations of the world.

The first resolution I have introduced today calls for the President and the Secretary of State to take all steps necessary to bring the Baltic question before the United Nations and to urge that the United Nations request the Soviet Union: To withdraw all Russian and nonnative troops, agents, colonists, and controls from the Baltic States; to permit the return of all Baltic exiles from Siberia and from prisons and labor camps in the Soviet Union; and to insure the right of self-determination to the peoples of the Baltic States through free elections conducted under the auspices of the United Nations after Soviet withdrawal from the Baltic States.

This last provision is especially important. The Baltic States lost their freedom 35 years ago through rigged elections held in an atmosphere of fear and coercion created by the Soviet Red Army. The right of self-determination—freely arrived at—should be the right of all citizens. The United Nations should be faithful to its principles and see that this right is extended to the peoples of the Baltic States.

Alexandr Solzhenitsyn, the Nobel Prize-winning Soviet author, recently termed the Helsinki document "the betrayal of Eastern Europe." President Ford and Secretary of State Kissinger assure us that the agreements are no such thing. Assurances are one thing, reality is another. Let us examine the reality of the situation. What do the documents, signed by President Ford in Helsinki last month, really mean?

By this agreement America and the free nations of Western Europe solemnly concede that the boundaries established during and after World War II with the help of the Red Army are "inviolable." From the Russian point of view "inviolability of frontiers" is the key phrase in the hundred page plus document. To the Russians this phrase indicates official endorsement of the absorption of the three Baltic States, the Finnish Province of Karelia, the eastern parts of East Prussia and Poland, Ruthenia—formerly part of Czechoslovakia, Bessarabia—formerly part of Rumania, as well as several lesser border changes.

At the end of World War II this country rightfully refused to recognize these ill-gotten gains and, hence, a comprehensive peace treaty delineating the new postwar boundaries was never signed. Formal recognition of these militarily imposed boundaries has been a constant aim of Russian diplomacy ever since. By signing the Helsinki agreements we have helped the Soviets to realize that goal.

And what have we gotten in return? Sadly, very little. Due to Soviet intransigence and a blind desire to preserve détente at all costs, several preconditions to American acceptance of the Helsinki agreement were waived. The original understanding that the Helsinki negotiations were to be linked with the Vienna talks on arms reduction was abandoned at Soviet insistence.

Moreover, the Soviets considerably watered down their original promise to include in the document strong guarantees for wider dissemination of information and freer movement of peoples. The Soviet response to attempts of Russian Jews to migrate and to efforts at liberalization of the press in Czechoslovakia and other countries is ample evidence of the emptiness of such promises.

Furthermore, the atmosphere of cordiality and conviviality of the Conference helped accomplish another primary aim of the Soviet Union—reinforcing the fantasies of many Europeans that the Soviets have become so peaceloving that the West can relax its guard. While to the West the term détente connotes a lessening of tensions and a reduction of the chances of armed conflict between East and West, it appears to have an entirely different meaning to the Soviets.

In a speech recently reported by the Russians themselves in Pravda, Mikhail A. Suslov—a leading Soviet ideologist and senior Politburo member—hailed détente as a useful condition for "the further development and deepening of the world revolutionary process." Suslov further declared that détente serves the cause of progress toward socialism in the whole world.

For evidence of what the Soviets really mean by détente one need merely turn to the most recent news dispatches from Portugal which indicate that the Soviet Union has decided to give all out support to the attempts of the Communist Party of Portugal to inflict a minority-supported, totalitarian regime on the unwilling people of that country.

Détente is a worthy aim. I support reasonable measures to try to achieve it. But in trying to bring about détente we should be very careful not to lower our guard too much nor to abandon the long-held aspirations for freedom of many in Eastern Europe. Our too willing posture toward détente brings home too well the wisdom of the observation of Charles Bohlen, our former Ambassador to the Soviet Union and a leading Kremlinologist, that Moscow's attitude toward diplomacy has continually been "what's ours is ours, and what's yours is negotiable". The second resolution I have introduced today declares unequivocally that these Helsinki agreements do not in any way indicate a change in the traditional American position of nonrecognition of the absorption of the Baltic States by the Soviet Union.

The President and Secretary of State tell us that the Helsinki agreements only "recognized reality." What kind of reality are we recognizing? The reality of the Gulag Archipelago of which Solzhenitsyn has so chillingly written? The reality of the armed repression of fighters for freedom in Hungary, Czechoslovakia, and Poland? I hope not.

At the least we should hold out hope to the enslaved millions in the capitive nations and not blithely acquiesce to the permanent Soviet absorption of these independent nations. The resolutions I have introduced today will demonstrate to the long-suffering citizens of the captive nations that the United States still stands firm in its commitment to their aspirations for freedom and self-determination.

I urge my fellow Members to support these resolutions to make it clear that the Congress of the United States declares that the Helsinki agreements do not affect the continuing commitment of the United States not to recognize the annexation of the Baltic States by the Soviet Union; that the United Nations should be urged to request the Soviet Union to permit the return of all Baltic exiles presently in the Soviet Union; and that the right of self-determination should be returned to the peoples of the Baltic States. By passing these resolutions we will provide a source of continuing inspiration to the peoples of Lithuania, Latvia, and Estonia that one day they will once again be able to join the ranks of free men.

The text of my two resolutions which I am introducing today follows:

H. CON. RES. 388

Whereas the United States of America extended full diplomatic recognition to the three Baltic nations of Estonia, Latvia, and Lithuania in 1922; and

Whereas the Union of Soviet Socialist Republics illegally occupied the three Baltic nations in 1940; and

Whereas the concept of liberty and freedom of choice is still alive in the United States as it has been constantly since the Declaration of Independence; and

Whereas the Soviet Union has engaged in "Russification" efforts since 1940 resulting in the suppression of the religion, the language, and the culture of the people of the Baltic nations; and

Whereas the Estonian, Latvian, and Lithuanian people have, at a very great cost to themselves, resisted and continue to resist the Soviet effort to destroy them nationally; and

Whereas the people of this Nation have consistently shown great sympathy for the peoples of these three Republics, especially as a result of their enslavement and as a result of the inhuman exile and deportation of great numbers of law-abiding persons from their native lands to imprisonment in slave labor camps in the Soviet Union; and

Whereas the Final Act of the Conference on Security and Cooperation in Europe, signed on behalf of the United States by President Gerald R. Ford on August 1, 1975, implies the recognition by the United States of the annexation of Estonia, Latvia, Lithuania by the Soviet Union: Now, therefore, be it

Resolved by the House of Representatives (the Senate concurring), That it is the sense of Congress that it remains the policy of the United States not to recognize in any way the annexation of the Baltic nations by the Soviet Union, the President's signature on the Final Act of the Conference on Security and Cooperation in Europe nothwithstanding.

H. CON. RES. 389

Whereas the United States, since its inception, has been committed to the principle of self-determination;

Whereas this essential moral principle is also affirmed in the Charter of the United Nations;

Whereas the Union of Soviet Socialist Republics is, according to its constitution, a voluntary federation of autonomous republics;

Whereas the three Baltic Republics (the Republic of Lithuania, the Republic of Latvia, and the Republic of Estonia) did not become member republics of the Union of Soviet Socialist Republics voluntarily, but rather were occupied militarily by Russian Armed Forces in the early days of World War II and subsequently incorporated by force into the Union of Soviet Socialist Republics and have since been governed by governments approved by, and subservient to, the government of the Union of Soviet Socialist Republics;

Whereas the ethnic makeup of the Baltic peoples (the Lithuanians, Latvians, and Estonians) is distinctly foreign in language, culture, common traditions, and religion from that of the Russian people;

Whereas, by deportation and dispersion of the native populations of the Baltic States to Siberia and by a massive colonization effort in which Russian colonists replace the displaced native peoples, the Soviet Union threatens complete elimination of the Baltic peoples as a culturally, geographically, and politically distinct and ethnically homogenous population;

Whereas, despite such treatment, the spirit of the citizens of the Baltic States is not broken and the desire of the citizens of the Baltic States for national independence remains unabated;

Whereas the United States has consistently refused to recognize the unlawful Soviet occupation of the Baltic States and has continued to maintain diplomatic relations with representatives of the independent Republics of Lithuania, Latvia, and Estonia; and

Whereas the United Nations and the United States delegation to the United Nations have consistently upheld the right of self-determination of the people of those countries in Asia and Africa that are, or have been, under foreign imperialist rule: Now, therefore, be it

Resolved by the House of Representatives (the Senate concurring), That it is the sense of the Congress that—

(1) the President and the Secretary of State should take all necessary steps to bring the Baltic States question before the United Nations and to urge that the United Nations request the Soviet Union—

(A) to withdraw all Russian and other non-native troops, agents, colonists, and controls from the Republics of Lithuania, Latvia, and Estonia, and

(B) to permit the return of all Baltic exiles from Siberia and from prisons and labor camps in the Soviet Union;

(2) until the Baltic States become independent, the Secretary of State should, through such channels as the United States Information Agency and other information agencies of the United States Government, do his utmost to bring the matter of the Baltic States to the attenion of all nations by means of special radio programs and publications;

(3) the right of self-determination should be returned to the peoples of Lithuania, Latvia and Estonia through free elections conducted under the auspices of the United Nations after Soviet withdrawal from the Baltic States; and

(4) the right of self-determination should be made a prime political objective of the United Nations and should be accorded through free elections under the auspices of the United Nations to all peoples now involuntarily subjugated to Soviet communism.

PANAMA CANAL: AMERICAN LEGION SUPPORTS UNDILUTED U.S. SOVEREIGNTY OVER CANAL ZONE AND MAJOR MODERNIZATION

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Pennsylvania (Mr. FLOOD) is recognized for 5 minutes.

Mr. FLOOD. Mr. Speaker, the problem of increased Trans-Isthmian transit facilities has been before the Congress since 1939 when it authorized the construction of a third set of larger locks. Work on that project started in 1940, but was suspended in May 1942 because of more urgent war needs. The total expended on it was $76,357,405, mostly on huge lock site excavations at Gatun and Miraflores, a rail-vehicular bridge across the Miraflores Locks and a roadbed near Gatun for relocating the Panama Railroad.

A postwar program was the enlargement of Gaillard Cut from 300 feet to 500 feet minimum width, completed in 1970 at a cost of $95,000,000. When this sum is added to that expended on the third locks project the total invested toward the major modernization of the existing canal is over $171,000,000.

After the suspension of construction on the third locks project during World War II, there were comprehensive studies in the Panama Canal organization of the problems of marine operations as based upon experience in war as well as peace. Out of those studies was developed the Terminal Lake-third locks plan for the future canal, which won the approval of President Franklin D. Roosevelt as a postwar project and is now the most strongly supported canal proposal before the Congress. It has the great additional advantages of being entirely within the Canal Zone, does not involve any discussions for increased territory or authority, and does not require the negotiation of a new canal treaty. These are paramount considerations and should be controlling.

