

Wheeler, Donald Lytel
 White, Steven Angelo
 Whitman, Donald Louis
 Wigent, Richard Andrew
 Wilkeen, Donald Bruce
 Wilbur, Harley Dexter
 Wilkins, James Rudyard, Jr.
 Wilkinson, Edward Lewis
 Williams, Allen Dean
 Williams William Albert, II
 Williford, James Richard, II
 Willson, Donald Merritt
 Wilson, Alexander Blake
 Wilson, Joseph William
 Wilson, William Wellington
 Winberg, William, III
 Winnefeld, James Alexander
 Wisenbaker, Eugene Morgan
 Woolcock, Thomas Edward
 Wooldridge, Edmund Tyler, Jr.
 Worchesek, Robert Roman
 Young, John Watts
 Zeisel, Richard Stephen
 Zendler, Edwin Earl
 Zink, Stewart Taylor
 Zoehrer, Herbert Alfred

SUPPLY CORPS

Armstrong, George Kornegay
 Ball, Thomas Fauntleroy, Jr.
 Barber, Ray Cleveland
 Bray, Joseph Alfred, Jr.
 Brown, Robert Michael
 Burbank, Donald Dean
 Cloutier, Norman Lewis
 Davis, James Bly
 Dickson, Holton Carroll, Jr.
 Donley, Harold Clement, Jr.
 Ely, William Benjamin, Jr.
 Evans, William Henry, Jr.
 Foster, Paul Lowe
 Gordon, Donald Bedell
 Gove, Jack Edwin
 Greenberg, Edwin Gilbert
 Henderson, John Merrill
 Hutchinson, Arthur Edward
 James, Billy Mink
 Killebrew, Thomas Edgar
 Lynn, James William
 McClintock, Harry Clayton
 Mitchell, William Frederick
 Porter, Orland Ainsworth, Jr.
 Ringhausen, Robert Leo
 Rixey, Charles Woodford
 Ryan, William Jardine
 Smith, Herbert Richard
 Stratton, Dene Brian
 Stubbs, Raymond Cooper
 Wasson, John Arthur
 Weisskopf, William Malvin

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Wirsing, John Arnold
 White, George Handford
 CHAPLAIN CORPS
 Conte, James William
 Dimino, Joseph Thomas
 Frimenko, Michael
 Fuller, William Calvin
 Geary, Joseph Francis
 Grace, Patrick Joseph
 Hardage, Owen Allen, Jr.
 Heath, Robert Hubbell
 Howard, William Raymond
 Huffman, William Wyland
 Ingebretson, Ervin Duane
 Jones, Asa Wallace
 Keen, Homer Eugene, Jr.
 Lemaster, Donald Calvin
 Moore, Withers McAlister
 Roberts, Maurice Edward
 Ryan, Joseph Emmet
 Samuel, William Roy
 Simmons, David Eugene
 Sire, Elwin Norton
 Veltman, Dean Kay
 Wootten, Thomas Joseph

CIVIL ENGINEER CORPS

Courtright, Carl
 DeGroot, Ward Walton, III
 Forehand, Paul Warren
 Olson, Paul David
 Phelps, Pharo Alfred
 Trueblood, Donald Richard
 Wagner, Walter Richard
 Whipple, Caryl Robbins
 Wingast, Stanley
 Zobel, William Marshall

JUDGE ADVOCATE GENERAL'S CORPS

Cedarburg, Owen Lee
 Conkey, Carlton Glen
 Davis, William Johnson
 Driscoll, William Thomas, Jr.
 Dunbar, John Peter
 Hantz, Savas
 Hawk, James Thomas
 Jimmerson, Thomas J., Jr.
 Palau, Henry Stuart
 Phillips, Lawrence Edwin
 Root, John Bernard, Jr.
 Sabatos, Nicholas
 Selby, Donald Eugene

DENTAL CORPS

Abbott, Paul Lamar
 Ainley, James Edward, Jr.
 Anderson, John T.
 Bowers, Gerald Miles
 Elliott, James Roy
 Enoch, James Duncan
 Falcone, Philip Russell
 Fields, Robert Earl

Flagg, Roger Holmes
 Gorman, Walter James
 Grandich, Russell Anthony
 Granger, Ronald Grant
 Hardin, Jefferson Frederic
 Hiatt, William Robert
 Hodson, Harold Wade
 Hoffius, Edwin Laurine
 Holmes, John Bernard
 Hyde, Jack Elgin
 Johnson, Dean Leroy
 Kelley, John Philip
 Lawrence, Joseph James, Jr.
 Luther, Norman Kennedy
 McKinnon, John Alexander, Jr.
 Orrahood, Robert Howard
 Pebley, Harry Calvin
 Pinkley, Virgil Alvin
 Pistocco, Louis Robert
 Prange, William Herbert
 Reid, Albert Francis
 Rulifson, Franklin Russell
 Schultz, Chester John, Jr.
 Shirley, Robert Edwards
 Slagle, Lowell Elwood
 Slater, Robert William
 Smith, Albert Ritchie
 Stanley, James Howard
 Sydow, Paul John
 Taylor, B. Frank
 Tenca, Joseph Ignatius
 Terry, Bill Carlton
 Thomason, Robert Richard
 Whatley, Thomas Luther
 Wilson, James McClelland
 Wooden, Robert Aubrey
 Woodland, Everan C., Jr.

MEDICAL SERVICE CORPS

Akers, Thomas Gilbert
 Barkley, Lucien Edward
 Boggs, Clifford Walter
 Jones, William Henry
 Kaufman, Louis Richard
 Laedtke, Ralph Harold
 McKearly, Georgia Mae
 McMichael, Allen Edgar
 Miller, Edwin Bartley
 Pruitt, John Dallas
 Rudolph, Henry Steven
 Still, Donald Eugene
 Testa, Michele Joseph
 Tober, Theodore Wendel

NURSE CORPS

Butler, Ann Teresa
 Byrnes, Anna Marie
 Conder, Maxine
 Davis, Alice Louise
 Gardill, Norma Helen
 Parent, Shirley Marie
 Weeter, Bessie Racheal

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ENERGY CONSERVATION IN PUBLIC BUILDINGS

HON. DICK CLARK

OF IOWA

IN THE SENATE OF THE UNITED STATES
 Friday, November 2, 1973

Mr. CLARK. Mr. President, in the midst of the continuing Watergate scandal, the conflict in the Middle East, and the resignation of the Vice President, our attention has once again been turned away from the country's critical energy crisis.

That crisis is still very much with us and we cannot afford to delay our search for a balanced and an effective approach to a national energy policy. We have already faced shortages of petroleum products earlier this year, and even more

severe shortages are predicted in the winter months ahead. Cutbacks in imports from Arab nations will aggravate these shortages.

Energy conservation could substantially help mitigate fuel shortages. We must assess current patterns of energy consumption, and then take the steps necessary to eliminate wasteful practices.

One area in which a great deal of energy could be saved is in the operation and maintenance of the buildings in which we live and work. It is encouraging to see that, in this field at least, the Federal Government is taking a leading role.

In a recent speech, Larry F. Roush, Commissioner of the Public Buildings Services, makes an excellent presentation of the steps being taken by the General Services Administration to conserve energy in Federal buildings throughout the Nation. GSA is obviously making a con-

certed effort to deal with the energy crisis—an example that should be followed not only by other agencies, but by private industry as well. I commend Mr. Roush's speech to my colleagues for their earnest consideration.

Mr. President, I ask unanimous consent that Mr. Roush's statement be printed in the RECORD.

There being no objection, the speech was ordered to be printed in the RECORD, as follows:

ENERGY CONSERVATION IN BUILDINGS
 (By Larry F. Roush)

For the people present in this meeting today, the word "conservation" needs no definition in ordinary conversation. It is my contention, however, that as we develop an energy conservation policy for public office buildings, the general understanding of "conservation" is not enough. We have recognized that this word means more than just "sav-

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ing," and that energy conservation must be a continuing effort to achieve the best balance between the benefits and costs of energy use.

The Public Buildings Service has been virtually concerned with the conservation of energy for many years. In our primary role as the builders and operators of office space for the Federal Government, we have attempted to use the most economical source of energy, while using it in the most efficient manner. We have had several on-going energy conservation programs to reduce energy consumption in 2,600 GSA-owned and operated buildings nationwide. These programs were not based primarily on the development of new technologies, but rather emphasized more efficient use of energy in existing buildings.

We quickly realized, however, that new technologies needed to be developed and tested, and their energy conservation features quantified, if we were to achieve optimum energy utilization in existing office buildings and those planned for the future. GSA's energy conservation policy for public office buildings is to incorporate features which insure the best possibilities of energy use. To do this we have attempted to recognize the trade-offs in terms of energy conservation, work area, costs and the environment in general.

For example, in considering the trade-offs between energy conservation and the work area, we must consider the people and the services they provide. For any energy conservation system to be viable, it must be compatible with the comfort and safety requirements of the occupants. We must answer many questions such as: How much light is really required to do specific kinds of work? What noise levels can be tolerated before they become distracting? How "good" are our current air purification and odor control systems? What levels of heat, humidity, and air movement provide the optimum level of thermal comfort for the building occupants? The answers to these and similar questions can provide the information necessary to balance energy usage against an adequate work environment. To do this we must apply the latest systems for measuring these factors in an actual work situation where we can correlate the human response with the environmental conditions.

To evaluate these and other energy conservation related questions, we needed a laboratory—a place where we could accurately measure and compare various energy conservation systems and their impact. And, in June 1972 Mr. Sampson designated the new Federal Office Building in Saginaw, Michigan, as the GSA Environmental Demonstration Building. Most of the experimental features of the Saginaw Project are directly related to environmental concerns. The prime energy conservation feature of the Saginaw Project is the proposed solar energy collector.

Recognizing the need for additional experimental work in energy conservation, the Administrator designated the new Federal Office Building in Manchester, New Hampshire, as the GSA Energy Conservation Building.

For the Manchester Project, we put together a design team consisting of the architect-engineer, an energy conservation consultant, the National Bureau of Standards and GSA. Energy conservation was made a prime design parameter to be considered equally with function, fire safety, life cycle cost and aesthetics. Determinations were made regarding features, systems, and equipment which would contribute greatly towards reduction in energy requirements before developing a concept for the building. From the very beginning of the design process, energy conservation possibilities were given major attention.

The final design of the building is expected to make a positive contribution to the urban surroundings and provide a pleasant interior environment for employees and visitors. We

expect the building to operate with at least 20 percent less energy consumption than other comparable existing buildings.

In addition to energy conservation features in the basic architectural design, we intend to demonstrate energy savings in the mechanical, electrical, lighting, plumbing, and space conditioning areas. We have included such energy conservation features as heat recovery systems, computer programmed mechanical and electrical systems, and a solar collector. Once the building is complete with the various energy conservation systems installed, they will be monitored and evaluated, based on built-in instrumentation and occupant reaction. From this experimentation we will be able to develop guidelines and criteria for use in the design and construction of future buildings.

I would like to pause for a moment—to quote the President—as he said on September 10: "While energy is one of our Nation's most pressing problems, and while the preservation and effective use of our natural resources is an imperative policy goal, it is presently impossible to administer these related objectives in a coordinated way. Our ability to manage our resources and provide for our needs should not be held hostage to old forms and institutions." I couldn't agree more and commend the President for his initiative to create Governor Love's office and his proposal for the new Energy Research and Development Administration.

The NBC white paper on the Energy Crisis, aired over two weeks ago, emphasized that there were over 40 Federal government agencies involved in some way or another with the energy question. To my way of thinking this indicates that; first, there is a great deal of enthusiasm to solve the problem and second that it must become a coordinated effort if we are going to effectively manage the solutions to our problem. Governor Love's office is a great step toward pulling us all together. GSA hopes that the Manchester and Saginaw projects will help act as a catalyst for the coordination of the technical effort.

But the need to conserve energy is real and now. Therefore, our greatest efforts are being made toward reduction of energy use in the buildings we presently operate.

As you all know, President Nixon has established a requirement to reduce the Federal Government's anticipated energy consumption by 7 percent. In this regard, GSA views its responsibility as the overseer of energy utilization in Federally-occupied buildings and of eliminating wasteful practices and concepts which developed during the past period of apparent energy abundance.

In order to fulfill this requirement we established a task force to develop and implement GSA's accelerated energy conservation program. When we considered that our annual utilities cost exceeds \$90 million and that all resources in our buildings equate to over 5 billion kilowatt hours. We also had to review those current building operating practices which result in the consumption of substantial quantities of energy, such as nighttime cleaning operations, lighting levels and the temperature being maintained in our buildings.

It is imperative that you as executives in your organizations gear onto what we're doing. And, it is important to emphasize that, in revising operational procedures, it is critical that the employees at the grass roots level be aware of what you're doing and why you're doing it. This is a voluntary effort and when dealing with existing buildings, the occupants must be educated to energy saving actions.

Accordingly, to the extent feasible, the following changes in operating practices are being initiated in all GSA-operated/owned buildings and GSA's 7,800 leased buildings. I think you can do the same things in your space.

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We have advanced nighttime force-account cleaning operations from the 5 p.m.-1:30 a.m. time frame to 11 a.m.-7:30 p.m. daily.

We have reduced the amount of lighting required in various space throughout a building without reducing the level at work stations;

We have raised (by 4 degrees) the setting on room thermostats serving office space during the airconditioning season to a range of 76-78 degrees;

And, we have lowered the setting (by 4 degrees) on room thermostats serving office space during the heating season to a range of 70-72 degrees; and

In addition we have made appropriate temperature and lighting changes in other types of space to realize similar energy savings.

Lessors who provide building services and utilities have been notified by the regional PBS offices to take appropriate action to reduce the anticipated energy consumption during the next 9 months by 7 percent.

Federal agencies have been notified that the aforementioned practices are being initiated, to the extent feasible, in all GSA-managed buildings in a way which will not impair the provision of vital services, nor curtail the proper functioning of the departments and agencies. In addition, each Federal agency has been requested to designate a headquarters representative as a point of contact to assist in realizing these objectives.

These revised operating practices already have been adopted in our Central Office and Regional Office Building, both in Washington, with excellent results.

As an example of savings that may be realized, 22 percent of the fluorescent light tubes have been removed from buildings here in Washington, with an opportunity to do more. Assuming we are able to achieve similar savings throughout the nation, we will eliminate approximately 1.2 million tubes and save 164 million kilowatts of electrical energy each year.