Over a period of years, the American Legion has made sustained studies of Isthmian Canal policy questions. At its 57th national convention in Minneapolis, Minn., August 15–21, 1975, it recognized the two crucial canal needs: First, continued U.S. sovereign control over the Canal Zone; and, second, the major modernization of the existing Panama Canal. With active support from widely separated States, the American Legion adopted a notable canal resolution that I quote as part of my remarks:

THE PANAMA CANAL—RESOLUTION NO. 173

Whereas, Under the 1903 Treaty with Panama, the United States obtained the grant in perpetuity of the use, occupation and control of the Canal Zone territory with all sovereign rights, power, and authority to the entire exclusion of the exercise by Panama of any such sovereign rights, power, or authority as well as the ownership of all privately held land and property in the Zone by purchase from individual owners; and

Whereas, The United States has an overriding national security interest in maintaining undiluted control over the Canal Zone and its treaties with Great Britain and Colombia for the efficient operation of the Canal; and

Whereas, The United States Executive Branch is currently engaged in negotiations with the Government of Panama without authorization of the Congress, which would diminish, if not absolutely abrogate, the present United States treaty-based sovereignty and ownership of the Zone; and

Whereas, The American people have consistently opposed further concessions to any Panamanian Government that would further weaken United States control over either the Canal Zone or Canal; now, therefore, be it

Resolved, by The American Legion in National Convention assembled in Minneapolis, Minnesota, August 19, 20, 21, 1975 that the United States must be vigilant against all efforts to surrender any of the U.S. sovereignty or jurisdiction in the Panama Canal Zone or over the Panama Canal obtained under the 1903 Treaty with the Republic of Panama, as amended and revised in 1936 and 1955; and be it further

Resolved, that The American Legion reaffirm its opposition to new treaties or executive agreements with Panama that would in any way reduce our indispensable control over the U.S.-owned Canal or Canal Zone, and be it finally

Resolved, that The American Legion urge the immediate resumption of the modernization of the present Panama Canal as provided under the current legislative measures for the Terminal Lake-Third Lock proposal.

THE ENERGY CRISIS

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Montana (Mr. BAUCUS) is recognized for 5 minutes.

Mr. BAUCUS. Mr Speaker, energy issues have dominated the efforts of the 94th Congress as evidenced by past action on surface mining, energy related tax measures, and currently on oil pricing and energy conservation. We badly need an energy policy that increases domestic energy production without damaging our national economy.

Very shortly, conferees will be appointed to reconcile the House and Senate versions of the Energy Research and Development Administration—ERDA—authorization. The ultimate disposition of the ERDA conference agreement will determine whether Congress emerges with a substantive energy policy in the critical areas of alternative energy technologies.

A major concern of the ERDA authorization conference will be the authorization for magnetohydrodynamics—MHD—research, development, and demonstration. A method of burning coal to generate electricity, MHD is far more efficient and far less polluting than conventional methods. The House's version of the authorization earmarks $13.7 million for MHD, the amount originally requested by the administration, while the Senate's version contains $50 million for this purpose.

While we grapple with other aspects of the energy issue, we must not lose sight of the importance of setting a sane policy with respect to coal and its importance as a means of generating electricity. If we are to continue to burn coal to generate electricity, we should do so with maximum efficiency and minimum damage to the environment MHD offers the potential of increasing electrical output through coal oxidation by 50 percent. The Boston Edison Co. concluded from a recent study that if 5 percent of the Nation's electric operating capacity were converted to MHD generation by 1985, the Nation would save the equivalent of 8.82 million tons of coal that year alone. In monetary terms, this savings represents more than $400 million. As the demand for coal intensifies, conservation of coal becomes ever more critical. Vanish-

ing oil and natural gas reserves will generate increase demand for coal as a replacement commodity through gasification and liquefaction. While the United States possesses coal in abundance, coal is nonetheless a finite resource. The day will dawn when accessible coal reserves are exhausted. Environmental constraints may eventually prohibit large-scale combusion of fossil fuels and the Nation may be forced to convert rapidly to such alternative energy sources as geothermal, solar, wind, and nuclear power. Coal must be utilized in a way that allows the most gradual and orderly conversion with a minimum of economic displacement.

In addition to increased efficiency, MHD power generation promises dramatic reductions in sulfur and nitrogen dioxides emissions. The process would reduce the need for water in cooling electrical generators, thus averting the issue of thermal pollution of rivers, lakes and streams. Exhaustive tests have shown that MHD generation admirably surpasses all Environmental Protection Agency standards for emissions.

There is no longer a question of whether MHD is worth pursuing. The question is whether Congress can rise to the urgent task of taking full advantage of MHD in meeting the Nation's energy needs. The scientific knowledge and laboratory data attendant to MHD technology are in place, ready to be used. The final hurdle before actual use of MHD is the engineering of commercially viable test facilities and a demonstration plant.

At this point, I want to present a brief background on Federal involvement in the development of MHD.

The first successful operation of an MHD generator occurred in 1959 in Everett, Mass., through research and development efforts by Avco Everett Research Laboratory. During the following decade, private industry and utilities with the support of the U.S. Air Force invested $10 million in MHD research and development. By the late 1960's, these efforts paid off in the construction and successful operational testing of four MHD generators and the world's first super-conducting magnet, a major allied component of MHD generation.

Laboratory data derived through MHD development together with the apparent potential offered by the new technology, prompted the Department of Interior to join the MHD effort through its Office of Coal Research—OCR. Significant progress followed in long-duration testing of a large MHD generator in Everett, successful operation of a direct coal-fired MHD generator at the University of Tennessee, solutions to nitric oxide emissions problems, the ability to recover sulfur dioxide emissions, and advancement of MHD generator efficiency. During this time, the Federal Government opened an MHD technology channel to the U.S.S.R. which supported the Russians in developing and testing a major MHD experimental plant.

This overall effort, significant as it was, did not represent a scale of activity commensurate either with the energy-producing potential of MHD or the wishes of Congress. From 1969 through 1972, Congress annually appropriated money for the MHD effort through the OCR.

Congressional leaders called for aggressive and accelerated MHD development in view of the emerging energy crisis. Late in 1973, Congress appropriated $2 million in support of speedy MHD development at the University of Tennessee. OCR, however, delayed allocation of the funds to the university for a full year.

Since that time, OCR has been integrated into ERDA. The change, however, did little to prevent additional delays. For fiscal year 1975, for example, Congress appropriated $10 million to be divided between efforts toward the immediate design of an MHD engineering test facility and additional MHD technology development at various units of the Montana University system. ERDA, however, waited until April of 1975 before allocating $1.6 million of the appropriated money toward the research effort. At that juncture, no action had yet been taken on the mandated engineering test facility. The delay occurred in spite of the fact that Congress had specified in Public Law 93–404—passed on August 31, 1974, as part of the energy appropriation—that immediate design and planning of an MHD engineering test facility be undertaken to develop the engineering basis for construction of a commercial-size MHD demonstration plant capable of generating 500 megawatts by the mid-1980's. The delay indicates that responsible ERDA officials did not share Congress sense of urgency in MHD development.

In the meantime, the Soviets proved the efficacy of an aggressive research and engineering effort in MHD. Last May, the Russians tested their large U–25 pilot plant and for half an hour generated electricity sufficient to the needs of 100,000 Moscow residents. So pleased were the Russians that they have now embarked on a program for constructing a large MHD generator for integration into the Moscow power grid by 1981. Soviet accomplishments ironically stem from data and techniques supplied initially by the United States. Yet, it will be a long time before the United States conducts a comparable test of an MHD generator.

The Japanese, too, have embarked on an MHD program. Dr. Arthur Kantrowitz, director of Avco Everett Research Laboratory and widely acclaimed pioneer in MHD, told the Ways and Means Committee on March 20 of the Japanese recent success in testing the world's first MHD generator using a superconducting magnet. "The Japanese also are operating MHD facilities comparable to or exceeding in size and sophistication those of the United States," he said.

In an effort to achieve a vigorous program aimed at accelerating progress in MHD, I introduced on March 18 the MHD Research, Development, and Demonstration Act, a companion bill to a measure introduced in the Senate. The bill, H.R. 5833, includes an authorization not to exceed $50 million for the current fiscal year and authorizations not to exceed $100 million for each fiscal year thereafter through 1980, toward achieving a commercial-size demonstration plant by the mid-1980's. The bill also directs formation of a division of MHD Electric Power Generation within ERDA and contains provisions for coordinated activity in MHD development through Federal and State governments with maximum participation by the private sector.

It is widely held among scientists, industry, utilities, and engineering professionals, that this level of Federal support must be provided if the requirements of Public Law 93–404—that is, commercially viable MHD electric power generation by the mid-1980's—are to be met. There is also widespread conviction that ERDA's original budget request for MHD—$13.7 million—is inadequate even to maintain the current MHD effort in view of inflation.

Since the beginning of this session of Congress, there has been much dialog between ERDA policymakers, representatives of industry engaged in various phases of MHD development, the scientific community, and Members of both Houses of Congress. This dialog has been productive. The delays mentioned earlier have been rectified and accounted for to a large degree. Expected very soon is the establishment of an MHD division within ERDA charged with the mission of accelerating progress and meeting the provisions of Public Law 93–404. Most striking is ERDA's revised budget request submitted to Congress on June 30, 1975. In it was an allocation of $28.8 million for MHD research, development, and demonstration, more than double the original $13.7 million requested by ERDA and approved by the House. ERDA has clearly recognized the inadequacy of its prior budget proposal in meeting the challenge in MHD development.

The House Appropriations Interior Subcommittee has yet to act on the revised budget request since the ERDA authorization conference has not yet been convened, and since the Senate will likely approve an appropriation for MHD based on the results of that conference and subsequent approval of an ERDA authorization. The issue faced in the House is whether to acknowledge the inadequacy of $13.7 million for MHD and thereby agree to an authorization that not only covers the new ERDA request, but enables Congress to provide through future appropriations whatever additional impetus it deems necessary to take maximum advantage of MHD.

Those colleagues cosponsoring my MHD bill recognize the need for a national commitment to development and use of MHD. I know they are as heartened as I that ERDA has revised its MHD budget request and has announced its intention to start construction of an MHD component test facility in 1976. I am confident that they will join me in urging the House conferees considering the ERDA authorization to approve an amount that covers ERDA's $28.8 million request and allows Congress the leeway it needs to insure an active national

MHD program. It would indeed be a tragedy if Congress failed to take the initiative in developing this aspect of an overall national energy policy.

SPEECH BY U.S. AMBASSADOR JOSEPH JOHN JOVA TO THE ROTARY CLUB OF MEXICO ON THE PARTICIPATION OF SPAIN IN OUR WAR OF INDEPENDENCE

(Mr. SIKES asked and was given permission to extend his remarks at this point in the RECORD and to include extraneous matter.)

Mr. SIKES. Mr. Speaker, it is not generally known, but Spain was an important participant on the side of the American colonies during our war of Independence. A family pact between the King of Spain and the King of France signed in Aranjuez on April 12, 1779, pledged those two Crowns "not to lay down their arms until the independence—of the 13 Colonies—has been recognized by the English Crown."

The distinguished U.S. Ambassador to Mexico, Joseph John Jova, on July 15 addressed the members of the Rotary Club of Mexico on the subject of American independence and the Bicentennial celebration. His speech provides an exciting account of the collaboration of Spain in that war and, in particular, of the Spanish military participation which reflected the efforts of a young leader, Don Bernardo de Gálvez. I submit his interesting speech for reprinting in the RECORD, with my congratulations to Ambassador Jova for his detailed knowledge of military activities which involved Florida and my congressional district.

The speech follows:

SPEECH AT THE ROTARY CLUB BY AMBASSADOR JOSEPH JOHN JOVA

President Galas Lavin, Distinguished members of the Rotary Club of Mexico.

What a pleasure it is for me to again be among my Rotary friends in this, one of the most important Rotary Clubs in the world. Thank you for having invited me at this time, when we celebrate our Independence and have begun the celebrations of our Bicentennial.

What is more important than to recognize here on Mexican soil that our Independence was won not only by our own efforts, and our sacrifices which were many, but also thanks to the aid of allies and friendly countries. My wish today is to be able to acknowledge Hispanic assistance which included that of Mexico—a fact unfortunately not well known. France's help, and in particular that of the young Marquis de Lafayette, was very important and well known, not only by historians but by the non-American public as well. It is in no way my wish to minimize the important role played by France, yet, not only as one of Spanish descent but also as Ambassador to Mexico, I cannot but resent the silence which cloaks the collaboration of Spain, of which Mexico was a part, at the time of our own War of Independence.

Let us remember that the Family Pact between the King of Spain and the King of France signed in Aranjuez on April 12, 1779, pledged those two Crowns "not to lay down their arms until the Independence (of the 13 Colonies) has been recognized by the English Crown." I believe the above-mentioned text proves that Spain's intentions were not only to recuperate lost territories, as alleged by those who wish to detract from Spanish participation, but were directed toward the specific objective of the Independence of North America. On this occasion I will not speak of details of financial aid or of the large shipments of war materials sent to the Colonies, where they were so badly needed at that time, but rather of the Spanish military participation that took place mainly through the efforts of Don Bernardo de Gálvez.

This young, gallant and elegant soldier was born in Spain, but lived most of his life on Mexican soil. He belonged to a family of renown. His father, Don Matias de Gálvez, was the forty-eighth Viceroy of New Spain. His uncle. Don José de Gálvez, was the famous President of the Council of the Indies, and Minister of the Navy under Charles III; and was favored with the very Mexican title of Marquis of Sonora. As a young soldier, Don Bernardo accompanied his uncle on his famous trip as Royal Visitor through Mexico, Nueva Vizcaya and Sonora.

Later, as Captain of the Army, he was second in command in the Mexican campaign against the Apache Indians at the Neuva Vizcaya border. Later still, he became Commander of the Vizcaya-Sonora front and led an expedition from Chihuahua to Rio Pecos in Texas in pursuit of hostile Indians.

At the age of 28, young Gálvez was named War Commander and later Governor of Spanish Louisiana. In New Orleans, he married a "North American," the beautiful Felícitas de St. Maxent, daughter of one of that city's most important French families. During his tenure as Governor, our War of Independence began, and Gálvez, acting with energy and discretion, did everything possible to help the efforts of the American patriots in the Western sector even before Spain became involved in the war. Once war was declared, Bernardo Gálvez, under the slogan "the best defense is to attack," began a series of vigorous operations against the English positions along the Mississippi River, capturing Fort Manchac, the town of Baton Rouge, the town of Natchez, and other important positions. For these operations his scant, locally recruited forces were reinforced by a group of 100 Spanish soldiers sent from Mexico. Next, he launched a naval campaign against the City of Mobile—successful thanks in part to the arrival of some four hundred soldiers sent from Mexico.

These operations kept open navigation on the Mississippi, making possible the delivery of supplies to the Americans in the Southwest, and protecting the thirteen Colonies' rear guard in what was at that point a fight to the death.

Later on, Don Bernardo undertook the most difficult and important of his campaigns in the siege, the assault and the eventual capture of the fortified city of Pensacola, whose Gibraltar-like control of navigation and commerce in the Gulf of Mexico made it of the highest strategic importance, not only to the thirteen Colonies but also to the Viceroyship of Mexico. For this campaign, Don Bernardo's Creole group was reinforced by a Spanish fleet, and by several thousand soldiers, sent not only directly from Spain but also from Havana, Puerto Rico and Mexico.

The historian Guillermo de Zéndegui, presently editor of the OAS magazine "Americas," has been engaged in very interesting research on Cuban participation in this and other campaigns of our War of Independence. Among his findings is that of the formation of a "battalion of Free Blacks" recruited in Havana, which apparently suffered heavy losses in military actions on North American soil.

Where Mexico is concerned, historian Dr. Buchanan Parker Thomson—author of the work "Spanish Aid in the War of American Independence" has revealed in her research into the Archives of the Indies and the Simancas Military Archives that some two thousand troops came "from Mexico and Campeche" to take part in the Pensacola campaign.

The fall of Pensacola and the other cities previously mentioned inspired great enthusiasm among Washington's armies and the Continental Congress, because the victories protected their southwest and western borders and interior communication lines maintained via the Mississippi River and its tributaries. Also, the constant threat by Indians serving the English cause and controlled by the British authorities at Pensacola, was eliminated. It may be said that Spanish-Mexican efforts along the Gulf Coast and in Western Florida were significant and perhaps decisive in effecting the defeat of Cornwallis and saving the Carolinas and Georgia. Also interesting to note, is the presence in the Battle of Pensacola, of Francisco de Miranda, then serving Spain, who fell in love with the American revolutionary ideal of liberty, and who would later take the cause of independence to his native country, Venezuela, as a forerunner and collaborator of Simón Bolivar.

The contribution of Don Bernardo de Gálvez to our independence is little known in the United States, but his name endures for another reason. In 1777, when he was Governor of Louisiana, the troops under his command founded a town in what today is Texas, and named it "Galvestown," now the very important city and commercial port of Galveston.

It is interesting to recall that his flagship in the Pensacola campaign was named "Galvestown," and when the King conferred upon him the title of Count of Gálvez, he gave him the right to add to his coat of arms the silhouette of this ship and the motto "Yo solo"—"I alone,"—for having dared to face the British guns singlehanded.

Later, Don Bernardo was named Captain General of Cuba and when his father, the Viceroy Matías de Gálvez died, he himself was named forty-ninth Viceroy of Mexico. He was a person of great personal charm, became very popular in Mexico, and was known for his courage and charity. He built the Calzada Vallejo and the road to Acapulco, and re-built Chapultepec Castle. My respected friend, Dr. Jorge Rubio Mañé, Director of the National Archives, indicated to me that it is possible that the expenses incurred in remodeling Chapultepec to please his beautiful Franco-American wife brought him a stern reprimand from the Court of Madrid. My esteemed friends dona Beatrice Redo de Iturbe and doña Maritia Martínez del Río de Redo, also historians, tell me that his separatist and independent ambitions were what brought him the King's reprobation. In any event, he was— according to *Diccionario Geográfico, Histórico y Biográfico* of A. García Cubas—"one of the most distinguished governors of the colony," . . . "suddenly and without known cause, this famous young man, joyful, ambitious and agreeable, consumed by an inner grief, died one year and five months after taking office . . . He left a warm memory among the people he governed." My friend Don Luis Carral reminds me that not all Viceroys were mourned at their deaths by those they governed. He died in the Archiepiscopal Palace of Tacubaya and was buried in Mexico, I believe in the Church of San Fernando; although I have been unable to find his grave.

The contagious effect of the American Revolution and the ideals of independence and freedom that were defended in the incipient revolutionary movements in all the Americas are pages of history that have remained dark and have not been fully discussed or publicized.

When the people of Latin America devoted themselves to the cause of their Independence, they chose the American Revolution

as their guiding star. In addition to their own heroes and individual symbols that emerged from the emancipation of Hispanic America, those of British America were also used. They took pride in the military genius and political shrewdness of George Washington, the scientific prowess and practicality of Benjamin Franklin and the political insights of Thomas Paine and Thomas Jefferson, just to mention the best known figures in the Spanish and Portuguese-speaking world.

All the famous documents of the American revolutionary period were translated and commented upon by the publicists in the New World; and the Spanish Americans borrowed liberally from them in the formulation of their own governmental systems. It would be unfair to forget the English heritage involved; for the English system, with its attachment to human rights and its respect for law and for the liberties of the individual were the inspiration of the Philadelphia legislators who wrote our Constitution.

The success of republicanism in the United States particularly impressed the Latin Americans because it reinforced their own historical inclinations.

Fray Servando Teresa de Mier, for example, one of the Mexican patriots most devoted to the republican system of government and a firm opponent of Emperor Iturbide, wrote in Philadelphia in 1821 that the republican system was "The only way in which we can prosper in peace as rapidly as have the United States because the republican system is the only one in which active private interests are the general interests of the Government and of the State." He also wrote, "the example of the United States is before us to lead us to the gates of bliss." Many years before, when living in exile in London, he gave great publicity to the cause of independence for Spanish America with the publication of his works "Letters from an American to a Spaniard," and the "Anahuac Revolution."

The United States and Mexico will celebrate next month another event that is part of our common heritage: the bicentennial of the expedition of Juan Bautista de Anza, who founded the city of San Francisco, California. The Charros of Mexico will join with American cowboys to follow the original route of the great Mexican explorer from Mexico City to San Francisco. This reenactment has been approved as part of the official program of the Bicentennial of the United States.

The Bicentennial, in conclusion, is a time of serious mediation and of celebration. I hope that my words on the life of Gálvez will serve to remind us of this chapter almost forgotten by our historians. I, for one, find an emotional significance in the knowledge—until now so well-concealed, even from the speaker—of the participation of Mexican soldiers, in some cases with their very life's blood, in our struggle for independence. At this time, when so much is made of the things that divide us, I find it extraordinarily healthy to dwell on those matters which remind us of how much unites us.

SPEECH BY THE PRIME MINISTER OF THAILAND ON FOREIGN INVESTMENT

(Mr. SIKES asked and was given permission to extend his remarks at this point in the RECORD and to include extraneous matter.)

Mr. SIKES. Mr. Speaker, it was my privilege during August to spend a short time in Thailand and while there, I talked with the distinguished Prime Minister, Kukrit Pramoj. Thailand continues to be an area of great importance to the United States and to the free world. It is one of the principal food-producing countries of the world and it has a long record of stability in an area which has been plagued by much turmoil.

There has been concern about the future of Thailand because of the collapse of the free governments of Indochina. Many assume that Thailand will be one of the next goals for a Communist takeover in Southeast Asia. The fact that the Thai government asked that U.S. forces be removed added to that concern. However, there are encouraging indications that the Thais expect to follow a policy of neutrality and that they can maintain a viable and effective independent government.

Although the present Thai government is precariously balanced between factions, it is gaining in strength and the Prime Minister is showing increasing skill in dealing with his problems. His government has the support of both the King and the army, and this is very important to its success.