We believe that with the changes in operation, we will be able to reduce our overall energy consumption by approximately 20 percent. This equates to over 1 billion kilowatt hours of electricity or 600,000 barrels of oil or 580,000 tons of coal that may be saved per year. But we're not stopping there.

We have begun a building profile study to determine the energy consumption characteristics of existing buildings as affected by their physical features.

We are conducting an Air Change Rate Study to determine the minimum number of air changes required for acceptable heating and air conditioning of buildings.

We are conducting a study of lighting levels and distribution required for the performance of the various work tasks in Federal buildings.

And we are conducting a study to develop a fully automated building control system using computer techniques and sophisticated equipment to optimize operations, manpower and energy utilization.

The research and the efforts in existing buildings will help GSA accomplish the President's conservation goal. They can be far more valuable, however, if we can get them out to industry and local government. To that end, we have written to all of the nation's governors and the mayors of 20 of our largest cities to urge their cooperation in the energy conservation effort.

We think we have a strong start in the race to alleviate an energy crisis. But all of our efforts are really minimal when you consider that we only have the responsibility for 200 million square feet out of 2.5 billion square feet of space; 200 million out of 2.5 billion! That means that you are very important. Have your employees turn off lights, lower thermostats, etc. I hope we can rely on you for this assistance in our effort, and

we will assist you in yours, because it will take the voluntary cooperation of many Federal employees if it's going to be a complete success.

CHILEAN MARXISTS TO ENTER UNITED STATES?

HON. EARL F. LANDGREBE

OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. LANDGREBE. Mr. Speaker, the recent anti-Communist revolt in Chile has aroused a torrent of criticism from those who believe slavery is not slavery accepted. Marxist Salvador Allende had nearly ruined the economy of Chile, despite aid from both the United States and the U.S.S.R., and had expropriated American property in Chile. There are indications that the government itself planned to use force to impose a dictatorship—a step which all socialist nations must take sooner or later, if they are to remain socialist. Since the anti-Communist coup the leftists have been howling with anger—and the new governors of Chile have justifiably made life difficult for them. It is our misfortune that a bill has been introduced by Congressman DRINAN (H.R. 10525) which would allow Chilean political refugees to enter the United States. Apparently America is not to be a haven for the tired, the poor, and the huddled masses yearning to breathe free, but for the angry, the envious, and the vanguard of the proletariat. I insert an article by Mr. Paul Scott which appeared in the Indianapolis News in the RECORD:

KENNEDY-DRINAN BILL—CHILEAN MARXISTS TO ENTER UNITED STATES

(By Paul Scott)

A move is underway in Congress to clear the way for thousands of revolutionaries, Communists, Marxists and socialists, now in Chile to enter the U.S.

Leading the movement are Sen. Edward Kennedy, D-Mass., chairman of the Senate Subcommittee on Refugees, and Rep. Robert F. Drinan, D-Mass., the far-left leaning Catholic priest.

Both lawmakers have introduced and are actively pushing legislation which would turn the U.S. into a haven for the militant supporters of the late Marxist President Salvador Allende.

Under the Kennedy-Drinan legislation, upward of 50,000 of these "political refugees" would be permitted to enter the U.S. regardless of their Communist and Marxist backgrounds.

This flow of refugees also would include many of the thousands of foreign revolutionaries who are now in hiding in Chile or have been imprisoned by that country's military government. At least 500 of these foreign nationals are now in foreign embassies in the Chilean capital seeking political asylum and free passage to leave the country. Because of the roles these revolutionaries played in trying to turn Chile into a Communist dictatorship, Chilean troops have barred their departure from the country by placing guards around the embassies.

Overshadowed by the Middle East war and Nixon administration scandals, the Kennedy-Drinan movement has received little or no attention in the press. Only the Daily World, the official organ of the Communist party, and government security of-

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ficials have given the Kennedy-Drinan drive the attention it deserves.

Alarmed over the prospects of the country being flooded with Latin American revolutionaries, officials of the FBI, CIA, and Immigration Service have passed word to the White House that the Kennedy-Drinan proposal, if enacted into law, would create a major internal security problem for the nation.

These officials warn the Kennedy-Drinan measure would allow into the U.S. the elite revolutionaries and bomb throwers of Latin America who took asylum in Chile when Allende came to power.

Thousands of these foreign nationals were involved in setting up an international Communist brigade similar to the one Moscow established in Spain during the Civil War there. If these foreign revolutionaries are permitted to join with other militants in the U.S., security officials claim that they could turn the country into another Northern Ireland in a matter of months.

Efforts by Assistant Secretary of State Jack A. Kubisch during the senate subcommittee hearings to point out that many of these foreign nationals had been involved in Chile was discounted by Kennedy and the Daily World.

The Communist publication hailed the Kennedy-Drinan movement with big black headlines. The front page article stated that "Sen. Edward Kennedy today demanded that the U.S. government provide 'asylum and resettlement opportunities' to tens of thousands of Chilean patriots (revolutionaries)."

The story in the Daily World stressed how Kennedy had opened his hearings "with an indictment of the Nixon administration for its silence in the face of bloodshed and violation of human rights by the junta."

Whether by design or coincidence, the Kennedy-Drinan movement in Congress to protect these revolutionaries fits into a worldwide campaign now being pushed by Moscow to save them and discredit the Chilean military government.

This campaign is similar to those conducted in the past against the government of Nationalist China and later against the anti-Communist governments of South Korea, South Vietnam and Cambodia.

At stake in this growing controversy is whether the U.S. is now going to become a haven for those who failed in their efforts to turn Chile into a Communist dictatorship.

If permitted to enter the U.S., these revolutionaries' next attempt to establish another Communist base in the Western Hemisphere could be disastrous for all of us.

One of the revolutionaries that would be permitted to enter the U.S. under the Kennedy-Drinan legislation is Luis Corvalan, general secretary of the Communist Party of Chile and a legislator there before the military takeover. He is now being held under charges of treason.

ENERGY CONSERVATION AND THE LIGHTING LOBBY TAKE THE LEASH OFF SNOOPY

HON. LEE METCALF

OF MONTANA

IN THE SENATE OF THE UNITED STATES

Friday, November 2, 1973

Mr. METCALF. Mr. President, the widespread interest in energy conservation is commendable. The efforts of the administration, State, and local governments, companies and individuals to sensitize the American public to our wasteful energy practices will help alleviate the shortages.

Some of the energy conservation suggestions are being repeated and emphasized in various ways. There are advertisements and speeches. The administration has even enlisted the assistance of Snoopy. And the oil companies have hired Johnny Cash to strum his guitar and admonish us to slow down—which is easy to do in the car-clogged streets of the Nation's Capital.

There are some significant ways to conserve energy which have not yet been incorporated into the ads and commercials. These are conservation methods opposed by the energy companies and the administration, which has our friend Snoopy on a tight leash. I want to suggest today several areas of energy conservation which need to be embarked upon now:

I. LIGHTING STANDARDS

Illumination standards should be drastically reduced. These standards—recommended by the Illuminating Engineering Society which is composed of utility officials and electric equipment salesmen—have been increased some 300 percent during the post-World War II period. Recommended lighting levels are far above the levels recommended by independent lighting experts and used in foreign countries. The July-August issue of the Architectural Forum contains an excellent article on this subject by Richard G. Stein. A Public Citizen's Action Manual, a paperback by Donald K. Ross, published this year by Grossman, includes a chapter on how individuals can help reduce excessive lighting standards. Presentations on the subject by school and library consultants are incorporated within my testimony on advisory committees, on November 4, 1971, before the House Government Operations Subcommittee on Legal and Monetary Affairs.

In addition, Members will be glad to know, the Architect of the Capitol is moving to bring our own institution into line on this matter. At the conclusion of these remarks, I shall ask for inclusion in the RECORD of correspondence which Chairman CANNON, of the Rules Committee, and I have had with the Architect, Bureau of Standards and General Services Administration, along with excerpts from Architect Stein's excellent article.

II. OIL CONVERSION TO ELECTRICITY

Utility use of oil to produce electric heat is a ghastly waste of a dwindling resource. Electric heat generation requires about three times as much energy, to provide the same number of Btu's, as oil heat does. I intend to develop this point more fully at another time. However, the Architectural Forum excerpts I shall include in the RECORD today include a succinct discussion of this waste.

III. ALTERNATE ENERGY SOURCES

Given the precarious position of foreign oil markets, and the continuing problems which will always plague nuclear power, we should go all out now on development of solar, water, sewage conversion, and wind energy. Valuable power increments are practical now by some of these methods. On October 30 the senior Senator from Maine (Mr. MUSKIE) brought us up to date on the

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Passamaquoddy tidal power project—CONGRESSIONAL RECORD, page 35392. For years the Office of Management and Budget has delayed planning of additional generators at existing dams on the Missouri River. The dams are in place—the additional hydropower would involve no additional impoundments. Hydro facilities are superior from an environmental viewpoint to steam or nuclear plants, because hydropower pollutes neither air nor water.

IV. NATIONAL POWER GRID

Construction of a national power grid would reduce new electric plant proliferation by an estimated 25 percent. A national grid—to fill in the serious gaps in our transmission system—would mean lower fuel consumption as well. There would be less demand for peak generating facilities. Bulk power could be moved from one section of the country to another to take care of load requirements peaking at different times of day in the various time zones, and at different seasons of the year in different regions of the country. Legislation to establish a national power grid has been introduced in both the 91st and 92d Congresses. S. 1025, which Senators MANSFIELD, HUMPHREY, McGOVERN, MOSS, ABOUREZK, HATHAWAY, and I cosponsored, is before the Commerce Committee. Companion legislation by Congressman TIERNAN and others is before the House Interstate and Foreign Commerce Committee. The administration's and power industry's opposition to this legislation should no longer delay its consideration.

V. RATE RESTRUCTURE

In a typical utility rate structure, large polluting industries pay about one-third as much for their electricity as do low-income persons in densely settled areas where cost of service is low. Rate structure is subject to regulation by State utility commissions. This means that people do not have to come to Washington for their remedy. A reduction in the rate subsidy now provided large industries would be an excellent incentive to those companies to review their energy consumption practices.

Mr. President, I sincerely hope that all of us, including the administration, can take time to rethink our approach to energy conservation. I was encouraged at one of our Interior Committee sessions Thursday by the promise of Governor Love and Assistant Secretary of Interior Wakefield to broaden the membership of some energy advisory committees. There are good men and women, and good projects, ready and waiting to become part of the answer to our national energy conservation problem.

Mr. President, I ask unanimous consent to print in the RECORD excerpts from Richard G. Stein's article in the July-August issue of the Architectural Forum, and the correspondence previously referred to regarding lighting standards, the Illuminating Engineering Society, and the constructive attitude of the Architect of the Capitol.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

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EXCERPTS FROM THE ARTICLE, "ARCHITECTURE AND ENERGY," JULY-AUGUST 1973 ISSUE OF THE ARCHITECTURAL FORUM

(By Richard G. Stein)

LIGHTING

Lighting is also coming in for serious reinvestigation, and for good reasons. Lighting represents about a quarter of all electricity sold; that is, as noted in the *EEI Statistical Handbook* 1970, about 500 billion kWhrs. 15 years ago, recommended light levels were as much as two thirds lower than present recommendations of the Illuminating Engineering Society (IES) in some categories. 15 years ago, only about one third of present quantities of electricity were being generated. In the interior of buildings, air conditioning is a more frequent requirement than heating. Every two excessive watts of lighting requires one excessive watt of cooling.

While the IES professes a primary interest in the quality rather than the quantity of light, all the quality related tests—Visual Comfort Probability, Equivalent Sphere Illumination, Effective Foot Candles—tend to downgrade the effectiveness of the light computed to satisfy the IES recommended minimal standards, making higher intensities inevitable if the entire methodology is embraced.

Spot analyses indicate that lighting can be reduced by large percentages. There is an advertisement of a lamp manufacturer in the IES magazine *Lighting Design and Application* (Nov. 1972, pp. 58-59). The heading reads, "Part of this lighting story is a lot of hot air." Across the top of the page is a picture of an office with a number of ceiling luminaires, people working below, a stretch of glass wall toward the right of the photo and a text that says, "Over 25,000 Sylvania Curvalume lamps light up the interior of S. S. Kresge Corporation's new headquarters in metropolitan Detroit. With two Curvalumes to a fixture, Kresge got the lighting they were after—and much more. The heat from the U-shaped lamps and ballasts is saved and recirculated into the building. It's a conservation of energy concept with Curvalume lamps at its heart. The bent lamps make it possible to use two by two foot fixtures that can be evenly spaced over the modular ceiling. This makes for even distribution of air as well as light. In Kresge's contemporary building, these long-lived fluorescents last even longer. They are never turned off, which lengthens their life. The constant circulation of air around them increases their efficiency. This handsome installation gives lighting levels of 100 foot-candles or more in the general offices and the color of the lamps blends in beautifully with the interior decor."

Now let's see what they are really saying. If 25,000 40-watt lamps are in use 24 hours a day, there are one million watts in use for 8,760 hours a year; or in kilowatts, 8,760,000 kilowatt hours per year. If all the lamps are on from 8 a.m. to 6 p.m., that would mean there are 14 hours of unnecessary time for five days of the week. A million watts times 14 hours is 14,000 kilowatt hours per day times five days of the week, or 70,000 kilowatt hours. On the two days you do not need the lights on at all—that is 48 hours times one million watts, or 48,000 kilowatts. This means that there is an unnecessary expenditure of 118,000 kilowatt hours per week times 52 weeks a year which means that 6,136,000 kilowatt hours per year out of 8,760,000 kilowatt hours are unnecessary.

The waste, just in dollar terms, not to mention energy, at two cents per kilowatt hour, is \$122,720 per year. As described instead of using the tubes 2,500 hours per year they are used 8,760. More than three times what they should be. The ad states, "They're never turned off which lengthens their life."

Let's see what this means. If the lamp is

turned off once in ten hours, according to the IES Handbook, it will last 140/190 times as many hours as one burning continuously; that is, 75 percent as many hours. If its lamp life is 10,000 hours (the figure given for medium loading) it would last four years if burned ten hours a day for five days a week. If it is on continuously with a life expectancy of 13,300 hours, the additional 25 percent lamp life, it will last about a year and a half. In other words, while the lamp lasts longer it has to be replaced almost three times as frequently.

It is interesting to see in the ad's photo that there are some 15 people at work in the section of the office covered in the photograph. The ceiling above them has 181 fixtures each with 80 watts without counting the power load for ballast, a total of 14,480 watts, or about a thousand watts per person. The lighting is distributed indiscriminately, or should we say uniformly, over banks of files, desks, corridors, storage spaces and aisles. There are 40 fixtures over a bank of files with one person filing.

Also there are floor to ceiling windows that would appear to throw a high level of light for a distance of three ceiling modules or about 15 feet from the window. Yet the lights there are continuously on. Obviously all this adds to the summertime heat load for air-conditioning as well as the power load that the lamps themselves consume.

Next, according to the text the basic light levels provided are above 100 footcandles. According to an article by Mr. Robert Dorsey, then President of The Illuminating Engineering Society, in the AIA Journal (June 1972), this is satisfactory for reading a fifth carbon, which requires ten times as much light as the original for equal visibility. And since lights are always left on, there is no provision for selective switching even if there were an attempt to cut down on energy use.

Let me recapitulate. If the lights were on for an average of ten hours a day, five days a week, this 8,760,000 kWhr load would be reduced to 2,624,000 kilowatts per year. If the maximum overhead level were 50 footcandles (which is higher than the 30 footcandles cited by Mr. Ringgold of IES as adequate for the reading of printed matter), if offices where interviews are carried on were lighted to 20 footcandles (both generous since every typist using an electric typewriter has a connection nearby that could also permit portable light in the typist's area), then the above figure could be reduced by 60 percent. If we add a five percent factor for local lighting, the saving would be 55 percent, reducing the overall power requirements to 1,062,720 kilowatt hours.

Selective switching could turn off unused sections of the office. Conservatively, another 10 percent could be saved. The reduced requirement is now 956,450 kilowatt hours. This total obviously permits a significant reduction in air-conditioning requirements. The capacity of the plant can be substantially reduced and the operation will require many fewer kilowatt hours per year. Without considering the air-conditioning saving, however, there is a direct saving of about 7,800,000 kWhrs per year against the present expenditure of 8,760,000. This is enough to keep a village of 6,500 people supplied with a budget of 5,000 kWhrs per year for each family.

Since this was reported, there have been some changes. According to *Electrical World* (January 1, 1973), the lights are no longer kept on 24 hours a day, and there is some selective switching.

Existing lighting installations can be modified more easily than exterior walls, complex heating and cooling systems and ventilation systems.

A 50 percent reduction in electric usage for lighting would be a three percent reduction in nation-wide energy use. This is equivalent to the output of over 30 1,000-megawatt generating plants.

The question has been discussed in some detail for the past couple of years. The spokesmen for the Illuminating Engineering Society and their sponsored research arm, the Illuminating Engineering Research Institute, have insisted their findings have been misinterpreted and misapplied. Nevertheless, there is no literature coming out that shows how to design and provide controls for lighting that will significantly reduce electrical consumption. It is time to call on the industry to produce some illuminating components that perform quite differently from those that fill our new schools and buildings.

It is encouraging to learn that the American Institute of Architects has disaffiliated itself from the joint committee on school lighting with the IES, and will work toward a new approach to school lighting design with Educational Facilities Laboratory.

The IES has such a long standing commitment to the light evaluation system based on the 1958 Blackwell Report that a fresh overall investigation of how to provide a satisfactory seeing environment for carrying on our daily activities at the lowest energy cost is almost impossible to expect.

The characteristics of the new lighting: A more efficient light source; a lighting component capable of being easily plugged in and removed as requirements change; one capable of delivering a number of levels of light; one easily controlled locally; one fitted with a light-sensitive device that will turn it off if the ambient light level is adequate; and one that will accept screening devices when necessary.

The lighting design standards will eliminate the shibboleth of more than three to one contrast. This is not only contrary to the activity of the eye in nature, but also counters the experience of people watching a drama or film where the task (the stage or screen) is brilliantly lighted and the surrounding area is without light. The contrast between the light from the sky and the light in shadow areas under trees can be 20 to 1 (or more) without causing discomfort or loss of discrimination. In contrast, an unrelieved snowfield can be fatiguing, disorienting and can produce such physical symptoms as headaches and nausea.

The idea of lighting designed for specificity of delivery is certainly not new. Moreover it works effectively wherever it is installed. Examples are an operating room light, the light on a drafting table, the small lamp attached to a sewing machine, the built-in lamp in a study carrel, the individual lights over airplane seats, the light over a pool table, the illuminated instruments in an automobile. In commercial buildings there is no area that cannot accommodate an electric typewriter, a desk computer or an electric coffee maker; which means the area can also accommodate local lighting, either attached to the equipment or free-standing to serve it.

The remote-control device for changing television channels suggests a type of control by which a person could selectively turn lighting on and off, or change its intensity.

In a universal ceiling grid, fixtures could be plugged in or removed to change the light delivery system for different programmatic requirements. The animated movable electric signs in Times Square hint at the variety of levels and points of illumination we could have in a space.

Since there is so much to be gained nationally by reducing unnecessary electric use, the reduction of unnecessary lighting, as well as other technological possibilities, should be immediately investigated (low voltage switching systems, for one).

The great benefit of the modified approach to lighting design—differentiated spaces, contrast and lowered ambient levels—is the improved architectural quality. The building begins to respect and respond to changing

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human needs, and to variations of climate and weather.

Two recent findings may have some bearing on performance requirements. First, the report on job dissatisfaction among assembly line and production workers. This stated that despite "efficient" work conditions, psychological factors caused reductions in productivity which could be offset by less routine work assignments and less undifferentiated environments. In place of assembly lines, experiments with assembly teams, putting together SAABs and Volvos in Sweden, resulted in dramatic reductions in absenteeism and defective workmanship. Second, it was reported by a CBC radio interview that a Canadian school found that reducing light levels in a new school noticeably reduced psychosomatic headaches and fatigue.

In looking critically at energy use, the amount of energy used for advertising purposes is generally lost in the commercial category reporting. Aside from giving information—the name of a hotel, the number of a building, similar messages, most merchandising lighting is either excessive or superfluous. During the war years of 1942 to 1945, the extreme situation of no advertising lighting pertained. While it was by no means a relaxed and joyful setting (one of the environmental tunes of the day was "When the Lights Go On Again All Over the World," as an equation of lights and peace) it did demonstrate that we could indeed survive without advertising lighting.

The ironic part about advertising is that a high light level, if it is used to overwhelm the message of its neighbors, is only effective if it is the highest light level around. As soon as a new high is established, the tendency is for others to seek a still higher level. This is kilowatt one-upmanship.

The light level intensities can mount from 100 to 200 to 300 to 400 (and higher) foot-candles, and do so very rapidly. Each advance cancels out the merchandising advantage of the one before it. The only way to avoid such an escalation is by having a limit on intensity that is either voluntary, or enforced. When this is done, ingenuity will replace sheer brute brightness.

The wonderful effect of tiny lights strung in trees was demonstrated in New York last Christmas as an increasingly popular technique for decorative lighting. Blocks along Park Avenue and the Avenue of the Americas were given a magical scintillating quality. All told, about one half watt was used per square foot. By contrast, the business streets in Las Vegas have so much wattage that the various messages are virtually cancelled out in the glare.

Lighting in residences has remained closer to light levels people enjoy, especially since there is no one goading them to increase levels for sake of performance. As a result, home lighting was considered undersaturated; that is, it had the potential for being appreciably increased and, energy shortage or not, there are promoters in the electrical industry who want to push up the amount of electricity for home lighting.

In an account of Edison Electric Institute's 1971 Annual Marketing Conference, *Air-Conditioning, Heating and Refrigeration News*, a trade weekly, ran a report about Edwin Vennard, former managing director of the Institute, commenting on residential lighting: "Lighting always stands out as one of our best builders of percent return." Mr. Vennard mentioned that the electric industry had failed to sell higher lighting levels at the residential level where, he continued, "We give them about 20 foot-candles." By raising the average wattage of all electric bulbs used in houses just 30 watts, there would be more net income for utilities "than in all existing house heating. I'm not saying neglect house heating, but why not have both?"

It is ironic that if we attempt to describe the most pleasantly lighted spaces we can think of, our thoughts turn to certain residences. Softly lighted restaurants, theater lobbies and other spaces whose performance requirements have escaped the foot candle escalation process. Judging from the above quotation the watt salesmen are zeroing in on these.

ELECTRIC HEATING

In considering Mr. Vennard's last sentence we come to another emotionally charged subject, electric heating. It would be wonderful to find that it really uses less energy than all those other crude, primitive and expensive systems. It is obvious that costs of installation are generally less than for hydronic fossil fueled systems. No boiler rooms are necessary, no chimneys; instead of conveying heat as a liquid or a gas in pipes, it is transmitted through copper wires that can turn corners more readily and don't require pitches for drainage. Controls operate an on-and-off switch instead of a valve or pump.

Unfortunately the basic production of electricity is so inefficient in converting heat to electricity (which can be converted back to heat) that the advantages of electric heating are offset by the cost of operating it.

In the years 1963-70, it is possible to see the result of the promotion of electric heating on the residential use of electricity. For a decade residential use represented about 30 percent of the total sale of electricity. On a per capita basis, the average increased at the same rate as the general increase in electric usage. That is, it doubled while the population increased by 15 percent. In 1957 there were 167,758,000 people, using 161 trillion kWhr for residential use. In 1967 197,374,000 people using 332 trillion kWhr. Each average family used 3,660 kWhr per year in 1957 compared with 6,420 kWhr in 1967. Suddenly, in 1968 there was a sharp increase in the amount of electricity used in residences, beyond the general rate of increase for electricity. Residential use of electricity within two years jumped to 32 percent of all electricity sold.

If this merely represented a shift from one source of energy to another with no other consequences, it would be interesting as a technological shift. It has more serious results however and complicates the problem it purports to solve.

It may be worth repeating that electric heating is basically wasteful of primary energy, largely due to the three to one inefficiency in converting primary fuel to electricity. The 11,000 (plus or minus) Btu's required to generate a kWhr have a heating value of 3,413 Btu's at 100 percent efficiency in the reconversion process. If primary fuel (oil or natural gas) is burned directly, even if it is burned at only 60 percent efficiency, it will use only half as much fuel as the needed heat supplied by electricity.

The different fuels are interchangeable and interdependent. In the New York City area, for example, gas turbine peaking units are providing some of the base load. These units, basically jet engines, operate on kerosene or No. 2 oil. As they convert it into electricity, used for heating, they contribute to the shortage of fuel oil for heating.

According to New York City officials, one quarter of Con Edison's generation is now in gas turbine units, over 2,000 megawatts worth. Originally planned as peaking units, they now are part of the base load supply. They use No. 2 fuel oil the oil used in home heating furnaces and boilers. The shortage is being worsened since electricity for home heating drains off twice the No. 2 oil from the market that would be required for direct combustion at the houses.

Similarly, where natural gas is available, it is used to generate electricity which, in turn is being used for heating that could be

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done more economically from a fuel use point of view by using the gas directly.

A rationale of the utilities for using electric heat is that it is required at a time when operations are below their peaks which occur, excepting a few northerly areas, during the summer air conditioning period. There are two flaws in this. First, we are faced with shortages in all primary fuels—oil, gas, fissile material and available low-sulphur coal. Predictions for the exhaustion of these resources suggest that they had better be used carefully until alternative power sources have been developed and made available in sufficient volume to replace the present generating and petroleum refining capacities. The absolute reduction in primary fuel use becomes more important than the more profitable use of generating facilities on a year round basis. The result of burning less fuel (and still providing the same basic performance standards) is also the reduction in pollution. The second point, however, is that the promotion of electric heat does not affect only the winter loading. The all-electric home is given more favorable rates year round than the non all-electric home. For over 360 kWhrs per month, the service classification for electric heating lists only 60 percent of the non-heating customer's cost during the eight heating months and only 75 percent of the non-heating customer's cost in the remaining four months. As a result the favorable rate structure makes electricity attractive for cooking, clothes drying, and hot water heating in addition to the space heating. It also encourages the use of more air conditioning. These additional electric uses tend to drive the summer peak still higher, resulting in still more winter time capacity to be exploited for electric heating.

If the controls and delivery of fossil fuel systems were as effective as those in electric systems, there would be no basis for discussion. The difference would be three and a half to one in favor of the fossil fuel. As the result of the losses in combustion and delivery, and of less specifically responsive controls, the edge drops down to about two to one. Even with boiler inefficiencies and chimney stack losses, direct use of fossil fuel is generally twice as efficient as electric heat, and does not cut into generating capacity.

The only promising use of electricity for heating under present methods is the heat pump. In the past this has been so beset with poor performance equipment that it has not been actively pursued.

The impact of additional electric heating on overburdened generating capacity can be appreciated by looking at actual quantities. In New York State, depending on location, between 10 percent and 50 percent of new homes have electric heat. In other areas of the country, that figure is higher. According to figures from Pennsylvania Power and Light, the average all-electric house in 1971 used 28,000 kWhrs, while the non-electric one used 5,600. That leaves an average of 22,500 kWhrs for heating. Applying this figure to the one percent of New York State's 5,300,000 residential customers, who now use electric heat, it turns out that 1,200,000 megawatt hours went into electric heat last year in this state—the total output of a 240 MW plant such as Indian Point 1. The amount of fuel which went into generating power to heat these residences could have heated about two and a half times the number of residences directly, given the same standards of construction.

In 1970, with a seven and a half percent saturation of the residential market, electric home heating used about 66,000 million kWhrs of electricity. This represents almost four percent of all electrical energy produced and sold. In other words, if the ratio of capacity to consumption of the Con Edison generators is used, a total of about 16 million kWhrs capacity is required—the equiva-

lent of twice the total capacity of all of Con Edison's generators.

According to "Electric World", the preference for electric heating has increased from 22 percent to 36 percent during the last six years. The electrical industry projects that the number of electrically heated residential units will be 19 million by 1980 and 25 million by 1985.

The annual electric consumption, if this prediction came true (assuming established 22,500 kWhrs per unit per year), would be 562.5 billion kWhrs. In primary energy, this would require about 6.5 billion (10¹²) Btu's, and would be the equivalent of a 50 percent importation of petroleum in 1985. This is obviously a matter to be decided on something other than first construction cost.