While in Thailand, I was privileged to hear the Prime Minister address the five foreign Chambers of Commerce. These are made up of foreign nationals who have business and industrial interests in Thailand.

The Prime Minister's audience numbered about 400 persons. His speech was reassuring to the audience and it should lend encouragement throughout the free world on Thailand's future policies.

I am pleased to submit His Excellency's speech for printing in the RECORD:

THE CLIMATE FOR FOREIGN INVESTMENT IN THAILAND

(Speech given by His Excellency M. R. Kukrit Pramoj, Prime Minister of Thailand)

Mr. Chairman, Distinguished Guests: The climate for foreign investment in Thailand during the past year has not been very good. Who has been responsible for this?

I asked myself this question for several days before coming to speak before you, because I know what I am about to say will have further bearings on the investment climate. I hope that the home work which I have done will prove beneficial to all of you here today, and also to my country.

To put the full blame on the political events of Thailand of the past year and a half would be a very superficial answer towards explaining the decline in interests in Thailand as a place for foreign investment.

Actually, what I think has been more of a contributing factor towards the lessening of foreign investments in Thailand during the past year and a half has been due to a general fall of foreign investments world-wide. 1974 was a disastrous year for most world economies, and coupled with the oil crisis and the ensuing inflation, most corporate investors of the advanced countries were concerned least of all with investments—but they were concerned more with the question of corporate survival. It is perhaps this first reason, more than *any* other factor, that the drop in foreign investments occurred in Thailand.

A second reason why there has been a drop in foreign investments in Thailand has been due to the fall of South Vietnam and its proximity to us. For those who believe in the Domino Theory, the fall of Vietnam would automatically lead to the fall of Thailand. Because of this reason, Thailand no longer exists and I am *not* talking to anyone this afternoon!

I must admit, nevertheless, that the political atmosphere in Thailand during the past year and a half has not been conducive for foreign investments as well. The labour problems, the barrage of demonstrations, and the TEMCO case are all disquieting factors for potential investors. My task, this afternoon, is to tell all of you why you should not take a wait-and-see attitude towards Thailand anymore, but to begin to think of this country as a very positive place for your investments.

Before I do so, however, I think it is in order that I should say a few words about those factors which you, as foreign businessmen and investors, have found to be disquieting.

Firstly, there was the question of political uncertainty. Many of you had taken a "wait-and-see" attitude because you had considered previous Governments and my own Government as "unstable." As all of you know, the students recently had my picture drawn in caricature as a Hitler, and I was called a dictator. Since most foreign investors consider "stable" governments as only those governments which have dictators, I think I now can qualify myself as having a stable government as I have been called a dictator; and you, on your part, can now have faith in a stable government!

Seriously though, I think you as foreign businessmen in Thailand would agree that Thailand today is a better place for doing business than ever before. Under previous military governments, you were really subjected to the whims and those in power, without having much recourse to whatever impositions were made upon you. In contrast, in Thailand today, I feel that because of our democratic system of Government, there is no longer corruption at the top, and, therefore, your opportunities for doing business here are only as good as your own performance. Nobody pulls strings any more for anyone. In this sense, the business climate in Thailand today should be more favoured by you businessmen. If all of you were to continue to support this type of democratic government, it is only in *your* own interests in the long run that you are able to do business in an open and honourable way, resulting in the most competitive firms coming out the winners.

The second problem which has been troubling you has been the so-called labour problem. While I admit that the many strikes so far have been disrupting and quite unruly, in many instances, I believe that these strikes could have been avoided if there were a better appreciation of the "new Thailand" by the employers. There is no question that many employees have been exploited in the past. Even the minimum wage rates have not been fulfilled. I now strongly advise any employer, whether he be local or foreign, who is not giving his employees good working conditions or a fair wage, should now seriously consider doing so. I believe that any fair employer who takes the initiative to negotiate with his labour force first by recognizing his labour force as a union, and secondly by having an equitable "Work Agreement", should not have any labour problems.

The government is now also revising the Labour Law Act as well as having the Labour Department play a more active role in preventing irresponsible strikes. For this reason, I believe that because the Thai worker is not an unreasonable worker, and because he responds to the goodwill of his employer, any employer who treats Thai labour well should not be afriad of labour problems.

A third factor which has been of concern to foreign investors has to do with the TEMCO case. Now, I think all of you know that the TEMCO case is a very special case, and should not in any way reflect upon the policy of my Government in nationalizing foreign investments. The case is a good example of what not to do in Thailand when you wish to come and invest here. As I said before, under military governments, it would look as if it is possible to utilize influence to obtain any kind of concessions necessary to further your investment ends. The withdrawal of the mining leases of TEMCO is not

in any way directed at the foreign company, but it was more of a reprisal demanded by a certain segment of our population to take revenue not only on the ousted military government of the past, but also upon those people who were their business partners, directly or indirectly. It was for this reason, and this reason alone, that the TEMCO case arose. My Government, nevertheless, is still working on an equitable solution with the parties concerned over this case.

This case also had very special political overtones, and should not be construed as a typical day-to-day occurrence in the Thai Government's relationship with foreign firms. I think most of you in this room can appreciate the uniqueness of this case.

As many of you here have worked and lived in Thailand, many of you can appreciate the inherent attitude which this country has for foreigners. This country has never been colonized, and I don't think we have an inferiority or a superiority complex towards foreigners. Our initial reaction towards foreigners is that we presume that they are our friends. Even if they were to do something that we might consider insulting to our traditional way of life, we feel quite condescending towards foreigners. We sort of forgive them as, after all, they are "farangs". This, I believe, is the typical attitude of Thais towards foreigners.

In my view, I do not think foreigners have really taken advantage of the Thais. We have long welcomed foreigners into our land. And because we welcomed them, they expanded their businesses and investments here. In a way, it was mutually beneficial. In the past, while we Thais were more concerned with government and the tilling of the land, the aliens took over the commercial aspects of our country. As I am sure all of you here realize, the commerce of Thailand today is very much dominated by the foreign communities.

It is only natural that no country can allow its economic life to be controlled by foreigners. For this reason, Thailand began some 3 years ago to impose certain restrictions on foreign companies, and introduced work permits for foreigners. These restrictions, I can assure you, are in fact much less restrictive than what the governments of the various nationalities represented here have imposed upon our nationals working in their countries. In many cases, so restrictive is it abroad that Thai nationals are not even allowed to trade or work there. So, if there has been some feelings by the foreign community in Thailand that business has become more restrictive than in the past, I would seriously deny that allegation.

There is a big difference between imposing some restrictions to protect your own nationals, and what is known as an "anti-foreign" sentiment. There is also a fine line of demarcation between chauvinism and mild nationalism. In our case, I believe that the "new Thailand" of today is passing through the phase of mild nationalism. But certainly, I do not believe that the Thai nation is heading towards any kind of chauvinism. In Thailand, there are few unnecessary or unreasonable restrictions on foreigners or foreign companies.

For the long term good of all, foreign firms which have a policy of phasing in Thai nationals as much as they can, and also turning over foreign equity as much as they can to Thai nationals after they have had reasonable profits for a number of years, are those firms which are most welcomed in Thailand.

I am realistic enough to understand that it is unreasonable to ask foreign companies to invest large amounts of money here, and to expect them to give management control to Thai nationals. That is a ridiculous request. I know that if Thai firms were to invest in big projects abroad, Thai nationals would also insist that our investments are managed by our own nationals. It is for this reason that Thailand had no intention of asking foreign investors with large investments to turn over their management, or the majority of their equity structure, to Thai nationals. What we ask is that foreign nationals and foreign companies should work here as partners, so that your investments here can be meaningful in terms of financial gains and at the same time they should also benefit my country. I believe if both sides were to accept a principle of partnership, then there never need be problems over ownerships of foreign businesses in Thailand.

It came as quite a surprise to me when I was informed recently that the foreign business community had taken a wait-and-see attitude and are waiting for a direction from my Government.

Prior to the elections of January this year, my Party has stated very clearly in our Policy Statement that the economic system of Thailand would be one of free enterprise. Our prime economic objective would be full employment, and we would achieve this through a policy of Export Promotion whereby both local and foreign investments would be welcomed. This policy was in turn adopted by the United Parties of the present Coalition Government. This means that the present Government fully subscribes to the system of free enterprise, as well as encourage foreign businesses and foreign investments.

There should be no reason whatsoever why there should be any doubt in the minds of anyone as to why the Government does not intend to follow through with its stated policy.

My Government has already shown that whatever platforms which we have promised to the people prior to the formation of this Government are things which we have faithfully carried out. And so, I pledge that we intend to follow through with our promise of encouraging foreign businesses and foreign investments in Thailand.

The history of foreign investments in Thailand has been long. This nation realizes that we cannot do without foreign businesses. You all have contributed much to the development of our country, and you too have been amply rewarded by the profits gained from your investments in those things which we the rural areas, and those projects which are so set up for the most equitable exploitation projects which are capital intensive, those projects which would result in a transfer of technology and management know-how, those projects which would be located in the rural areas, and those projects which are so set up for the most equitable exploitation of our natural resources.

I give you my pledge that any project presented to the Government along the above guide-lines would receive not only favourable consideration, but would also receive a quick response from my Government.

The new democratic Thailand welcomes both foreign business and investments. No one should ever have doubted this policy in the first place.

As the proof of the sincerity of my intentions, I now wish to invite the heads of the foreign Chambers of Commerce in Thailand to join with certain members of the Thai private sector whom my government will soon nominate to act as a "Foreign Investment Advisory Council" which would have the function of being a sounding Board to the Board of Investment so that together we can work out policies which are equitable to both foreign business and Thailand. I hope the idea of this "Foreign Investment Advisory Council" will meet with your approval.

CONFUCIUS, GEORGE MEANY AND THE FARMER

(Mr. BAUMAN asked and was given permission to extend his remarks at this point in the RECORD and to include extraneous matter.)

Mr. BAUMAN. Mr. Speaker, the Oriental sage of the Ages, Confucius, once remarked that the true and deserving leader is characterized by how free he is of four uniquely human vices. They are that he have no foregone conclusions, no arbitrary predeterminations, no obstinacy, and no egoism.

Far be it from me or for any responsible citizen to publicly judge the total worth of another's leadership ability. Privately, however, we can remind ourselves of the complex problems demanding our urgent attention and evaluate how well our leaders behave in attempting to solve them for the public interest.

George Meany, who has headed the organized labor movement for the last thousand years or so, deserves such an evaluation. While other public figures are constantly before the scrutiny of the professional critics, Mr. Meany is too often able to act in the most outrageous way and say the most inappropriate things with impunity. One man who has never been afraid to take on any luminary attempting to become larger-than-life is Hurtt Deringer, the editor of the Kent County News, servicing Chestertown, and Kent County, Md., since 1793.

In his August 29 edition, he includes an editorial which illustrates his habit of journalistic independence. I suggest that we keep the wisdom of Confucius in mind as we reflect on the subject of Mr. Deringer's article, "Will It Be George Meany or the American Farmer?"

The article follows:

WILL IT BE GEORGE MEANY OR THE AMERICAN FARMER

Drop the y and you have the man; mean, tough and determined.