In addition, there has been a successful campaign on the part of the utility companies to increase substantially the amount of electrical heating in office buildings and other commercial installations. In 1969, of all new non-residential construction, 23 percent was electrically heated, a total of almost 40,000 buildings of which 5,400 were new office buildings.

A governmental policy, expressed in codes and power use regulations, is necessary to stop this tendency, one that permits electric heat only in installations where fuel deliveries cannot be made or where the presence of an open flame in an unattended building would be either unsafe or undesirable.

U.S. SENATE,

Washington, D.C., September 7, 1973.

Hon. LEE METCALF,
Chairman, Subcommittee on Budgeting,
Management, and Expenditures, Com-
mittee on Government Operations, U.S.
Senate, Washington, D.C.

DEAR LEE: I enclose a copy of the report of the Architect of the Capitol concerning lighting standards and conditions in Senate spaces, about which you wrote me several weeks ago.

Mr. White's summary of the situation seems to be responsive to my request, but I would be glad to have your comments on it after you have had a chance to read it.

With all best wishes,

Sincerely,

HOWARD W. CANNON,
Chairman.

WASHINGTON, D.C.,

September 4, 1973.

Hon. HOWARD W. CANNON,
Chairman, Committee on Rules and Admin-
istration, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In pursuance of your request regarding Senator Metcalf's comments concerning lighting standards and lighting conditions in Senate spaces, I have made a careful investigation of the quality of lighting to which Senator Metcalf refers.

Appended hereto are copies of data obtained by our engineers from calibrated light meter readings made in nine different Senators' offices in the Russell Building. These data corroborate Senator Metcalf's concern. As a personal matter, I should add that I have long held an opinion similar to that of Senator Metcalf's, namely, that the recommended light levels as indicated by the Illuminating Engineering Society standards are, in many cases, substantially more than is necessary for the comfort of people with normal eyesight.

A short review of the lighting development in the Russell Building may be helpful in understanding the present situation.

In the Second Supplemental Appropriation Act, 1955, authority was given for the employment of lighting consultants to survey and study the illumination in the Russell Building (at that time called the Senate Office Building) and to "submit recommendations and estimates of cost for improved il-

lumination. The amount of \$10,000 was expended for that study. As a result, an allotment of \$220,000 was requested in the appropriations for 1957, to provide for the purchase and installation of new lighting fixtures recommended by the lighting consultant. In the justification for the request, the following statement is made:

"Existing lighting conditions in Senators' suites are definitely substandard. The average level of illumination is five to six foot-candles at desk level, 30 inches from the floor. These figures may vary with the size of the room and the number and type of luminaires."

The justifications state, further, the recommendations made by the lighting consultants. A portion of these reads as follows:

"Initial illumination levels in Senators' private offices, in Administrative Assistants' offices and in reception rooms should not exceed 35 foot-candles. In stenographic-file rooms, the initial illumination levels should not exceed 50 foot-candles."

Accordingly, funds were appropriated and lighting fixtures furnished and installed on the basis of the consultant's recommendations.

Those fixtures, installed in 1958, contained plastic shades that had, by 1973, over the years, become old and brittle and, therefore, subject to frequent breakage during cleaning and lamp maintenance operations. Because of their age, they could no longer be procured from commercial sources without special manufacture. Further, because the fixtures were designed with an open top which caused their efficiency to be impaired as a result of the collection of dirt and insects, and because the exorbitant cost of shade replacement resulted in approximately half of the lighting fixtures being without any shades at all, funds were requested and appropriated for FY 1973 to enable these 15 year old fixtures to be replaced.

The replacement fixtures which were installed during the first six months of this year were identical in electrical power consumption (wattage) to those which were replaced. Fifteen years of development in the lighting fixture industry, however, resulted in our obtaining much more efficient lighting in terms of lumens per watt. We are thus experiencing substantially greater foot-candles at the reading level resulting from the use of the same electrical energy. It should be noted also that the initial foot-candle readings will, in a short period of time, diminish to approximately 80%–85% of the initial readings. This occurs in varying degrees in all lighting installations, and is a result of general aging of the lamps and fixtures and the impracticability of cleaning them each day.

Nevertheless, it is undoubtedly true that since the installation of the new fixtures, the illumination level has increased to the point where for some people there may be discomfort. In several of the Senators' offices, half of the fluorescent tubes have been removed from the fixtures and the resulting illumination has remained at a satisfactory level. It thus appears possible to achieve satisfactory illumination levels with virtually one-half the energy consumption that has been used during the last 15 years. It should be noted, also, that the new fixtures, on an individual basis, cost very little more than the replacement costs of the outdated shades on the 1958 fixtures. Since installation was accomplished through the use of our in-house electricians, the labor cost was minimal.

One further factor should probably be recognized. Lighting levels are, by and large, a matter of individual preference.

Higher lighting levels, within limits, are found to be more comfortable for some individuals, and not for others. Under the present situation in the Russell Building, we are able, with the fixtures installed in 1973, to provide a substantial range of illumination

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in answer to individual requests. As the appended data indicate, the foot-candle readings in various Senators' offices range from 10 to 160. I certainly agree with Senator Metcalf that these upper levels are substantially greater than necessary. I intend, therefore, to survey each Senator's office with the goal of reducing the electrical power consumption by removing lighting tubes to such extent as deemed necessary, subject, however, to the desires of each Senator.

Because, as you know, the extension to the Dirksen Office Building is now under design, it is my intention, also in accordance with Senator Metcalf's comments, to keep the lighting levels at a range more consistent with the standards of comfort than those generally recommended by the Illuminating Engineering Society. Measurements taken at my own desk have persuaded me that lighting levels beyond 60 to 75 foot-candles are, for the most part, unnecessary, if not uncomfortable, for ordinary desk work by persons with normal eyesight.

Please be assured that the lighting consultants for the new construction will be carefully apprised of these concerns. Our goal in the new building is, of course, to achieve maximum but reasonable flexibility consistent with the cost implications that are inherent in that goal. Thus, in connection with the lighting, it may be that higher illumination levels may be provided for but not utilized except as they may be needed for specific sight tasks.

I shall, of course, be pleased to incorporate or adjust these lighting philosophies in accordance with the guidance of the Senate Office Building Commission. I shall be happy also to furnish you and Senator Metcalf with any additional information that you might deem appropriate.

Cordially,

GEORGE M. WHITE,
FAIA, Architect of the Capitol.

JULY 9, 1973.

Dr. RICHARD W. ROBERTS,
Director, National Bureau of Standards,
Washington, D.C.

DEAR MR. ROBERTS: New lighting fixtures recently installed in my office are so bright that several members of my staff complained that the light hurt their eyes. A test by a Senate electrical engineer showed that the illumination amounted to more than 100 footcandles.

That is a level two or three times the amount recommended by school and library officials and oculists. I included some of the documentation on this point in my testimony before a House subcommittee two years ago, which I enclose for convenient reference. Further documentation is provided in "A Public Citizen's Menlo Manual," a paperback by Donald K. Ross just published by Grossman.

The Senate, and many other governmental units, Federal and non-Federal, unfortunately rely on standards suggested by the Illuminating Engineering Society, which is composed principally of utility officials and electrical equipment salesmen. It seems to me, especially in view of the energy problem, that the Federal Government ought to issue scientifically based lighting standards, and that your bureau is the appropriate agency for that task.

I would welcome your general comments on the matter, and your specific response to my suggestion that the Bureau of Standards promulgate appropriate lighting standards for Federal buildings.

In view of the responsibilities and interests of the General Services Administration in this matter, I am sending a copy of this letter to the GSA Administrator, and requesting his comments.

Very truly yours,

LEE METCALF.

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JULY 9, 1973.

Hon. HOWARD W. CANNON,
Chairman, Committee on Rules and Administration, U.S. Senate.

DEAR SENATOR CANNON: I would welcome Rules Committee review of lighting standards used in the Senate and other government buildings as discussed in my enclosed letter to Dr. Richard W. Roberts, Director of the National Bureau of Standards, and in the enclosed testimony before a House subcommittee.

Very truly yours,

GENERAL SERVICES ADMINISTRATION,
Washington, D.C., July 24, 1973.

Hon. LEE METCALF,
U.S. Senate,
Washington, D.C.

DEAR SENATOR METCALF: Thank you for your letter of July 9 inviting our comments on illumination levels.

The General Services Administration has been concerned with levels of illumination for some time and on this basis is taking action to remedy and revise some of the existing standard procedures. Of special concern are comfortable and adequate lighting levels and the conservation of energy.

We have already taken action to establish new standards for illumination in both existing and new GSA-controlled space which will significantly reduce energy consumption.

In all new buildings we have introduced a new task oriented illumination concept. The traditional concept used in the past provides uniform illumination throughout the entire space to the level of the most difficult visual task, whether needed or not. The idea of the task oriented (or nonuniform) lighting concept is to provide the required amount of light only at the work station, with the flexibility to relocate the light as the work station changes. The traditional concept required a power input of four watts per square foot of ceiling area, whereas the task oriented lighting concept requires no more than two watts per square foot and in some cases may be reduced to one watt per square foot. Attendant benefits are, of course, reduced airconditioning loads and less lighting fixtures to install and maintain.

We are enclosing a copy of our guide specification T 4-13500. Integrated Ceiling and Background (ICB) System. The lighting performance for task oriented lighting is contained in paragraph 2.02A, and establishes maintained lighting level of 70 footcandles at the work stations, and a minimum of 20 footcandles anywhere within the space.

The task oriented or nonuniform illumination concept is also being applied to existing buildings, in accordance with the enclosed GSA Order 5856.1, paragraph 5 of Attachment A. The Order also indicates other actions we have taken to conserve energy in GSA-maintained buildings.

With regard to new standards, we have recently engaged a private consulting firm to perform a comprehensive study of illumination levels. The study, when complete, will establish criteria to provide a national GSA standard that can be utilized in planning and designing systems for GSA-controlled space. The final report of the study should be complete by October 1973 and if you so desire we shall be pleased to send you a copy.

Concurrently, GSA has an Energy Conservation Demonstration Building (the proposed Federal Building for Manchester, New Hampshire) under design. Present plans include the provision of different types of office lighting on the various floors. For example, one floor will be designed for conventional uniform lighting, other floors will be designed for task oriented lighting, another floor will be designed to take maximum advantage of natural lighting, while other

floors may be designed for polarized lighting and lights incorporated in the furniture. Through this demonstration project, we expect to gain further knowledge which will help us provide adequate lighting with savings in energy.

We hope this information has been helpful. If we may be of further assistance, please let us know.

Sincerely,

ARTHUR F. SAMPSON,
Administrator.

U.S. DEPARTMENT OF COMMERCE,
Washington, D.C., July 26, 1973.

Hon. LEE METCALF,
Chairman, Subcommittee on Budgeting,
Management and Expenditures, Committee on Government Operations, U.S. Senate, Washington, D.C.

DEAR SENATOR METCALF: Thank you for your letter of July 9, 1973, suggesting that the National Bureau of Standards promulgate appropriate lighting standards for Federal Buildings.

The National Bureau of Standards does not promulgate industry standards. NBS contributes technical competence and makes recommendations upon request to standardization groups. The current research effort at NBS is directed toward an improved technical basis for the quantity and quality of illumination and improved measurement methods for determining whether users' needs are met by lighting systems.

The standard for office lighting currently used is the American National Standard A132.1, "American National Standard Practice for Office Lighting," issued by the American National Standards Institute which is sponsored by the Illuminating Engineering Society (IES). Xerox copies of Table 1—Illumination Levels Currently Recommended, from A132.1—1972 (proposed Revision of A132.1—1966) and appropriate portions of Figure 9-80 IES Lighting Handbook, 1972, are enclosed for your convenience—Appendices A and B, respectively.

The National Bureau of Standards through its Center for Building Technology (CBT) has initiated technical studies on the illumination required to perform visual tasks. These studies were in response to the general dissatisfaction voiced by some of the "user" community to the current recommendations, including some of those documented in your testimony to the House subcommittee. The CBT studies are based on illumination experiments which more nearly simulate real-life conditions. The current American National Standard A132.1 and IES recommendations are based on visual performance data obtained under situations seldom encountered in everyday task performance. A brief summary of the experimental data on which current IES recommendations are based and the initial efforts of CBT in this area is included as Appendix C. Hopefully the new information developed by the current CBT research could serve to stimulate reconsideration of present illumination standards.

CBT's Building Environment Division has been working with the General Services Administration in the field of energy conservation, where lighting power is a very important parameter. In the enclosed copy of NBS/GSA Roundtable on Energy Conservation in Buildings, May 23-24, 1972, on pages 52-53 the subject of lighting is discussed. We understand that GSA is in the process of implementing many of the energy saving ideas mentioned by reducing lighting levels in offices and by providing the principal illumination in the task-performance areas.

NBS is cooperating with GSA on the Manchester, New Hampshire, energy conservation demonstration office building, which was a result of the above Roundtable. Computer studies of savings possible from changing normal design practices to energy design are

shown on pages 120-133 of the enclosed publication, *Technical Options for Energy Conservation in Buildings*, June 19, 1973. This same publication (pages 93-98) gives information on the subject of conserving energy used for lighting.

Thank you for your interest and your suggestions.

Sincerely,

RICHARD W. ROBERTS,
Director.

THE PALESTINIANS: THE REAL PROBLEM IN THE MIDDLE EAST GOES UNSOLVED

HON. JOHN R. RARICK

OF LOUISIANA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. RARICK. Mr. Speaker, people the world over are prayerfully hoping that peace can be restored to that area of the world called the Middle East, with whatever concessions are necessary by all parties involved so that all people in that area can save face and live together in mutual respect and understanding.

Tragically, at this time the Palestinian people do not appear represented nor do they have a voice in any of the negotiations. Only those who understand the Palestinian and his ageless plight can understand the seriousness and the futility of any negotiated peace without including the Palestinians.

Those who followed the negotiated "peace with honor" in Vietnam will recall that not only were representatives of North Vietnam and South Vietnam included at the peace table, but also representatives of the Viet Cong and every other dissident splinter faction, a measure which was deemed advisable by our Government so that every aggrieved group participated in the final decision.

In considering a Middle East settlement without the Palestinian, we must remember that before the conversion of Palestine into Israel by unilateral action in 1948, the population of Palestine was 1,845,000, of which 1,076,000 were Arab-Moslem, 608,000 were Jews, and 145,000 were Arab-Christians. *Arab-Israeli Dilemma* by Fred J. Khouri, Syracuse University Press, 1968.

The 1969 census of Israel gives a population of 2,919,172 of which 2,496,438 are Jews, 314,580 are Arab-Moslem, 73,556 are Arab-Christians, and 34,598 are Druze and others. *Worldmark Encyclopedia of the Nations*, vol. 4, 1971 edition.

Where did the Arab-Palestinians go? They are still in the Middle East where they can be expected to continue as an oppressed minority, convinced that they have been deprived of their land and their birthright—and now by action of all nations of the world.

I ask that a related news clipping follow:

[From the Washington Star-News, Nov. 1, 1973]

PALESTINIANS SEEN SHIFTING ON SEPARATE STATE ISSUE

The Palestinian guerrilla command may be dropping its opposition to the idea of a separate Palestinian state, a switch that could help break the 25-year-old Middle East deadlock.

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The development was hinted in Beirut press reports as the Palestinian command was meeting in the Lebanese capital in a summit of various guerrilla organizations as the executive committee of the Palestine Liberation Organization.

Chairman of the group is Yasir Arafat, who heads Al Fatah, the largest of the Palestinian organizations.

The news report yesterday quoted Arafat as saying the Palestinian movement "is on the threshold of a new stage that would require an historic decision . . . and I am confident that it is capable of finally coming out with such a decision."

The Pro-Palestinian newspaper Al Moharrer said that agreement had already been reached by all but one of the Palestinian groups on the executive committee after three days of what it described as "heated debate."

The paper said a majority of guerrilla leaders favored acceptance of a Soviet invitation to Arafat for Palestinian participation in an international peace conference on the Middle East, with the insistence that:

Israel withdraws from occupied Arab territory inhabited by Palestinians without "bargaining."

Palestinians living on the west bank of Jordan, the Gaza Strip and the Hama Plains east of the Sea of Galilee—the southern part of the Golan Heights—will have "the right to self-determination."

The Palestinians also will "have the right to determine what kind of relationship they want with the east bank of Jordan," King Hussein's monarchy where 70 percent of the population is Palestinian.

The Palestinians had previously rejected a proposal by King Hussein to form a semi-autonomous Palestinian state on the west bank of the Jordan River, federated with his east bank kingdom under the Hashemite throne.

On the critical question of prisoners taken in the war, Syrian authorities said yesterday they would submit a list of Israeli prisoners of war in Syria to the International Red Cross. But Deputy Foreign Minister Abdel Ghani Rafai said Syria would only comply with the Geneva Convention on Prisoners of War if Israel also complied.

Rafai told a news conference Syria had two conditions: That Israel return the bodies of Syrians killed during the fighting and that Israel allow Syrians who fled their villages during the fighting to return.

Egypt has sent Israel a list of 82 Israeli prisoners, but a quick exchange is hung up on Egypt's demand that Israel withdraw from territories it took after the Oct. 22 cease-fire. Israel captured about 6,000 Egyptians and wants to exchange them for about 450 Israeli prisoners the other side took.

THE PROSECUTOR'S PREROGATIVE: INDEPENDENT AND IMPERVIOUS, OR PRESSURIZED?

HON. EARL F. LANDGREBE

OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. LANDGREBE. Mr. Speaker, there appears to be much sentiment in Congress for the appointment of a special prosecutor by the chief judge of the district court. In the interest of the restoration of confidence in the Federal Government, the role of the special prosecutor should be strictly and unambiguously defined and guaranteed by law in order to assure impartiality and objectivity in investigations and prosecutions of Government authorities. Accordingly,

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I call your attention, Mr. Speaker, to a letter I received from a gentleman in San Francisco, Calif., who has set forth in reasonable terms what I consider to be some pertinent points to consider in the possible legislation of the appointment:

SAN FRANCISCO, CALIF.

October 28, 1973.

I have noted with interest the news reports that the congress of the United States is indicating great interest in the establishment of a prosecutor's office which would be unentangled or pressurized either pro or con in its use of the subpoena and other court powers to investigate the administrative branch of the government.

I salute this progressive step only on the condition that the congress do no less for itself by also freeing the prosecutor to act at his whim and will in the same manner, free from pressure or entanglement, politically, in investigating alleged wrong doing on the part of any congressman or senator. And why not the same power to investigate the federal courts themselves?

I predict that any bill with amendments tacked on to it to add investigative and unbridled authority to a prosecutor investigating the congress . . . or the courts, as well as the administration, would die a sudden death in committee.

To state that it would be all right to have uncontrolled investigation of a main branch of our government . . . to wit: the administrative, and at the same time exclude the other main branches . . . the judicial and the legislative, must certainly cause the constitution to vibrate if not crash into pieces.

WILLIAM L. GREGORY.

EQUITY FUNDING CASE AND CONGRESSIONAL ACTION

HON. RICHARD T. HANNA

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. HANNA. Mr. Speaker, the Equity Funding case now before the Federal Court for the Central District of California gives us a grim and awesome warning of the potential for computer frauds. It must be continually appreciated that all the tools of man are subject to abuse and may be used for evil as well as good. You can use the kitchen knife to slice the bread, but you can also use it to slay the breadwinner. You can use the computer to effectively convey facts, but you can also use it to conveniently confuse or cover the facts. In the Equity Funding case, it appears that the programmers used the computer for these latter purposes.

In the words of the assistant U.S. attorney in the case:

The Equity scandal involves probably the most substantial business fraud of the century, possibly in the history of this country.

It involves approximately one-half billion dollars in Equity's assets and more than \$1 billion in allegedly phony life insurance policies. The dimensions of the fraud may exceed the Vesco, Billy Sol Estes, and IOS scandals all together.

Unfortunately, the list of stockholding victims include a number of colleges, public pension funds, churches and foundations. Each of them stands to lose a substantial percentage of its investment and to be tied to a long period

of loss of liquidity, if it wishes to reduce its loss by obtaining devalued stock in the course of a reorganization. Since none of these entities pay taxes, their losses will be real and permanent. Each of the eleemosynary organizations affected will have its capacity to serve the public good reduced accordingly.

My expectation, Mr. Speaker, is that the realization of the full scope of the damage will raise demands for legislative action. And I am sure that these demands will be met by countervailing arguments from industry to do nothing at all. Our action should reflect an appreciation in Congress for this new type of sophisticated "white collar" crime. It should equally reflect the best efforts of our committee system and floor activity to hone an answer to the proper use of computers while discouraging to a maximum extent the recurrence of an Equity Funding type of fraud.

CONSERVE ENERGY—RESTORE DAYLIGHT SAVING TIME

HON. THADDEUS J. DULSKI

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. DULSKI. Mr. Speaker, with increasingly higher estimates of the fuel shortage being revealed, Congress and the administration are trying to map out emergency plans for this winter.

Certainly, a broad spectrum of conservation measures is needed now as well as developing a long-range program to solve the energy crisis.

However, I believe that Congress could take a very simple step immediately to start the long journey toward sound energy policy.

As one of the sponsors of H.R. 7647, to provide that daylight saving time shall be observed on a year-round basis, I am even more firmly convinced than ever that we should institute this change without further delay.

Daylight saving time is an easy and proven method of conservation. We are all aware of the positive results in this country during the World Wars and in fuel-short Europe following the war.

Several of my colleagues already have pointed to the results of the Rand study indicating there would be a saving of half our estimated shortage for next year resulting from DST. We are also cognizant of the auxiliary benefits of increased traffic safety and decreased crime statistics.

At this point, I include the text of a very pertinent editorial:

TIME TO SAVE ENERGY

The impetus in Congress for conserving energy by adopting Daylight Saving Time throughout the year is one of several signs that the lessons pointed up by the Middle East war are at last being driven home.

Western Europe, President Nixon observed in last week's press conference, "would have frozen to death this winter" unless the Middle East fighting had been brought to an early end. The United States, fortunately, is less vulnerable than Western Europe and Japan to the impact of embargoes or cutbacks of oil production by the Arab states.

Even so, the folly of leaving the future

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economic life of the U.S. a potential hostage to the blackmail threats of Arab producers charges with fresh urgency the nation's search for ways to minimize the risks in excessive reliance for energy resources upon unstable foreign sources.

This need not imply any cause for panic. We have time to find sound solutions for energy shortages, provided the nation does not delay the effort necessary for the development of fuel alternatives to gas and oil.

The answer to our long-term needs lies in developing new energy sources. John A. Love, director of the President's Energy Policy Office, foresees no one single solution but rather a "group of pieces"—including coal conversion, shale oil, nuclear power and the Alaska pipeline.

But until this massive research-and-development investment commitment can produce effective solutions, there must be a public readiness to restrain demand for energy supplies with an acceptance of what government officials call a new "ethic of energy conservation."

An industrial society that has been profiteering with its fuel supply, in an era of abundance when we were all lulled into complacency, now must discipline its wasteful practices. Shifting our life styles and economy demands a reassessment of the way we insulate our homes and offices, the efficiency we get out of our gas-guzzling cars, and in particular prudent restrictions on non-essential uses of electric power. To assure the most efficient use of diminishing fossil-fuel resources, State Public Service Commission Chairman Joseph C. Swidler calls for steps by the major gas and electric utilities to discourage excessive use of power by their major customers.

A similar concern for saving electricity and the fuel it takes to generate it now has prompted congressional proposals for making Daylight Saving Time permanent. An extra hour of daylight at the end of the day, advocates contend, would achieve a substantial savings in winter energy needs. Year-round Daylight Saving Time served this purpose during World War II, when it was adopted by congressional action, and it has stayed in effect in most of Western Europe.

The claims of opponents, that any fuel savings might be offset by such things as additional gasoline consumption for more daylight driving, are currently the subject of study by the Rand Corporation. Though the Nixon administration has taken no official position on a time change long opposed by farm groups, energy officials in the Interior Department lean toward giving experimental daylight saving time a reasonable test, along the lines of a Senate bill. Certainly the need is at hand to intensify present studies and give this potential energy-saving idea serious consideration.

Much more than year-round daylight saving time is need for a complete solution, of course, but there is no plausible reason why Congress cannot promptly pass the legislation for a simple, immediate, and cost-free way to begin to meet the energy crisis in a positive manner, in order that the energy savings can be realized this winter.

ANOTHER AFFRONT TO THE CONSTITUTION OF THE UNITED STATES

HON. JOHN R. RARICK

OF LOUISIANA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. RARICK. Mr. Speaker, article I, section 6, clause 2, of the Constitution provides:

No Senator or Representative shall, during the time for which he was elected, be appointed to any civil office under the authority of the United States.

The question posed is: Can Mr. FORD and Mr. SAXBE be appointed to the positions of Vice President and Attorney General of the United States?

Mr. Speaker, I include the full text of article I, section 6, clause 2, of the Constitution of the United States following my remarks:

No Senator or Representative shall, during the time for which he was elected, be appointed to any civil office under the authority of the United States, which shall have been created, or the Emoluments whereof shall have been increased during such time; and no Person holding any Office under the United States, shall be a Member of either House during his Continuance in Office.

CRIME CONTROL NO. 4

HON. EARL F. LANDGREBE

OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. LANDGREBE. Mr. Speaker, a gentleman has been insisting for several months that guns are responsible for thousands of deaths, and inserting in the RECORD examples to prove it.

I have already discussed the fact that guns cannot be responsible for anything, simply because they cannot respond. Now, I must call into question the attempted proof of the ghastliness of guns. Apparently the gun control lobbyists believe that the accumulation of case upon case in which guns have been used in the commission of crimes constitutes proof for their fundamental proposition: guns cause crimes. The silliness of this idea may be realized when it is recalled that observation of entities does not include observation of causes. The notion of cause must find its basis in a prior argument and not in observation. The conjunction of guns and crimes no more proves that guns cause crimes than does the conjunction of wet streets and cloudy days prove wet streets cause clouds.

Second, the argument of the gun control lobbyists ignores the fact that crimes, human deaths, and injuries are joined much more frequently with other things than they are with guns: bicycles, stairs, doors, cleaning fluids, tables, beds, football, swings, fuel, glass, lawnmowers, baseball, nails, baths, heaters, pools, ovens, basketball, chairs, cutlery, clothing, paint, chemicals, coins, and automobiles, if one may believe the U.S. Consumer Product Safety Commission. To select guns as the objects responsible for crimes and injuries is arbitrary and unwarranted.

Third, guns are used to stop and prevent crimes as frequently, if not more frequently, than they are used to commit crimes. The alleged proof of the statement that guns cause crimes fails completely. Guns do not cause crimes, nor are they involved in a large proportion of human injuries, nor are they used exclusively for criminal purposes. The argument fails to use logic and observation, and deliberately ignores examples

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of gun use that militate against its conclusion. In further articles in this series I will present counterexamples. These will serve to show the deliberate misrepresentation of the facts for which the gun control lobbyists are responsible.

URGENT NEED FOR LONG-TERM REHABILITATION PROGRAM IN THE SAHEL

HON. LOUIS STOKES

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. STOKES. Mr. Speaker, as chairman of the Congressional Black Caucus, I wish to share with my colleagues in the House a joint statement by the members of the caucus calling for increased U.S. aid to the drought- and famine-stricken countries of the West African Sahel.

I invite the attention particularly of those members serving on the foreign aid bill conference which seeks to reconcile the weaker Senate version, S. 2335, with the strong House version, H.R. 9360.

The statement follows:

URGENT NEED FOR LONG-TERM REHABILITATION PROGRAM IN THE AFRICAN SAHEL

The Congressional Black Caucus, concerned about the crippling effects of prolonged drought and famine in the West African Sahel, calls for a strong commitment by the U.S. Government to cooperate with international planning efforts to rehabilitate the area as rapidly as possible.

The six countries principally affected—Mauritania, Senegal, Niger, Upper Volta, Mali and Chad—have just concluded a summit meeting in Ouagadougou, capital of Upper Volta, to discuss long-term rehabilitation of the semi-desert zone. It is now vital that the United States continue to provide the leadership it has shown in the provision of relief food by leading the movement, in cooperation with the African countries, towards effective international coordination and planning on a regional basis in the Sahel. A long-term program of perhaps \$1 billion over the next ten years will be required. It is imperative that aid donors assist the countries concerned in implementing their own priorities.

FURTHER RELIEF GRAIN SHIPMENTS

It is urgent that the U.S. Government make commitments for grain deliveries after October when the harvest is expected. Due to the prolonged continuation of the drought and the late arrival, uneven distribution, and periodic interruption of the rains, substantial food shortages are likely in the year to come, at least in certain areas. We urge the U.S. Government to take every precaution against food shortages and to commit grain and protein supplements with a margin of safety adequate to cover the inevitable underestimates which inadequate communications always produce.