AFL–CIO President George Meany implied last week that he is more important than the Secretary of State. We are surprised he stopped short of the Presidency. His flair for pomposity is nothing new. Long he has been a demagogue.

Today he is thumbing his nose at American foreign policy by decreeing that the International Longshoremen's Association and the maritime unions refuse to load 9.8 million tons of grain recently sold the Soviet Union unless the federal government guarantee that the grain sales will not effect consumer prices.

What Meany is really after is a larger share of the shipping market for U.S. ships and their AFL–CIO crews. Meany is only interested in unionism and the fostering of that principal. Not everyone in a democracy, however, agrees with Mr. Meany.

The farmer in 1973 was urged by the U.S. Department of Agriculture to go all out on food production. The Department was acting under public pressure. A record harvest is producing approximately 2,140 million bushels of wheat and 5,850 million bushels of corn. The figures for Maryland are 5,328,000 bushels of wheat and 44,940,000 bushels of corn. The normal consumption in the U.S. is about 800 million bushels of wheat and 3.7 billion bushels of corn. This means that we will have over 1 billion bushels of wheat and over 2 billion bushels of corn to sell.

The Chicago Daily News points out, "Urban consumers should not forget either, that unless the farmers prosper, the city dwellers will suffer too in the long run. Farm surpluses that drive down prices may look good temporarily, but they lead either to less planting and future shortages or to

government subsidies that eat away the taxpayer's dollar. A proper balance of supply and demand can best be achieved through a free market, including the world market."

American farmers are depending on the world market for part of their income. Approximately one out of every four acres normally goes for export. If exports are curtailed Maryland grain farmers will suffer along with farmers in other states.

Maryland Farm Bureau has gone on record in support of more U.S. flag ships, provided they are always competitive in their rates. MFB, however, does not support labor's strong-arm tactics to gain this end. Once again we are back to George Meany.

The Baltimore Evening Sun summed up Meany and the grain sale mess the best in an editorial August 19.

"In the ultimate touch of arrogance, when asked whether the unions weren't trying to make foreign policy, Mr. Meany replied: 'Foreign policy to too damn important to be left to the Secretary of State.' It is certainly too important to be turned over to an irascible, emotional labor leader making his own arbitrary decisions." Amen.

SECTION-BY-SECTION SUMMARY OF H.R. 9318

(Mr. DOMINICK V. DANIELS asked and was given permission to extend his remarks at this point in the RECORD and to include extraneous matter.)

Mr. DOMINICK V. DANIELS. Mr. Speaker, on Wednesday, September 3, 1975, I introduced H.R. 9318, the Federal Metal and Nonmetallic Mine Safety Amendments of 1975. At that time, I stated that supplemental information concerning the bill would be entered into the RECORD. Following is a section-by-section summary of H.R. 9318:

SECTION-BY-SECTION SUMMARY OF H.R. 9318

Sec. 1 Short Title. This Act may be cited as the "Federal Metal and Nonmetallic Mine Safety Act."

Sec. 2 Congressional Findings and Purposes. The findings and purposes emphasize the need to improve safety and health conditions in the Nation's metal and nonmetallic mines, especially through new efforts to discover and take action against health hazards in the mines.

Sec. 3 Definitions and Coverage. "Mine" is here defined to exclude from coverage under this Act coal, lignite, sand and gravel mines.

Sec. 4 Duties. This section contains the "general duty" clause under which operators may be cited for hazards likely to cause death or injury other than those for which standards have been promulgated.

Sec. 5 Health and Safety Standards. Mandatory standards currently in effect under the Federal Metal and Nonmetallic Mine Safety Act shall be deemed promulgated under this Act. Within six months after enactment the Assistant Secretary for Metal and Nonmetallic Mine Safety shall promulgate the non-mandatory standards (or modified versions thereof) in effect under the existing law and appropriate standards under the Occupational Safety and Health Act except for those which "do not contribute to the health and safety of miners". The Assistant Secretary may then promulgate, modify, or revoke any additional standards. This section also outlines the time frame for steps taken in the promulgation process.

With regards to toxic materials, the Assistant Secretary shall choose the standard which most adequately assures on the basis of the best available evidence that no miner will suffer material impairment of health or functional capacity, even if the employee has regular exposure to the hazard for the period of his working life. This section further provides for emergency temporary standards to be promulgated without regard to provisions of the Administrative Precedure Act, to be followed by permanent standards within nine months.

Sec. 6 Variances. An affected operator may obtain a variance from a standard promulgated under Sec. 5, when he has demonstrated by a preponderance of evidence that with such noncompliance he can provide employment as safe and healthful as if he had complied with the standard. Variances may be granted to permit operators to participate in experiments if adequate protection is afforded the health and safety of miners.

Sec. 7 Inspections. Underground mines shall be inspected at least four times a year, and surface mines at least two times a year. Advance notice of any inspection shall not be given. The operator and a representative of the miners shall be given "walk-around" rights—the opportunity to accompany the inspector in his rounds—without the miners' representative suffering loss of pay if he is employed by the operator. A miner or miners' representative may request a special inspection if he believes that there exists a standard violataion which may cause injury, or an imminent danger exists. This request or notification may be oral. Prior to or during an inspection of a mine, a miner or miners' representative may notify the inspector of a believed violation. This notice must, however, be in writing.

Sec. 8 Requirements in Cases of Accidents; Records and Reports. Define accident. The operator shall promptly notify the Assistant Secretary of the occurrence of any accident which caused or could reasonably be expected to have caused death or serious injury. In case of an accident, the Assistant Secretary may supervise or direct rescue and recovery activity. The operator shall investigate and record all accidents. He shall keep note of similar potentially hazardous conditions existing elsewhere in the mine, and his actions to prevent the recurrence of similar accidents. During inspections of mine accidents, the Assistant Secretary shall review these records to determine whether failure to take preventive action violated any health and safety standard promulgated. Operator self-inspection of a mine is also authorized under this section. This section further requires records to be kept on work-related deaths and injuries, and miner exposure to potentially toxic materials or harmful physical agents. Operators are required to keep their miners informed of their protections and obligations under this Act.

Sec. 9 Minimum Burden on Small Business. Information shall be obtained under this Act with a minimum burden on small businesses. Each operator of a mine subject to this Act shall be provided with an accurate and complete copy of health and safety standards promulgated, including emergency temporary standards, at least once each year. Inspectors shall bring with them updated copies of standards and regulations changed since the previous inspection of the mine.

Sec. 10 Miner Education and Access to Information. Miners shall be permitted to observe the monitoring and measuring of miner exposures to toxic materials, and shall have access to records of the results. Each miner shall also have access to records of his own exposure to the toxic materials, and shall be informed by his operator if he has been or is being exposed to such agents in amounts exceeding those prescribed by the applicable health or safety standard. Any miner exposed to excessive levels of these agents shall be entitled to transfer with no reduction in pay until corrective action has been taken. The Assistant Secretary in cooperation with the Director of the National Institute for Occupational Safety and Health (NIOSH) shall advise miners on risk of injury indicated by the records, and shall carry out a program of education and training including visits by health experts to improve the health and safety of mines and help miners evaluate their exposures to toxic substances. Miners shall also receive annually updated manuals explaining all health and safety standards. Copies of standards furnished to operators shall also be available to miners at an area where they check in and out on a daily basis.

Sec. 11 Citations. Written citations shall be issued for violation of the general duty clause (Sec. 4), or for violation of any standard, rule, or order promulgated, and shall fix a reasonable time for abatement. Notices may be issued instead of citations for "de minimus" violations, meaning those which have no substantial direct or immediate relationship to safety or health. Citations shall be prominently posted at each place of violation and where the miners check in and out on a daily basis. No citation may be issued after the expiration of six months following the occurrence of a volation.

Sec. 12 Procedures to Counteract Imminent Dangers. If an inspector finds that an imminent danger exists, he may close down the dangerous portion of the mine for 48 hours, during which an injunction or temporary restraining order may be obtained in the appropriate U.S. district court. While the mine is closed, only persons whose presence is determined necessary by the joint decision of the operator and an authorized representative of the Assistant Secretary, public officials whose duties require them to enter the area, and legal and technical consultants or any person including a miners' representative who is accompanied by such a qualified examiner may enter the closed portion. If the Assistant Secretary arbitrarily or capriciously fails to seek relief, any miner injured by such failure may bring an action against the Assistant Secretary in the appropriate U.S. district court.

Sec. 13 Procedure for Enforcement. This section sets the time frame for various portions of the enforcement procedure. If the Secretary issues a citation he shall within a reasonable time notify the operator by certified mail of the penalty, if any, to be assessed. The operator has 15 working days to contest the citation of proposed assessment of penalty. If the Assistant Secretary has reason to believe that the operator has failed to correct a violation for which a citation has been issued within the period allowed, the Assistant Secretary shall notify the operator by certified mail of the failure and penalty proposed, and that the operator has 15 working days to contest the proposed penalty. In either case, if he receives a notice of contestation, the Assistant Secretary shall advise the Federal Metal and Nonmetallic Mine Safety Commission of such notification, and the Commission shall afford a hearing and issue an order. When an operator demonstrates a good faith effort to comply with the abatement requirements of a citation, and the abatement has not been completed because of factors beyond his reasonable control, the Assistant Secretary, after a hearing, shall issue an order affirming or modifying the abatement requirements in the citation.

Sec. 14 Judicial Review. Any person adversely affected by an order of the Commission under Sec. 13 may obtain a review of that order in the appropriate U.S. Circuit Court of Appeals. This section also relates to miner discrimination, and provides that no miner shall be discriminated against because he has filed a complaint or otherwise taken advantage of his rights under this Act. A miner who believes he has been discriminated against may apply to the Assistant Secretary who shall make a determination on the case within 90 days, and bring an action in an appropriate U.S. district court, in accordance with his determination.

Sec. 15 Representation in Civil Litigation. The Solicitor of Labor may appear for and

represent the Assistant Secretary in any civil litigation, subject to the direction and control of the Attorney General.

Sec. 16 Penalties. Operators may be assessed a civil penalty of not more than $10,000 for each violation of a standard or recordkeeping requirement or procedure to be followed in case of an accident. Mandatory penalties of *up to* the specified amounts shall be assessed as follows: $1,000 for each day during which failure to correct a violation continues; $25,000 or one year imprisonment or both for willfully violating a health or safety standard; and $50,000 or five years' imprisonment or both for convictions after the first conviction; $1,000 or six months imprisonment or both for giving advance notice of an inspection; $1,000 or six months imprisonment or both for falsifying a document required; $1,000 for violating a posting requirement; $250 for any minor violating a smoking standard; $25,000 or one year imprisonment or both for misrepresenting equipment for sale, etc., as complying with standards. In assessing these penalties, the Commission shall consider the seriousness of the violation, the good faith of the person charged, the history of previous violations, and the appropriateness of the penalty with respect to the size of the business. Civil penalties shall be deposited into the United States Treasury.

Sec. 17 Entitlement of Miners. Miners working in the shift idled by a closure order shall receive full compensation for the remainder of that shift. Miners in the next shift idled shall receive full compensation for the first four hours of that shift. Miners working in an area closed as a result of an imminent danger (under provisions of Sec. 12) shall be compensated for time lost up to one week. When an operator fails or refuses to comply with a closure order issued under Sec. 12, miners idled shall be entitled to full compensation at regular rates of pay in addition to pay received for work performed after the order was issued, for the period beginning when the order was issued and ending when the order was complied with, vacated, or terminated.

Sec. 18 Federal Metal and Nonmetallic Mine Safety Commission. This section establishes a three-member commission appointed by the President with the advice and consent of the Senate. Terms of the members shall be six years. Compensation shall be in accordance with provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code relating to classification and general pay rates. Hearings examiners shall hear cases.

Sec. 19 Assistant Secretary for Metal and Nonmetallic Mine Safety. This section establishes in the Department of Labor an office of the Assistant Secretary for Metal and Nonmetallic Mine Safety, which shall be filled by appointment by the President by and with advice and consent of the Senate.

Sec. 20 Advisory Committee. This section establishes a twelve-member National Advisory Committee on Metal and Nonmetallic Mine Health and Safety, with members selected for their experience and expertise in accordance with provisions set forth in this section.

Sec. 21 Publication, Annual Report, and Regulation. The Assistant Secretary shall transmit to Congress no later than February 1 of each year a report on the administration of this Act.

Sec. 22 Transfer Matters. This section provides for the transfer of personnel, appropriations, property, records, etc. involved in administration of the Federal Metal and Nonmetallic Mine Safety Act, from the Department of the Interior to the Department of Labor, and for other matters relating to transfer of administration.

Sec. 23 Research and Related Activities. This section authorizes the Secretary of Health, Education and Welfare, after consultation with the Assistant Secretary and with other appropriate Federal departments or agencies, to conduct research experiments and studies including research relating to lung and respiratory diseases and carcinogenic substances. It also authorizes, after a written request from an operator or miners' representative, a testing of substances normally found in the mine for toxic effects. It authorizes the Secretary of Health, Education and Welfare to conduct and publish annually, industry-wide studies on the effects of chronic low-level exposure to substances within mines and stresses connected with mining, on the potential for illness.

It authorizes the Secretary of Health, Education and Welfare to make medical examinations available to miners exposed to hazards in mines. Results of these medical examinations shall be made available to miners and their authorized representatives.

Sec. 24 Report of Commencement of Operation of a Mine. Each operator of a metal or nonmetallic mine who employs three or more miners shall report any commencement of operations to the Assistant Secretary.

Sec. 25 Economic Assistance to Small Mine Operators. This section amends the Small Business Act to authorize loans to mine operators to make additions or alterations necessary to comply with health and safety standards promulgated, if such mining concern is likely to suffer substantial economic injury without the financial assistance.

Sec. 26 Authorization of Appropriations. This section authorizes for any fiscal year, such sums as may be necessary, to be appropriated to the Assistant Secretary, the Commission, and the Secretary of Health, Education and Welfare.

ADDITIONAL AUTHORITY AND FUNDING FOR TITLE V REGIONAL ECONOMIC DEVELOPMENT COMMISSIONS

(Mr. RONCALIO asked and was given permission to extend his remarks at this point in the RECORD and to include a letter).

Mr. RONCALIO. Mr. Speaker, one of the issues which the House will be asked to consider in the near future is the matter of additional authority and funding for the title V regional economic development commissions.

Most of my colleagues who follow economic development matters closely will already be apprised of the action of the Senate shortly before our August recess in which they moved to reorganize all economic development commissions under the same legislation and simultaneously to expand the authority for the title V commissions.

This is a most important measure, Mr. Speaker. Interest in regional governmental cooperation is growing. We in Wyoming and our sister energy-bearing States are finding it imperative as we attempt to cope with the sweeping socioeconomic changes which energy development is bringing to our doorstep.

An example of the efficacy of regional economic development as promoted and implemented by the title V commissions is contained in a letter I have received and a resolution adopted by the Buffalo-Johnson County planning office at Buffalo, Wyo.

The letter is addressed to Warren C. Wood, Federal cochairman of the Old West Regional Commission which late last fiscal year provided a considerable amount of money to substate planning units for administrative purposes.

The amount which was allocated to the Buffalo-Johnson County office was only $30,000 for 2 years, but as my colleagues will note from the response and resolution, it was money very well spent.

When the House convenes to consider the matter of adding more authority and funding to the regional economic development commissions it is my hope my colleagues will keep this isolated example in mind and consider how many times it is repeated in areas which are in need of economic assistance. If they do so, I believe they will agree with me that strengthening the programs of the title V commissions is one of the greatest contributions we can make to economic progress in the country at this time.

Mr. Speaker, I place in the RECORD at this point, the resolution adopted by the Buffalo-Johnson County planning commissions and its letter of transmittal to Warren Wood, Federal cochairman of the Old West Commission:

BUFFALO-JOHNSON COUNTY
PLANNING OFFICE,
Buffalo, Wyo., July 28, 1975.

Mr. WARREN C. WOOD,
Old West Regional Commission,
Washington, D.C.

DEAR MR. WOOD: As you are aware the City of Buffalo and Johnson County, Wyoming are recipients of a planning assistance grant from Old West Regional Commission for calendar years 1975 and 1976 in the amount of $30,000 for this two year period. This grant assistance has been utilized in Johnson County for hiring a planning assistant under the joint City-County Planning Program.

The purpose of this letter and enclosed resolution is to inform you of the value of this funding assistance to planning on the local level. Johnson County was identified by the State of Wyoming as one of five potential impact counties in the state. The planning-management assistance provided by this Old West Regional Grant has been very effective in improving the management-planning capability of the City of Buffalo and Johnson County. Documentary evidence of the work efforts accomplished in the first six month period of 1975 has been submitted to the State of Wyoming Department of Economic Planning and Development and Old West Regional Commission for its review. Most notable of the work completed to date under this program has been the completion of requirements for grant offering by the EPA of a "208" Water Quality Planning Grant in the counties of Johnson, Campbell and Sheridan, all of which are located in the mineral rich Powder River Basin of Wyoming.

Since Johnson County was the first county to put these Old West Planning Assistance Grant Funds into operation, this program has been able to submit the most completed work completion report to date. However, as similar planning assistance programs are established in Sheridan, Campbell, Converse, and Platte Counties the overall effectiveness of the Old West Planning Grant Assistance Program will be amplified. We therefore urge you to continue your support of planning assistance to the local level programs where the needs are most urgent. Furthermore, we feel that this type of assistance is far more effective in meeting local level problems than large scale regional surveys, opinion polls, and other similar analyses which are designed to assist local level planning and management problems.

Sincerely yours,
RICHARD W. DOUGLASS,
Planning Director.

BUFFALO-JOHNSON COUNTY
PLANNING OFFICE,
Buffalo, Wyo., July 24, 1975.

The Planning Commissions of the City of Buffalo and County of Johnson wish to express their appreciation to the Old West Regional Commission for its support of the Wyoming Technical Assistance Program. This program has already been of considerable aid to this area and we anticipate that a number of future benefits to our planning program will arise from the grant funds you have provided.

This planning program has not appreciably benefited from the numerous regional socio-economic studies which have been or are being conducted in the coal resource areas of Wyoming. However, the program initiated by the Old West Commission to provide direct planning assistance by increasing the planning and management capability of local programs in impact areas, has proven and will continue to prove to be, extremely effective at the local level.

In the upcoming months the Old West Regional Commission will be monitoring and evaluating the effectiveness of its various programs and determining future program allocations. The Buffalo-Johnson County Planning Program, as a recipient and participant in the Wyoming Technical Assistance Program, strongly encourages the Commission to consider extending the present program at the end of the two year period. The validity of such a request will surely be shown by the results from the program and its direct benefits to the cities and counties involved.

MELVIN R. ADAMS,
Chairman, City Planning Commission.
LEE E. KEITH,
Chairman, County Planning Commission.

LEAVE OF ABSENCE

By unanimous consent, leave of absence was granted as follows to:

Mr. BALDUS (at the request of Mr. O'NEILL), for today, on account of official business.

Mr. JONES of Tennessee (at the request of Mr. O'NEILL), for today, on account of official business.

Mr. OBEY (at the request of Mr. O'NEILL), for today, on account of official business.

SPECIAL ORDERS GRANTED

By unanimous consent, permission to address the House, following the legislative program and any special orders heretofore entered, was granted to:

(The following Members (at the request of Mr. O'BRIEN) to revise and extend their remarks and include extraneous matter:)

Mr. CRANE, for 5 minutes, today.

Mr. BELL, for 10 minutes, today.

Mr. RAILSBACK, for 5 minutes, today.

Mr. FINDLEY, for 10 minutes, today.

Mr. KASTEN, for 5 minutes, today.

(The following Members (at the request of Mr. NOLAN) to revise and extend their remarks and include extraneous material:)

Mr. GONZALEZ, for 5 minutes, today.

Mr. ROSTENKOWSKI, for 5 minutes, today.

Mr. ANNUNZIO, for 5 minutes, today.

Mr. BRECKINRIDGE, for 60 minutes, today.

Mr. STOKES, for 15 minutes, today.

Mr. FLOOD, for 5 minutes, today.

Mr. BAUCUS, for 5 minutes, today.

EXTENSION OF REMARKS

By unanimous consent, permission to revise and extend remarks was granted to:

Mr. MADDEN, and to include a newspaper article.

Mr. RONCALIO, and to include a letter.

Mr. SYMINGTON, to revise and extend and include extraneous matter.

Mr. ROUSSELOT to revise and extend his remarks immediately following the remarks of Mr. GOLDWATER during general debate in the Committee of the Whole today on H.R. 8800.

Mr. LLOYD of California, to revise and extend following the remarks of Mr. MOSHER.

(The following Members (at the request of Mr. O'BRIEN) and to include extraneous matter:)

Mr. QUIE.

Mr. ARCHER.

Mr. WINN

Mr. PRESSLER.

Mr. ABDNOR.

Mr. LAGOMARSINO in three instances.

Mr. SNYDER.

Mr. DU PONT.

Mr. JOHNSON of Pennsylvania.

Mr. STEIGER of Arizona.

Mr. FRENZEL in three instances.

Mr. CRANE.

Mrs. HOLT.

Mr. ANDERSON of Illinois in two instances.

(The following Members (at the request of Mr. NOLAN) and to include extraneous matter:)

Mr. GONZALEZ in three instances.

Mr. ANDERSON of California in three instances.

Mr. VANIK in two instances.

Mr. KARTH.

Ms. ABZUG in two instances.

Mr. SARBANES in five instances.

Mrs. LLOYD of Tennessee.

Mr. NIX.

Mr. HARRINGTON.

Mr. RANGEL in two instances.

Mr. SMITH of Iowa.

Mr. RUSSO in 10 instances.

Mr. STOKES.

Mr. HELSTOSKI in 10 instances.

Mr. PATTEN.

Mr. ROGERS in five instances.

Mr. BURKE of Massachusetts.