The Caucus is not convinced that the preservation of human life and culture in the Sahel is of sufficient importance to the officials of the U.S. Government. In particular, we note with alarm that Portugal whose colonial policies in Africa are officially disapproved by the U.S. has been receiving \$30 million worth of feed grain with which to build up a commercial dairy industry, in direct competition with the human needs of the Sahel. The Caucus opposes the diversion of food away from Africa to feed the animals of a colonial regime responsible for brutal repression in Africa. We demand that human life take priority.

CONGRESSIONAL ACTION

The House version of the Foreign Aid Bill contains a provision for \$30 million in backing for reconstruction in the Sahel, which was introduced by Congressman Charles C. Diggs, Jr. The Senate Bill contains a weaker clause, without any specific commitment, and we consider it essential that the conferees agree to retain the House version. We appeal for letters to be sent immediately to Congressmen Morgan, Zablocki, Fascell, Mail- lard and Frelinghuysen, and to Senators Fulbright, Case, Church, Aiken and Humphrey, urging them to retain the House provision for the Sahel.

In addition, we call on the responsible officials of the U.S. Government to give top priority to work out a long-term development program with (1) the six countries concerned and their permanent Interstate Committee; (2) the United Nations and its agencies involved in regional programming; and (3) other donor countries. We deplore the duplication and uneven concentration with resources in certain sectors and areas which ultimately unbalance the whole economy and environment of the region. We call for an integrated, carefully coordinated African Sahel Development Program.

We also support the appeal of the six Sahel countries for the rescheduling of their debt burden as an essential first step towards the recovery of their economies. We endorse their request for the financing of the dam projects designed for the conservation and efficient use of their water resources—projects which for years have been largely ignored by the donor community.

IMPLICATIONS FOR U.S. AFRICA POLICY

Due largely to the emerging interest in Africa among many communities in the U.S., the United States has become the major supplier of relief food to the Sahel. This relief effort should be supported by a generous appropriation to a development program and a genuine commitment to cooperation on a regional basis.

The disaster in the Sahel has brought home to us the ineffectiveness of U.S. aid to Africa. U.S. aid tends to be concentrated on the relatively prosperous States, where U.S. strategic interests lie; this is an untenable basis for an aid policy, which should be seen as an impartial expression of concern for and solidarity with the poorest areas.

In the long run, last-minute relief efforts are a huge and wasteful drain on U.S. aid resources. The airlift in Mali may have cost as much as the construction of an adequate road system, which has been repeatedly requested by the countries concerned: this would have ensured distribution of food in the years ahead. This painful lesson should lead U.S. aid officials to seek a new policy of anticipating food shortages, and planning ahead, in cooperation with international agencies, to provide the tools with which the countries themselves can plan their own development without major disasters like the seven-year Sahelian drought.

Development is, in the end, cheaper than emergency relief. Should the U.S. revise its aid policy for Africa on the basis of maximum development potential, it could, as a disinterested participant in the struggle for economic self-determination in Africa, avoid the malign neglect of current short-sighted foreign aid policies.

AMSTERDAM NEWS NAMES SARA SLACK AS NEW MANAGING EDITOR

HON. CHARLES B. RANGEL

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. RANGEL. Mr. Speaker, I am pleased to report that the New York

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Amsterdam News, America's largest black weekly newspaper, has just named Sara Slack to the position of managing editor.

Sara Slack, formerly women's editor, has been with the newspaper for 17 years.

The Amsterdam News has earned a reputation for hard-hitting editorials, investigative reporting in the areas of narcotics, crime and community development, and excellent coverage of local events. The promotion of Ms. Slack to the post of managing editor is another sign of this newspaper's continued commitment to excellence.

FIRST AID OF TRANSIT

HON. ANDREW YOUNG

OF GEORGIA

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. YOUNG of Georgia. Mr. Speaker, one of the most pressing issues facing the future life of the Nation's cities is one of mass transit. If our centers of urban growth are to survive, it is imperative that we take sound and rational approaches to the movement of citizens in these metropolitan centers.

The citizens of Atlanta, Ga., have for some time now made a commitment to plan and design a system of balanced transportation for its metropolitan community. Mr. Stephen Goldfarb, an instructor at the Atlanta University Center has written an informative digest of the effects of that work in Atlanta for the October 22, 1973, issue of the Nation magazine.

I commend it to my colleagues for their reading:

GETTING AROUND IN ATLANTA

(By Stephen Goldfarb)

ATLANTA.—It has been evident for a number of years that only drastic measures will revive mass transit in American cities. From 1950 to 1972 the number of revenue passengers carried by the country's urban systems dropped from 13.8 billion to 5.3 billion per year. Unlike automobile travel, which receives hefty subsidies from all levels of government, transit systems are for the most part expected to pay their own way. With only the fare box to depend on, they have fallen into a downward spiral of higher fares and poorer service and fewer riders. In an attempt to break even, some transit systems have stopped Sunday and holiday services altogether, and have severely reduced service at night. Since 1954, 260 transit systems have gone out of business.

A possible solution for this nearly desperate situation is suggested by the recent experience of Atlanta, Ga. Beginning on March 1, 1972, the bus fare in Atlanta was reduced from 40¢ with 5¢ zone and transfer charges to a flat 15¢ with free transfer. This decrease in fare generated a new patronage of 14 per cent in the first month, and 27 per cent a year later. Not all of the increase can be attributed to the fare reduction, for there has also been a substantial increase in the services offered. In addition to fourteen new bus lines and extensions on sixteen others, there have been ninety-one improvements of scheduling and eighteen route revisions. These changes have increased the number of annual vehicle miles by more than 30 per cent and required seventy-one additional busses.

This remarkable improvement in transit service was made possible by the creation of

the Metropolitan Atlanta Rapid Transit Authority (MARTA) by the Georgia legislature in 1965 and the voting on a referendum in 1971 that increased the Georgia sales tax in Fulton and DeKalb Counties from 3 to 4 per cent. Two other counties in the Atlanta metropolitan area voted down the larger sales tax, and are excluded from both expanded service and the reduced fare, but the counties which did approve the increase comprise about two-thirds of the population of the metropolitan area, enough to put a slightly modified MARTA plan into operation.

The long-range goal of MARTA is the construction of 50 miles of rapid rail transit (Atlanta has none at present) and 14 miles of special connecting busways which, with future improvements in bus service, should put most people in the two participating counties close to some kind of mass transit. Of more immediate interest, however, is the fact that MARTA has been able to reverse the downward trend in ridership which has plagued most transit systems in this country. So far, the 12 per cent increase in ridership during the two daily rush hours has not made a dent in the massive automobile congestion, but optimists point out that the twice-daily traffic jam has not gotten any worse since the fare was reduced.

The 1 per cent additional sales tax is used in part to offset the deficit incurred by increased service and reduced fare, which has grown steadily from about half a million dollars in the first month to more than \$1 million a month a year later. Figures for July 1973, the latest month for which they are available, show that the total cost of transit operations was \$1,845,000, of which \$760,000 came from fares and \$1,085,000 from the sales tax. The 1 per cent sales tax, however, raised almost \$4 million in the same month. The remaining income has thus far gone to pay MARTA's third of the purchase of the old Atlanta Transit System and for 125 new air-conditioned busses (another 365 are on order), with the Urban Mass Transit System paying the other two-thirds. The capital cost of the projected rail-busway system is so great—now estimated at more than \$1.3 billion—that even with the federal government paying 80 per cent (its new matching figure), MARTA will have to issue bonds for its share.

As it now seems certain that there will be no federal funds available for the operating expenses of mass transit, a sales tax is perhaps the country's only practical recourse in the present urban transportation crisis. Neither state legislatures, dominated as they usually are by rural constituencies and highway interests, nor the financially troubled cities can be looked to as possible sources of operating funds. Although a few American cities and counties now provide some operating subsidies for mass transit from various tax sources, most of these subsidies are on a year-to-year basis and subject to stiff competition from other vital community needs. The Missouri legislature has in recent weeks levied a sales tax to bail out the near-bankrupt Bi-State Transit System in St. Louis.

It appears from Atlanta's experience of the last year that any metropolitan county in the United States, by levying a 0.5 per cent sales tax on itself, could generate enough income not only to reduce the mass transit fare to, say, 25¢, but also to improve the service substantially. Unlike Atlanta, most large cities already own their transit systems and many have some rapid rail service. With a new source of income, not tied to the whims of either city, state or national governments, a transit system could attract new riders in impressive numbers. That it makes good sense to do so is obvious from a glance at the urban transportation problems that prevail. On a passenger-mile basis, mass transit uses only a fraction of the fuel and creates only a fraction of the pollution that the automobile does. A new air-conditioned, diesel-powered bus carries from twenty to

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forty times as many passengers during rush hours as does the average automobile, and uses only three times as much fuel. Moreover, a properly tuned diesel engine emits far less pollution than does a gasoline-powered automobile. A beefed-up transit system also takes the steam out of plans for new highways and the widening of streets. The recent defeat of the Stone Mountain Tollway in Atlanta, for instance, was due in part to a rail transit line which is slated to be built near the right-of-way of the proposed highway.

The most obvious criticism of the approach to mass transit is the regressive nature of the sales tax. However, given the loophole-infested federal income tax, a sales tax that excludes food and prescription drugs, which is the case in many states though not in Georgia, may not be as bad as once thought. For a family with a near-poverty take-home income of \$5,000, the additional annual tax would be less than \$15. If just one member of this family used mass transit to commute to work and the fare dropped from 40¢ to 25¢, the annual savings would be \$60 (30¢ times 200 workdays).

For the middle-income family with a take-home pay of \$10,000, a good mass transit system can make the difference between owning one car or two, if one of the members can commute by bus. The annual tax burden on this family created by the 0.5 per cent increment in the sales tax would be between \$25 and \$35, a sum that would not even pay the insurance on a second automobile. Those whose incomes are large enough for the cost of transportation not to be a consideration would ultimately benefit from fewer cars on the streets and freeways and the resulting reduction in pollution.

At present, MARTA is trying to attract the more affluent away from their automobiles. Many of the new lines extend to suburban areas which previously had no transit service. (Due to the creation of two new lines, it is now possible to ride 57 miles for 15¢, changing busses once with a free transfer—which must be the best bargain around these days.) The recently purchased air-conditioned buses, adorned with MARTA's logo of three brightly colored stripes, have given the transit system a certain flair, though the ridership remains overwhelmingly lower income. Whether the middle- or upper-income groups can be attracted away from their cars remains to be seen, but they are, through their payment of the sales tax, making a contribution to mass transit in Atlanta whether they ride on it or not.

CAN MR. NIXON GOVERN?

HON. CHARLES B. RANGEL

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. RANGEL. Mr. Speaker, for the last 6 months the Nation has been in the midst of a constitutional crisis brought on by President Nixon's refusal to give up the Watergate tapes. In the end, after the Nation responded with a flood of mail and telegrams never before experienced, he released the tapes. Does Mr. Nixon thrive on confrontation and crisis for its own sake? Is there the possibility, ever more apparent with each new shock, now that we are told that the tapes never existed in the first place, that Mr. Nixon is really unable any longer to govern because of his loss of credibility?

A column by Joseph Kraft appeared in the Washington Post October 5, 1973 ad-

dressed these questions and presents an answer for our Government's current paralysis.

CAN MR. NIXON GOVERN?

(By Joseph Kraft)

By turning the White House tapes over to Judge John Sirica, President Nixon has brought himself—and the country—a breathing spell. The congressional and judicial pressures against his authority are now slightly eased.

But whether he can continue to govern abides as a question. Everybody will still want to think seriously about the possibility of using the present circumstance to organize the retirement of Mr. Nixon in favor of a person capable of giving the country more dependable and steady leadership.

To be sure, the turning over of the tapes is a great relief. It proves that the combination of pressure from the public, the Congress and the courts can force even the most powerful and resolute official to back down.

It also shows that the country is not beyond shocking. There are developments—and the firing of Special Watergate Prosecutor Archibald Cox is one of them—so repugnant that they set in motion a tidal wave of opposition. The taste for freedom and the bias toward constitutional government are not dead in this country. We have proved worthy of the founders.

Still the tapes comprise only a narrow part of Mr. Nixon's troubles. Few knowledgeable people believe that they can resolve anything in an unambiguous way. Many savvy persons felt that all along the President was using them as a device to foil investigation of other more important matters.

So there remain some immediate problems associated with the Watergate investigation. The most pressing by far is the need for an independent prosecutor. Mr. Cox was clearly on the trail of highly explosive material pointing toward criminal action by the President himself, his friend Charles Rebozo and several of his closest political associates.

The Justice Department, which is under the President's orders, cannot possibly conduct an investigation that inspires public confidence. It is surprising that Assistant Atty. Gen. Henry Petersen, who is now in charge of the case, could, of all people, imagine otherwise. For Mr. Petersen is himself a witness in the case and is particularly sensitive to the problem of conflict of interest. There is simply no substitute for an independent prosecutor—preferably Mr. Cox himself. So the incipient moves in the Senate to establish that office will surely go forward.

More important, there is the question of Mr. Nixon's general standing in the country. The effort to stamp out Mr. Cox shows that the President and his praetorian cohorts under Gen. Alexander Haig have lost touch with public opinion.

In the first two days after the Cox firing, Western Union reported some 72,000 telegrams to the White House. The majority was apparently running heavily against Mr. Nixon. While there is no breakdown from the White House, the flow to House Speaker Carl Albert is suggestive. Of the first 156 wires that came to his office, all called for ouster of the President.

Mr. Nixon was not even in touch with the thinking of his own party. Hours before the President decided to turn over the tapes, Bryce Harlow of the White House staff met with the Republican Caucus in the House of Representatives. Hardly any members were prepared to stand up for the President. The one resolution offered called on the President to rescind the order firing Mr. Cox and to comply with the orders of the court.

Partly because he was out of touch with opinion. Mr. Nixon for the last six months has been leading the country at a dizzying pace over a staggering course of crazy developments. Time and time again he has been

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driven to the brink of crisis. Our standing in the world has been diminished as a result, along with respect for authority in this country. And for what?