Mr. HOWE.

Mr. CONYERS.

Mr. LEGGETT.

Mr. MCDONALD of Georgia in four instances.

Mr. ZABLOCKI in two instances.

SENATE BILLS REFERRED

Bills of the Senate of the following titles were taken from the Speaker's table and, under the rule, referred as follows:

S. 1245. An act to amend section 218 of title 23, United States Code; to the Committee of Public Works and Transportation.

S. 1281. An act to improve public understanding of the role of depository institutions in home financing; to the Committee on Banking, Currency and Housing.

S. 2195. An act to establish a National Center for Productivity and Quality of Working Life; to provide for a review of the activities of all Federal agencies including implementation of all Federal laws, regulations, and policies which impede the productive performance and efficiency of the American economy; to encourage joint labor, industry, and Government efforts to improve national productivity and the character of working conditions; to establish a Federal policy with respect to continued productivity growth and improved utilization of human resources in the United States; and for other purposes; to the Committee on Banking, Currency and Housing.

ADJOURNMENT

Mr. NOLAN. Mr. Speaker, I move that the House do now adjourn.

The motion was agreed to; accordingly (at 1 o'clock and 3 minutes p.m.), under its previous order, the House adjourned until Monday, September 8, 1975, at 12 o'clock noon.

EXECUTIVE COMMUNICATIONS, ETC.

Under clause 2 of rule XXIV, executive communications were taken from the Speaker's table and referred as follows:

1681. A letter from the Chairman, the Renegotiation Board, transmitting a draft of proposed legislation to extend and amend the Renegotiation Act of 1951, and for other purposes; to the Committee on Banking, Currency and Housing.

1682. A letter from the Executive Secretary to the Department of Health, Education, and Welfare, transmitting proposed amendments to the Office of Education's general provisions regulations dealing with the fee schedule for the availability of public records under the Freedom of Information Act, pursuant to section 431(d)(1) of the General Education Provisions Act, as amended; to the Committee on Education and Labor.

1683. A letter from the Administrator of General Services, transmitting the 1974 Annual Report of the General Services Administration; to the Committee on Government Operations.

1684. A letter from the Administrator, American Revolution Bicentennial Administration, transmitting the first report of the American Revolution Bicentennial Board, pursuant to section 10(i) of Public Law 93-179; to the Committee on Post Office and Civil Service.

REPORTS OF COMMITTEES ON PUBLIC BILLS AND RESOLUTIONS

Under clause 2 of rule XIII, reports of committees were delivered to the Clerk for printing and reference to the proper calendar, as follows:

Ms. SCHROEDER: Committee on Post Office and Civil Service. H.R. 1753. A bill to amend section 141 of title 13, United States Code, to provide for the transmittal to each of the several States of the tabulation of population of that State obtained in each decennial census and desired for the apportionment or districting of the legislative body or bodies of that State, in accordance with, and subject to the approval of the Secretary of Commerce, a plan and form suggested by that officer or public body having responsibility for legislative apportion-

ment or districting of the State being tabulated, and for other purposes; with amendment (Rept. No. 94–456). Referred to the Committee of the Whole House on the State of the Union.

Ms. SCHROEDER: Committee on Post Office and Civil Service. House Joint Resolution 209. Joint resolution asking the President of the United States to declare the fourth Saturday of each September National Hunting and Fishing Day; with amendment (Rept. No. 94–457). Referred to the House Calendar.

Ms. SCHROEDER: Committee on Post Office and Civil Service. House Joint Resolution 597. Joint resolution authorizing and requesting the President to issue a proclamation designating Sunday, September 14, 1975, as National Saint Elizabeth Seton Day (Rept. No. 94–458). Referred to the House Calendar.

Mr. WHITE: Committee on Post Office and Civil Service. H.R. 6227. A bill to amend title 5, United States Code, to provide Federal employees under investigation for misconduct the right to representation during questioning regarding such misconduct (Rept. No. 94–459). Referred to the Committee of the Whole House on the State of the Union.

Mr. WHITE: Committee on Post Office and Civil Service. H.R. 7110. A bill to amend title 5, United States Code, with respect to the retirement of customs and immigration inspectors, and for other purposes; with amendment (Rept. No. 94–460). Referred to the Committee on the Whole House on the State of the Union.

Mr. WHITE: Committee on Post Office and Civil Service. S. 584. An act to amend title 5, United States Code, to correct certain inequities in the crediting of National Guard technician service in connection with civil service retirement, and for other purposes; with amendment (Rept. No. 94–461). Referred to the Committee of the Whole House on the State of the Union.

PUBLIC BILLS AND RESOLUTIONS

Under clause 5 of rule X and clause 4 of rule XXII, public bills and resolutions were introduced and severally referred as follows:

By Mr. ASPIN (for himself and Mr. BALDUS):

H.R. 9379. A bill to require the U.S. Postal Service to provide postal lock boxes for certain persons who reside in rural areas; to the Committee on Post Office and Civil Service.

By Mr. AuCOIN (for himself, Mr. ULLMAN, Mr. HICKS, Mr. HAWKINS, Mr. REES, Mr. HECHLER of West Virginia, Mr. EDGAR, Mr. GAYDOS, Mr. ROONEY, Mr. ANDERSON of California, Mr. GRADISON, Mr. HARRIS, and Mr. MOLLOHAN):

H.R. 9380. A bill to amend the National Flood Insurance Act of 1968 to extend coverage under the flood insurance program to include losses from landslides as well as losses from mudslides; to the Committee on Banking, Currency and Housing.

By Mr. BAFALIS:

H.R. 9381. A bill to authorize the Secretary of the Interior to convey certain phosphate interests of the United States to the owner or owners of record of certain lands in the State of Florida; to the Committee on Interior and Insular Affairs.

By Mr. BROOMFIELD:

H.R. 9382. A bill to amend the Internal Revenue Code of 1954 to provide a refundable credit against tax for postsecondary education expenses for tuition and fees paid by the taxpayer attributable to the attendance of a student at an institution of postsecondary education, and for other purposes; to the Committee on Ways and Means.

By Mr. BURKE of Massachusetts:

H.R. 9383. A bill to terminate the coverage of police officers of the Massachusetts Bay Transportation Authority under the old-age, survivors, and disability insurance program; to the Committee on Ways and Means.

By Mr. BURLISON of Missouri:

H.R. 9384. A bill to provide for payments to compensate county governments for the tax immunity of Federal lands within their boundaries; to the Committee on Government Operations.

By Mr. DINGELL (for himself and Mr. SIMON):

H.R. 9385. A bill to revise the laws relating to the establishment, administration, and management of the National Wildlife Refuge System, to establish a Bureau of National Wildlife Refuges, and for other purposes; to the Committee on Merchant Marine and Fisheries.

By Mr. DUNCAN of Tennessee:

H.R. 9386. A bill to amend the Internal Revenue Code of 1954 to provide an exemption from the income tax for any amounts received under a State or local retirement system; to the Committee on Ways and Means.

By Mr. FRENZEL:

H.R. 9387. A bill to provide for the issuance of $2 bills bearing the portrait of Susan B. Anthony; to the Committee on Banking, Currency and Housing.

By Mr. GRASSLEY (for himself, Mr. AMBRO, Mr. ARCHER, Mr. BEARD of Tennessee, Mr. BEDELL, Mr. CARR, Mr. CLEVELAND, Mr. CRANE, Mr. GUDE, Mr. HILLIS, Mr. MILLER of Ohio, Mr. SANTINI, Mr. SPENCE, Mr. THONE, Mr. WHITEHURST, and Mr. WINN):

H.R. 9388. A bill to repeal the recently enacted provisions authorizing increases in the salaries of Senators and Representatives; to the Committee on Post Office and Civil Service.

By Mr. HAMMERSCHMIDT:

H.R. 9389. A bill to repeal the Real Estate Settlement Procedures Act of 1974; to the Committee on Banking, Currency and Housing.

H.R. 9390. A bill to establish a method whereby the Congress (acting in accordance with specified procedures) may prevent the adoption by the executive branch of rules or regulations which are contrary to law or inconsistent with congressional intent or which go beyond the mandate of the legislation which they are designed to implement; jointly to the Committees on the Judiciary, and Rules.

By Mr. HARRIS (for himself and Mrs. SPELLMAN):

H.R. 9391. A bill to amend the act of April 17, 1954, which preserved within Manassas National Battlefield Park, Va., important historic properties relating to the battles of Manassas, and for other purposes; to the Committee on Interior and Insular Affairs.

By Mr. HARRIS (for himself and Mr. DODD):

H.R. 9392. A bill to regulate commerce and to protect petroleum product dealers from unfair practices, and for other purposes; to the Committee on Interstate and Foreign Commerce.

By Mr. HEINZ (for himself, Mr. DEVINE, Mr. STAGGERS, Mr. HAGEDORN, Mr. MCCLOSKEY, Mr. COUGHLIN, Mrs. COLLINS of Illinois, Mr. UDALL, Mr. BROWN of Ohio, Mr. JONES of Oklahoma, Mr. YATRON, Mr. PREYER, Mr. THOMPSON, Mr. SIKES, Mr. BLOUIN, Mr. MOORHEAD of Pennsylvania, Mr. SCHNEEBELI, Mr. EDGAR, Mr. ANDREWS of North Dakota, Mr. NEDZI, Mr. ROSENTHAL, Mr. FISHER, Mr. MCHUGH, Mr. BROWN of Michigan, and Mr. PEYSER):

H.R. 9393. A bill to establish a National Commission on Regulatory Reform; to the Committee on Interstate and Foreign Commerce.

By Mr. HEINZ (for himself, Mr. KEMP, Mr. BADILLO, Mr. BENNETT, Mr. JACOBS, Mr. REES, Mr. QUIE, Mr. MCEWEN, Mr. FRASER, Mr. SOLARZ, Mr. DODD, Mr. SHARP, Mr. KETCHUM, Mr. FLOOD, Mr. BLANCHARD, Mr. JENRETTE, Mr. LEVITAS, Mr. ROE, Mr. WEAVER, Mr. NOWAK, Mr. OBEY, Mr. BAUCUS, Mr. NIX, Mr. EILBERG, and Mr. LUJAN):

H.R. 9394. A bill to establish a National Commission on Regulatory Reform; to the Committee on Interstate and Foreign Commerce.

By Mr. HEINZ (for himself, Mr. RUSSO, Mr. MONTGOMERY, Mr. BRINKLEY, Mr. DOWNEY of New York, Mr. HUGHES, Mr. DUNCAN of Oregon, and Mr. WHALEN):

H.R. 9395. A bill to establish a National Commission on Regulatory Reform; to the Committee on Interstate and Foreign Commerce.

By Mr. HELSTOSKI:

H.R. 9396. A bill to amend section 218 of the Social Security Act to require that States having agreements entered into thereunder will continue to make social security payments and reports on a calendar-quarter basis; to the Committee on Ways and Means.

H.R. 9397. A bill to amend title II of the Social Security Act to permit a State, under its section 218 agreement, to terminate social security coverage for State or local policemen or firemen without affecting the coverage of other public employees who may be members of the same coverage group (and to permit the reinstatement of coverage for such other employees in certain cases where the group's coverage has previously been terminated); to the Committee on Ways and Means.