Not certainly because of the tapes. That issue could have been settled months ago. The hard issue, the issue that will not drown is the apparent involvement of the President and his closest associates in the various scandals with Watergate. Either Mr. Nixon has something to hide, or he likes confrontation and crisis for its own sake.

In any case, there is now no rapport between the President and moderate opinion in the country. Mr. Nixon can only stumble for the next three years. So it would be a blessing for all of us if a way could be found—perhaps through the continuing vacancy in the Vice Presidency—to drive a bargain whereby Mr. Nixon withdrew to make room for some other leader.

REPLY TO THE PRESIDENT'S VETO
MESSAGE ON THE WAR POWERS
RESOLUTION

HON. CLEMENT J. ZABLOCKI

OF WISCONSIN

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. ZABLOCKI. Mr. Speaker, the President's veto message of the war powers resolution (H.J. Res. 542) made several unfounded assertions resulting in serious questions and some confusion.

As you well know, Mr. Speaker, the war powers resolution is first and foremost an effort to reaffirm the prerogatives of Congress—of restoring the balance intended by the Founding Fathers in the awesome decision to send our sons to war. We submit that the war powers resolution does that responsibly and legally.

Chairman MORGAN and I have prepared a reply to the misleading and unfounded assertions in the President's veto message. The memorandum was sent to our colleagues for their careful review and consideration.

In view of the wide interest in this legislation, I include the reply to the President's veto message on the war powers resolution at this point:

REPLY TO THE PRESIDENT'S VETO MESSAGE ON
THE WAR POWERS RESOLUTION

In the President's veto message on House Joint Resolution 542, the War Powers Resolution, a number of assertions are made about the legislation which require reply. This statement is intended to answer criticisms made in the October 24, 1973, message and to provide an accurate description of the purpose and effect of the War Powers Resolution.

VETO ASSERTION. The Founding Fathers, acknowledged the need for "flexibility" in meeting national security contingencies, through close cooperation of the Congress and President. The War Powers Resolution violates those principles.

REPLY. "Flexibility" has become a euphemism for Presidential dominance of war powers. The Founding Fathers decreed that only Congress could commit the nation to war and that the President, as commander-in-chief, was to be first among the generals and admirals. In recent years Presidents have in practice illegally arrogated to themselves more and more authority. Congress therefore believes it necessary to pass war powers leg-

islation which establishes a procedure for the close cooperation of the two branches consistent with the Constitution.

VETO ASSERTION. House Joint Resolution 542 "I believe is unconstitutional" because it would "take away . . . authorities which the President has properly exercised under the Constitution for almost 200 years."

REPLY. Section 8(d)(1) of the measure states that the resolution is not intended "to alter the constitutional authority of the Congress or the President . . ." At the same time, under article I, section 8 of the Constitution, Congress has the power to make laws "necessary and proper" for carrying out all powers vested in the government, including those of the President. H.J. Res. 542 does not purport to affect the President's constitutional authority—only to establish a procedure for its legitimate exercise.

VETO ASSERTION. H.J. Res. 542 is unconstitutional because it provides that Congress may require the President to disengage troops from an unauthorized commitment through the passage of a concurrent resolution, an action which does not normally have the force of law.

REPLY. Many legal and Constitutional scholars have endorsed the use of a concurrent resolution as being Constitutional. It is a logical way for the Congress to pass judgment on a commitment not authorized by Congress.

The President can secure advance authorization for a commitment only if a majority of both Houses approve his request.

It makes the commitment without getting authorization in advance, the ability of a majority of both Houses to pass judgment should be maintained, not diminished.

It makes no sense to give the Congress less control over war powers simply because the President makes a commitment without first securing approval. Yet, that is the effect of the above veto message assertion. Under it, the Congress could force a President to disengage forces from hostilities outside the U.S. only by overriding his veto, which means mustering a two-thirds margin—not just a simple majority—in both Houses.

VETO ASSERTION. H.J. Res. 542 would "undermine this nation's ability to act decisively and convincingly in times of international crisis," and thereby increase the likelihood of miscalculation and war.

REPLY. The measure in no way restricts the legitimate authority of the President to respond to crises. For example, it would not have hindered the President in any way from following precisely the course he pursued in obtaining the recent Mideast cease-fire, the U.N. peace-keeping force and the new peace initiative. It simply provides that if the President commits U.S. armed forces to hostilities in a crisis, he may do so for a maximum of 60 days—and must have Congressional approval if he wishes to extend the commitment beyond that time frame. As a practical matter, miscalculation and war are less likely to occur when the Congress and President *jointly* participate in decisions of war and peace, rather than when the President acts alone.

VETO ASSERTION. If H.J. Res. 542 had been in operation, the United States could not have responded as it did during the Berlin crisis of 1961, the Cuban missile crisis of 1962, the Congo rescue operation of 1964, or the Jordanian crisis of 1970.

REPLY. The assertion is patently false; if H.J. Res. 542 had been in force, the U.S. response in those crises would not have been affected. Since neither the Berlin nor the Jordanian crises involved direct introduction of U.S. troops into hostilities, only the consultation and reporting provisions of the resolution would have applied. The Cuban crisis and Congo rescue operations did carry clear dangers of imminent hostilities, and in

those instances the termination provisions of the War Powers Resolution also would have applied. However, since both operations lasted less than one month, the President would have been acting well within the time parameters set by the legislation.

VETO ASSERTION. Peace might be delayed if a future adversary stalled serious negotiations believing that Congress would allow the 60-day period to terminate.

REPLY. In the unlikely event of such a situation, the President need only inform Congress of the adversary's strategy and it could act quickly to provide him with sufficient additional time to convince the other side to come to the conference table.

VETO ASSERTION. Existence of a deadline could lead to an escalation of hostilities in order to achieve certain objectives before 60 days.

REPLY. This argument assumes acts of irresponsibility and abuse of authority by future Presidents for which there is no model in American history. If a future Chief Executive is irresponsible or irrational in his conduct, he will be so whether or not there is a War Powers Resolution in force. Moreover, the existence of the established procedures provided for in the Resolution might well help restrain an irresponsible President from even greater excesses.

VETO ASSERTION. The resolution "would strike from the President's hand a wide range of important peacekeeping tools by eliminating his ability to exercise quiet diplomacy backed by subtle shifts in our military deployments."

REPLY. This criticism indicates a startling lack of knowledge about H.J. Res. 542. The legislation would require consultation and reporting on important military peacetime deployments, but the termination provisions in the measure would not apply. Thus, any authorities presently exercised by the President in peacetime deployments of U.S. armed forces would be unaffected by the measure.

VETO ASSERTION. H.J. Res. 542 would "cast into doubt" Presidential authority for humanitarian relief missions in conflict areas, protection of fishing boats, anti-hijacking actions and response to threats of attack.

REPLY. A careful reading of the legislation would not raise such doubts. No authorities exercised by Presidents in the situations delineated would be infringed. H.J. Res. 542 does not define specific contingencies under which the President may act. Only when he responds by sending U.S. armed forces into hostilities or situations of imminent hostilities do the termination provisions apply.

VETO ASSERTION. Section 8 of the War Powers Resolution contains a "prohibition" against fulfilling U.S. obligations under the NATO treaty.

REPLY. Section 8 contains no such "prohibition"; rather, it contains specific reference in Section 8(d)(1) that the legislation is not intended to alter "the provisions of existing treaties." Moreover, Section 8(b) specifically permits U.S. participation in joint exercises with other NATO members. The resolution concurs with the position of the Department of State that the NATO treaty and other mutual security agreements are not self-executing in their provisions but require Congressional approval for commitments of U.S. armed forces into combat made pursuant to their provisions.

VETO ASSERTION. "The bill is somewhat vague as to when the 60-day rule would apply."

REPLY. The application of the 60-day limitation refers to the physical introduction of United States Armed Forces into hostilities or situations of imminent hostilities. Once the troops have been so introduced, the President has 48 hours to provide Congress with a report on the situation. Sixty days after the report is submitted or is required to be submitted, the use of U.S. forces must

terminate unless Congress has, in the meantime, declared war or otherwise approved the commitment. Since the provisions of the resolution are triggered by a specific, tangible act by the President—i.e., introduction of troops into hostilities—there is little chance of confusion.

VETO ASSERTION. H.J. Res. 542 fails to provide for "positive Congressional action" to force the President to disengage troops which he may commit to combat. Congressional inaction could force disengagement of troops.

REPLY. If "positive Congressional action" is required to force disengagement of U.S. troops committed by the President, then it follows that "positive Congressional action" is required to introduce troops. Any other interpretation would distort the Constitutional mandate that only Congress can declare war. There can be no war unless Congress declares it; similarly there can be no commitment of U.S. forces beyond 60 days unless Congress approves it.

Without a doubt, a resolution of approval or disapproval of U.S. troops committed by the President would be introduced. The provisions of H.J. Res. 542 require an "up and down" vote on such resolutions within a 60-day period. In addition, H.J. Res. 542 contains anti-filibuster priority provisions. Finally, special provision is made for situations in which House and Senate versions differ.

When one considers the public pressures which would be on Congress to act in a crisis situation, the assertion of Congress "handcuffing" the President by "doing nothing and sitting still" is ridiculous.

FREEDOM OF CHOICE FOR VITAMIN USERS

HON. ANTONIO BORJA WON PAT

OF GUAM

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. WON PAT. Mr. Speaker, on Wednesday, I had the privilege of testifying before the House Subcommittee on Public Health and Environment in support of legislation introduced by Congressman CRAIG HOSMER, many of our colleagues and me. The measure in question would reverse the Food and Drug Administration's ill-advised regulations controlling the use of vitamins.

As one who feels he has personally benefited from the use of food supplements, I believe that it is my right to use whatever type or amount of vitamin I regard as necessary, in lieu of data proving the possibility of harm to the user.

Because this issue has generated considerable interest in many segments of our society, I request that my statement before the subcommittee be inserted in the RECORD at this time for the information of my colleagues.

STATEMENT OF ANTONIO B. WON PAT, M.C.

Mr. Chairman and members of this Subcommittee, I hereby express my support for H.R. 643, the Food Supplement Amendment of 1973 which I have cosponsored, as the key legislative measure before the Congress in opposition to the FDA regulations limiting the potency and availability of food supplements to the American people. The regulations, which represent a major setting of standards of identity for hundreds of vitamin and mineral products, may be illegal and are certainly beyond the intent of Con-

EXTENSIONS OF REMARKS

gress in any section or provision of the Federal Food, Drug and Cosmetic Act.

I view the massive FDA rulings as an overdose of bureaucratic specifics imposed upon an agency and an industry already overburdened with unmanageable regulations. Recently saddled with an apparatus in drug investigations leading to a virtual standstill in new drug entities, the FDA is apparently determined to produce a similar immobility in food supplement formulations. This invasion of privilege in common dietary practices of millions of Americans is not only an unnecessary restriction on private behavior, but also constitutes government control of human activity in an area where the benefits may be high and the risks relatively low. There are few adults today whose safety is in peril because of their use of vitamin and mineral supplements or of any of the standard health foods.

Assuming the FDA/AMA arguments for the daily requirements of nutrients are technically valid, the rulings made regarding these nutrients are unduly restrictive. Why should we put a relatively small industry, or at least the small business sector of it, through refinements in formulations that exceed scientific, medical and nutritional knowledge concerning such refinements? And why should we impose restraints on self-determination in the use of food supplements, when it is a fact that deficiencies in some vitamins and minerals exist in the diets of millions of Americans in many parts of the country? If government is not prepared to control the excessive intake of common foods which cause most of the nutritional and degenerative diseases in the country, why is it so bent on controlling nutrients which are rarely mentioned as leading causes of ill-health and mortality among our people?

The intervention of government in the food supplement market may do a great deal more harm than good. The millions of individuals who rely on vitamins, minerals and other special foods in self-treatment are generally health-oriented people whose dietary practices are only a part of the regimen they follow in preventing disease. Most of them do not smoke or drink alcoholic beverages, nor do they use tea, coffee or large amounts of refined sugars. They engage in sensible exercise and other good "preventive medicine" practices. On the whole, they represent a healthy portion of the population, thus reducing the demand for health care services on a system currently saturated with the burden of medical service demand. By removing the food supplement and dietary cornerstone of the millions of people engaged in good health beliefs, we may, by government fiat, be adding substantially to the population of indulgent Americans who frequent the office of doctors for a "quick fix" from the prescription pad. A scientifically and medically advised consumer protection agency, admittedly concerned with our drug-oriented culture, would do well to concern itself more with the safety and efficacy of such drugs as prescribed by the pharmaceutical-medical complex, and less with what kind and how often our citizens are adding supplemental vitamins to their daily diet.

I believe the rulings and compliance in the area of potent pharmacologic agents is a matter of first priority for FDA and far too important for it to be diluting these efforts by unnecessary and confusing regulations concerning health foods and food supplements. I therefore fully support H.R. 643, which would prevent the FDA from imposing standards of identity and labeling on food supplements unless demonstrated to be harmful in amounts recommended on truthfully labeled food supplement packages.

UNJUSTIFIED SMALL AUTO PRICE INCREASES

HON. CHARLES A. VANIK

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. VANIK. Mr. Speaker, in recent months I have been pointing to the vital necessity of designing gasoline efficiency into the American automobile. Recent events in the Middle East have illustrated to us how tenuous our supply of crude petroleum really is. With declining domestic production, we have become increasingly dependent on the narrow and self-serving interests of the Arab States. Seen in this light, efficient automobiles have become a fundamental issue in our own national security. Let us look at some serious facts.

THE OIL SUPPLY CRISIS

Total known reserves of crude oil in the United States—including offshore and Alaskan oil—are about 44.4 billion barrels. With our present consumption of 3.5 billion barrels a year, these reserves would be exhausted by about 1983. If demand does not stay at present levels, but instead grows at historic rates, our reserves will be gone by 1981. Admittedly, these projections follow from an overly pessimistic assumption—that we will discover no more domestic oil. But even if we include new discoveries based upon past rates, we will be pumping our last barrel of petroleum sometime before 1990.

Clearly, we will need to rely increasingly on other countries to supply our burgeoning demand. Mexico, for example, has known reserves of 5.5 billion barrels. Canada possesses 9.9 billion known barrels, and Central and South America show known reserves of 23.3 billion barrels. However, the region best in a position to supply our future needs will be the Middle East. The small countries of the Middle East are sitting on over 67 percent of the world's proven oil reserves.