By Mr. JONES of Alabama (for himself, Mr. HARSHA, Mr. ROE, Mr. HAMMERSCHMIDT, and DON H. CLAUSEN) (by request):

H.R. 9398. A bill to amend the Public Works and Economic Development Act of 1965 to extend the authorizations for a 3-year period; to the Committee on Public Works and Transportation.

By Mr. KEMP:

H.R. 9399. A bill to repeal the recently enacted provisions authorizing increases in the salaries of Senators and Representatives; to the Committee on Post Office and Civil Service.

H.R. 9400. A bill to amend the tariff schedules of the United States with respect to the entry of horses; to the Committee on Ways and Means.

H.R. 9401. A bill to continue to suspend for a temporary period the import duty on certain horses; to the Committee on Ways and Means.

By Mr. MONTGOMERY:

H.R. 9402. A bill to amend title II of the Social Security Act to increase the amount of outside earnings permitted each year without any deductions from benefits thereunder; to the Committee on Ways and Means.

By Mr. NIX (for himself and Mr. BIAGGI):

H.R. 9403. A bill to provide for improved labor-management relations in the Federal service, and for other purposes; to the Committee on Post Office and Civil Service.

By Mr. OBERSTAR (for himself, Mr. EVANS of Colorado, Mr. PATTISON of New York, and Mr. CORNELL):

H.R. 9404. A bill to provide for payments

to compensate county governments for the tax immunity of Federal lands within their boundaries; to the Committee on Government Operations.

By Mr. RAILSBACK (for himself, Mr. KASTENMEIER, Mr. MAGUIRE, and Mr. MORGAN):

H.R. 9405. A bill to regulate lobbying and related activities; jointly to the Committees on the Judiciary, and Standards of Official Conduct.

By Mr. ROSTENKOWSKI:

H.R. 9406. A bill to amend section 174 of the Internal Revenue Code of 1954 to make clear that product development and improvement costs of publishers are research or experimental expenditures, and to prohibit the retroactive application of Revenue Ruling No. 73-395; to the Committee on Ways and Means.

By Mr. ST GERMAIN:

H.R. 9407. A bill to amend the Federal Water Pollution Control Act to repeal the requirement of user charges; to the Committee on Public Works and Transportation.

By Mr. STAGGERS (for himself and Mr. DEVINE) (by request):

H.R. 9408. A bill to amend the Federal Power Act and the Natural Gas Act; to the Committee on Interstate and Foreign Commerce.

H.R. 9409. A bill to amend the Natural Gas Act; to the Committee on Interstate and Foreign Commerce.

H.R. 9410. A bill to amend the Natural Gas Act; to the Committee on Interstate and Foreign Commerce.

By Mr. STEPHENS:

H.R. 9411. A bill to provide for adjustments in the lands or interests therein acquired for the Clark Hill Reservoir, Ga., by the reconveyance of certain lands or interests therein to former owners thereof; to the Committee on Public Works and Transportation.

By Mr. WHITE:

H.R. 9412. A bill to amend title 5, United States Code, to permit the U.S. Civil Service Commission to contract with certain qualified health maintenance organizations; to the Committee on Post Office and Civil Service.

By Mr. BELL:

H.J. Res. 633. Joint resolution to include the Secretary of Labor in the membership of the Energy Resources Council; to the Committee on Government Operations.

By Mr. BELL (for himself, Mr. WOLFF, Mr. MARTIN, Mr. BLANCHARD, Mr. CLEVELAND, Mr. COUGHLIN, and Mr. DUNCAN of Oregon):

H.J. Res. 634. Joint resolution to save the great whales from extinction by amending the Fishermen's Protective Act of 1967 to impose an embargo on the products of all foreign enterprises engaged in commercial whaling; jointly to the Committees on Merchant Marine and Fisheries, and Ways and Means.

By Mr. O'NEILL (for himself, Mr. MCFALL, Mr. RHODES, Mr. ANDERSON of Illinois, and Mr. PICKLE):

H.J. Res. 635. Joint resolution to authorize procedure for acceptance or appropriation of funds for establishment of a sound and light performance on the east front of the U.S. Capitol; to the Committee on Public Works and Transportation.

By Mr. ABDNOR (for himself, Ms. ABZUG, Mr. ADDABBO, Mr. ANDERSON of California, Mr. ANDREWS of North Dakota, Mr. AUCOIN, Mr. BADILLO, Mr. BEARD of Rhode Island, Mr. BEDELL, Mr. BENITEZ, Mr. BLOUIN, Mr. BONKER, Mr. BRODHEAD, Mr. BROWN of Michigan, Mr. BURGENER, Mrs. CHISHOLM, Mr. COHEN, Mrs. COLLINS of Illinois, Mr. CORMAN, Mr. DAVIS, Mr. DODD, Mr. DOWNEY of New York, Mr. DUNCAN of Oregon, Mr. EDGAR, and Mr. EDWARDS of California):

H. Con. Res. 384. Concurrent resolution to promote and encourage the removal of architectural barriers to the access of handicapped persons to public facilities and buildings; to the Committee on Public Works and Transportation.

By Mr. ABDNOR (for himself, Mr. EILBERG, Mr. FLOOD, Mr. FRENZEL, Mr. FREY, Mr. GILMAN, Mr. GUDE, Mr. HANNAFORD, Mr. HARRINGTON, Mr. HAWKINS, Mr. HECHLER of West Virginia, Mrs. HOLT, Mr. JENRETTE, Mr. KEMP, Mr. KETCHUM, Mr. LAGOMARSINO, Mr. LEHMAN, Mr. LITTON, Mr. LLOYD of California, Mr. LONG of Maryland, Mr. MAGUIRE, Mr. MAZZOLI, Mr. MELCHER, Mr. MILLER of California, and Mr. MITCHELL of New York):

H. Con. Res. 385. Concurrent resolution to promote and encourage the removal of architectural barriers to the access of handicapped persons to public facilities and buildings; to the Committee on Public Works and Transportation.

By Mr. ABDNOR (for himself, Mr. MITCHELL of Maryland, Mr. MOAKLEY, Mr. MOORHEAD of California, Mr. MOSS, Mr. MOTTL, Mr. OTTINGER, Mr. PEPPER, Mr. PRESSLER, Mr. QUIE, Mr. RODINO, Mrs. SCHROEDER, Mr. SHARP, Mr. SOLARZ, Mr. STARK, Mr. STEELMAN, Mr. STEIGER of Wisconsin, Mr. THONE, Mr. WALSH, Mr. WAXMAN, Mr. WHITEHURST, Mr. BOB WILSON, Mr. CHARLES WILSON of Texas, and Mr. WINN):

H. Con. Res. 386. Concurrent resolution to promote and encourage the removal of architectural barriers to the access of handicapped persons to public facilities and buildings; to the Committee on Public Works and Transportation.

By Mr. ABDNOR (for himself, Mr. WOLFF, and Mr. ZEFERETTI):

H. Con. Res. 387. Concurrent resolution to promote and encourage the removal of architectural barriers to the access of handicapped persons to public facilities and buildings; to the Committee on Public Works and Transportation.

By Mr. ANNUNZIO:

H. Con. Res. 388. Concurrent resolution expressing the sense of Congress with respect to the Baltic States; to the Committee on International Relations.

H. Con. Res. 389. Concurrent resolution expressing the sense of Congress that it remains the policy of the United States not to recognize in any way the annexation of the Baltic nations by the Soviet Union, the President's signature on the Final Act of the Conference on Security and Cooperation in Europe notwithstanding; to the Committee on International Relations.

By Mrs. FENWICK:

H. Res. 695. Resolution to establish a Select Committee on Security and Cooperation in Europe; to the Committee on Rules.

By Mrs. FENWICK (for herself, Mr. PATTISON of New York, Mr. BRADEMAS, and Mr. BOLAND):

H. Res. 696. Resolution concerning the safety and freedom of Valentyn Moroz, Ukrainian historian; to the Committee on International Relations.

By Mr. HOWE (for himself, Mr. STEIGER of Arizona, Mr. HANSEN, Mr. BAUCUS, Mr. MCKAY, Mr. MELCHER, Mr. CONLAN, Mr. JOHNSON of California, and Mrs. MINK):

H. Res. 697. Resolution calling upon the National Park Service to take all appropriate steps to carry out the provisions of Public Law 89-249 to assure the availability of lodging and other services in the National Park System, to the Committee on Interior and Insular Affairs.

PRIVATE BILLS AND RESOLUTIONS

Under clause 1 of rule XXII, private bills and resolutions were introduced and severally referred as follows:

By Mr. BAFALIS:

H.R. 9413. A bill for the relief of Miguel Guillermo Correa; to the Committee on the Judiciary.

By Mr. FLOWERS:

H.R. 9414. A bill for the relief of TV Facts, Rochester, N.Y.; to the Committee on the Judiciary.

By Mr. GRADISON:

H.R. 9415. A bill for the relief of Dr. Gustavo Scioville; to the Committee on the Judiciary.

By Ms. HOLTZMAN:

H.R. 9416. A bill for the relief of Keith Allan McLean; to the Committee on the Judiciary.

By Mr. ROGERS (by request):

H.R. 9417. A bill for the relief of Miguel Guillermo Correa; to the Committee on the Judiciary.

By Mr. TALCOTT:

H.R. 9418. A bill for the relief of Joseph C. Hutchinson; to the Committee on the Judiciary.

PETITIONS, ETC.

Under clause 1 of rule XXII,

214. The SPEAKER presented a petition of the National Water Supply Improvement Association, Fountain Valley, Calif., relative to research and development in the desalinization of water, which was referred to the Committee on Interior and Insular Affairs.

AMENDMENTS

Under clause 6 of rule XXIII, proposed amendments were submitted as follows:

H.R. 8650

By Mr. ROUSSELOT:

On page 7, line 10, insert the following new section, and renumber the succeeding section accordingly—

"SEC. 108. (a) The Comptroller General shall provide for the examination and audit of programs under this Act.

"(b) The Comptroller General shall include in each examination and audit conducted under subsection (a) of this section an evaluation which describes and measures—

"(1) the manner in which policies and programs under this Act are being carried out;

"(2) the impact of such policies and programs; and

"(3) the effectiveness of such policies and programs in achieving stated goals.

"(c) The Comptroller General shall develop standards and criteria for the examination and audit of policies and programs under this Act.

"(d) The Comptroller General shall transmit his report to the Congress no later than July 1, 1977. Such report shall contain a detailed statement and review with respect to the findings and conclusions of each examination and audit conducted under subsection (a) of this section, together with recommendations of the Comptroller General for such legislative or other action as he considers necessary or appropriate.

"(e) No later than 90 days after the enactment of this Act, the Administrator of the Federal Energy Administration shall submit to the Committee on Banking, Currency and Housing of the House of Representatives, and to the Committee on Banking, Housing and Urban Affairs of the Senate, a plan for evaluating the effectiveness of the weatherization program."