The United States is not alone in its search for petroleum. In the years ahead, competition for available supplies will intensify. Western Europe and Japan are already heavily dependent on imports for their petroleum supplies. In addition, other rapidly developing countries—India and Chile are examples—will increasingly enter the world market in search of oil. As the result of these changes, the world petroleum market has already shifted from a "buyers" market to a market in which sellers hold the dominant power.

Beyond this unmistakable movement to a monopoly market in oil lies the difficult problem for the United States of massive dollar outflow from increased reliance on petroleum imports. Although estimates vary widely, it is clear that our trade deficit in oil will reach the neighborhood of \$10 billion annually by 1980 and will likely be over \$25 billion each year by 1985. The bulk of this money will end up in small countries with nar-

row, undiversified economies. This tremendous liquid balance of dollars in the hands of a few self-interested politicians presents a most grave threat to world economic stability and our own national security. Last winter, we got a brief glimpse of the havoc these dollar reserves could play in the orderly pattern of international monetary flows. By dumping their reserves on the world money markets, the leaders of the oil states can manufacture a crisis of confidence in the dollar and throw our tenuous international monetary system into turmoil.

REASONS FOR CRISIS AND THE NEED FOR CONSERVATION

This crisis, although international in scope, has its roots in our own lack of foresight in energy planning. To find a way out of this dilemma we need to buy time—time which can be spent finding ways to exploit sensibly our available domestic energy supplies: petroleum, coal, oil shale, geothermal and solar energy. We need time also to evaluate our own extravagant consumption of energy. With only 6 percent of the world's population, we consume over one-third of the world's energy. What is perhaps more significant, we waste between a quarter and a third of all the energy we consume. In short, we waste more energy in 1 year than most countries in the world actually consume each year.

These facts boil down to one inescapable conclusion: The energy joyride is over. We must begin now to cut back our inflated energy demand by discovering more efficient ways to use our energy. Cutting back on our energy waste will not only buy us time to recover from our past mistakes but also will prepare our country for the inevitable changes ahead as the world petroleum supply disappears. The now defunct Office of Emergency Preparedness estimated in a report issued 1 year ago that the Nation could conserve 7.3 million barrels of crude oil a day by 1980 through a comprehensive program of energy conservation. This represents a savings of over 40 percent of our present crude oil consumption.

THE NEED FOR MORE EFFICIENT AUTOMOBILES

The best place to initiate an effective national conservation program is the automobile. A recent study by the Department of Treasury has estimated that the automakers in Detroit can manufacture automobiles which by 1980 will realize a savings of over 2 million barrels of crude oil a day by 1980. This task can be accomplished through the application of present technology and need not result in a sacrifice of comfort, safety, or emission control. However, recent actions by Detroit have led me to conclude that the manufacturers are not, as yet, committed to achieving this goal.

Accordingly, I have introduced legislation with Senator FRANK MOSS of Utah to establish an excise tax on all new automobiles which fail to obtain a certain level of fuel economy and efficiency. The level of the tax would be determined by the fuel economy of the vehicle. This legislation is needed to create an incentive for the automakers to design efficiency into their automobiles. Without a serious sustained commitment to automobile efficiency today, the industry—as well as the American economy—is likely to suffer

from severe dislocations as our petroleum supplies dwindle.

AMERICANS WANT A SMALL, EFFICIENT AUTO

Recent news reports have detailed the shifting preferences of the American car buyer. Detroit claims to be meeting this need with the production of more smaller cars. Yet, a more complete examination of the facts illustrates that Detroit's response is more "PR" than substance.

The automakers are committed to profits. Traditionally, Detroit has maximized profits by producing large cars loaded with optional equipment. The small-car market and the export market have received only token attention by the Big Four. However, increasing shortages of petroleum will reinforce and accelerate the demand for safe, clean, and efficient automobiles. In making adjustments to meet this demand, Detroit must reappraise its design and marketing strategies.

Unfortunately, the manufacturers have thus far failed to supply the American consumer with a satisfactory selection of efficient automobiles. By following their past avenues to profits, the managers in Detroit have saddled the economy-minded car buyer with small cars which are neither safe, comfortable, nor particularly efficient. Let us look more closely at the time-tested tactics of Detroit impeding the supply of compact manufacturers from fully meeting the demands of the American market.

One. The "tradeup" strategy: Automakers are fearful of "locking in" their customers to smaller, less luxurious, and less profitable automobiles. To avoid this effect, automakers continually invite their customers to "step up to a wide track." Apart from advertising, the automakers encourage this movement from less profitable to more profitable automobiles in more subtle ways. First, they may consciously limit the appeal of their smaller models. This end is accomplished primarily by limiting the availability of optional equipment on their smaller cars. For example, according to *Business Week* magazine of March 29, 1969, when Ford first introduced the Maverick there was a decision to offer just 15 options—power steering and power brakes excluded:

A relatively spartan auto, it is hoped, won't attract the Mustang customer, who likes his cars flashy, and loaded with gadgets. But austerity is bad for profits, since optional equipment, relatively insulated from competitive price shopping, is a powerful money earner.

Second. Making optional equipment standard once an irreversible market for smaller cars developed. Because of the earning power of optional equipment, there has been an increasing emphasis on gadgets by Detroit. Hidden headlights, rear window defrosters, airfoils, all are nonessential equipment that Detroit has attempted to standardize in the design of their cars. In addition, there is an increasing tendency to "package" optional equipment. One-half of the new 1973 models came equipped with vinyl roofs at a cost of around \$125 apiece. Over 70 percent are equipped with factory-installed air-conditioning with an added cost of \$360 per car. This emphasis on optional equipment is in reality an attempt to counteract the widening trend

toward smaller, less profitable cars in the American market. As the First National City Bank has noted—

The key to successful profit performance . . . is options.

Third. Increasing the weight of established models. Another way for Detroit to increase profits is to increase the size and weight of their established model. The Environmental Protection Agency documents this trend in the Chevrolet Impala: In 1958 the car weighed 4,000 pounds; 14 years later, it had ballooned to 5,500 pounds.

Fourth. Limiting the number of small cars to dealers. Whether by conscious decision or simple mismanagement, the fact remains that Detroit is unable to supply American car buyers with enough small cars. In July, my staff and I conducted a market survey of automobile dealers in the Cleveland, Ohio, area. The results of this survey, reprinted in the RECORD of August 3, 1973, page 28362 clearly demonstrate the unavailability of small cars among the dealers sampled. Typically, fewer than 10 compacts or subcompacts were available at any one dealership. Waiting periods for these cars ranged to a month and even longer. Meanwhile, the dealer was overloaded with intermediate and full-sized models. The implication is clear: An economy-minded car buyer, unable to tolerate a 4- to 6-week waiting period, is forced to compromise on a larger automobile.

Fifth. Bulging the small car price tag. As a final outrage my staff and I have uncovered abuses by Detroit in the application of price increases recently authorized by the Cost of Living Council. Quite simply, average price increases were applied unevenly so that small cars suffered the highest increase in price, while the price tags of larger models increased only slightly. I will detail more completely this latest maneuver by Detroit.

This latest marketing strategy came to light after my staff and I studied the Cost of Living Council's ruling on price increases for 1974 models. We conducted a survey of the base prices of 1973 and 1974 models in the Cleveland area.

During the 1973 model year, the Big Four sold more cars than in any other year since the automobile was invented. Profit figures have mirrored this boom. For example, General Motors experienced profits of \$267 million for the third quarter of this year. This is over twice the profits for the same period last year. Despite this rosy profit picture, the automakers pushed for more price increases—increases that would ultimately cost the American consumer over \$1 billion.

The Cost of Living Council has the obligation of screening these applications and obtaining a diversity of viewpoints in open hearings. But instead of well organized open hearings, the CLC—through some shrewd maneuvering of its own—provided only a 1-day announcement of the meeting. With such a calculated short notice, it is not surprising that the only witness to challenge the auto industry's claims was a Ralph Nader associate.

Not unexpectedly, the auto industry based their claim for price increases on new governmental pollution and safety standards. Following this reasoning, the add-on cost for each car should have

been more-or-less similar. For this reason, the CLC authorized an average increase of \$74 for GM, \$74 for Ford, while Chrysler and American Motors both received a bit less.

But my market survey shows that the automakers took advantage of the CLC ruling—and exploited the key word "average"—to increase inordinately the price of their smaller cars. As the table below illustrates, the burden of the increase fell on that segment of the market that has shown the liveliest growth—the market for smaller more efficient and cheaper cars. For example, while the Chevrolet Vega increased \$281.90, the price of an Impala increased by only \$50.90. With these results, I am left to one conclusion: Detroit has manipulated the CLC ruling to bolster their profits in the small car market. In fact, their motivation for initially seeking the increase was false and misleading. I have written a letter to CLC Director John Dunlop requesting his staff to investigate this wanton violation of the intent of his agency's ruling.

The automakers have a moral responsibility to prepare the American people for the inevitable changes ahead. As a nation we can no longer afford the luxury of inefficient, overpowered automobiles. The move toward smaller cars—much heralded by Detroit as evidence of their good faith in meeting our Nation's transportation and energy needs—is an illusion. Detroit's present tactic of gouging the economy-minded auto buyer—by inflating small car prices, limiting their availability, and dampening their appeal—reveals a shallow commitment by the automakers to the genuine needs of the American people.

There is going to be no easy path out of our energy dilemma. Shortages will occur this winter and again next summer. Detroit, however, has the capability of providing the Nation with answers for the future. This is a challenge unparalleled in the history of American industry. To insure that Detroit considers and meets this challenge, the Vanik-Moss bill, which is cosponsored by 39 of my colleagues in the House, will create a profit incentive for efficiency.

Using existing technology, Detroit can manufacture automobiles which have all the qualities of comfort, safety, and efficiency. Up until now, however, there has been little incentive for the automakers to maximize the operating efficiency of their product. A graduated excise tax, as I have proposed, will insure that the transitions that must be made will be accomplished with a minimum of disruption to the industry, the workers, and the American economy as a whole.

The table follows:

LIST PRICES OF 1973 AND 1974 CARS

	1973	1974	In- creases
General Motors:			
Chevrolet:			
Vega	\$2,060.00	\$2,341.90	\$281.90
Vega wagon	2,285.00	2,472.90	187.00
Impala	3,726.00	3,776.90	50.90
Impala wagon	4,171.00	4,190.40	19.50
Oldsmobile:			
Omega 2D	2,664.70	2,814.70	150.00
Omega 4D	2,692.70	2,842.70	150.00
Delta 88 2D	4,177.05	4,189.05	12.00
Delta 88 4D	4,238.00	4,250.05	12.00
Ford Motor Co.:			
Pinto	2,021.00	2,292.00	271.00
Pinto wagon	2,343.00	2,543.00	200.00
Maverick	2,248.00	2,441.00	193.00
LTD	4,001.00	4,083.00	82.00
LTD wagon	4,515.00	4,615.00	100.00
American motors:			
Gremlin	2,161.00	2,222.00	61.00
Hornet 2D	2,363.00	2,423.00	60.00
Hornet 4D	2,407.00	2,463.00	56.00
Hornet wagon	2,740.00	2,764.00	24.00
Matador 2D	2,996.00	2,996.00	0
Matador 4D	3,017.00	3,061.00	44.00
Matador Brougham	3,060.00	3,214.00	154.00
Chrysler-Plymouth:			
Dodge:			
Dart 2D	2,467.00	2,597.00	130.00
Polaris 2D	4,317.00	4,495.00	178.00
Plymouth:			
Valiant 2D	2,499.00	2,673.00	174.00
Valiant Duster	2,428.00	2,563.00	135.00
Fury II 2D	3,747.00	3,792.00	45.00

BASE PRICE FOR IMPORTS

Fiat: 128 2D sedan	\$2,343.00	(1)	(2)
Datsun: 610 2D sedan	3,200.00	3,200.00	0
Toyota: Corolla S1200	2,044.00	2,145.00	\$101.00
Mazda: Rx3	3,295.00	(1)	(2)

¹ Not available until January 1974.
² Dealers feel a \$100 to \$300 increase.
³ Dealers feel a \$25 to \$30 increase.

EMERGENCY MEDICAL SYSTEM USES NASA TECHNOLOGY

HON. OLIN E. TEAGUE

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

Thursday, November 1, 1973

Mr. TEAGUE of Texas. Mr. Speaker, combining space developed technology with down-to-earth needs continues to be an important contribution of our national space effort. A recent NASA press release describes an emergency medical unit now in use in Houston, Tex., which is helping to save lives through aerospace technology. I am including this NASA press release to alert my colleagues and the general public to the possibility of utilizing this technology throughout the United States:

NEW EMERGENCY MEDICAL SYSTEM USES NASA TECHNOLOGY

A compact, 18-kilogram (40-pound) medical unit containing essential equipment to help meet a victim's diagnostic and therapeutic

needs at the scene of an emergency—including two-way voice and telemetry communications—has been developed by SCI Systems, Inc., Houston, based in part on technology derived from NASA's manned space flight program.

Called Telecare, the ambulance-stored unit permits trained emergency medical technicians to administer prompt, professional care under radio supervision of a physician who may be miles away in a hospital emergency room or even in his office.

It is during the first critical minutes after arrival of a rescue squad at the scene of an emergency that quick, accurate diagnosis and therapy prescribed by a physician can be instrumental in saving a patient's life—particularly cases involving heart attacks, shock or drowning.

The overall concept of the system brings together six major elements to cope with medical emergencies: trained personnel, diagnostic and therapeutic equipment for use in the field, communications, vehicles, physicians and hospital facilities.

The Telecare unit is a key component of the total system. Despite its suitcase-size it contains the following equipment—brought together for the first time in a single portable package:

A respiratory resuscitation system.

A 15-minute oxygen supply contained in a lightweight canister developed from space technology.

An electrocardiogram display and telemeter system.

A defibrillator for external heart stimulation.

A semi-automatic indirect blood pressure measurement system using a special microphone placed beneath a hand-inflated cuff, similar to the blood pressure device used in the Skylab program.

A basic pharmaceutical pack.

Optional equipment can include an electroencephalogram, to permit remote observation and detection of brain waves stemming from technology first devised for the Skylab sleep analyzer, and a strip chart recorder and tape recorders.

The unique communications system permits full duplex communication between the physician and the emergency medical technician, including a backup system using telephone circuits. In addition, electrocardiogram data on a patient's condition and voice transmissions can be sent simultaneously to the base station over a single radio frequency by the multiplexing process. This permits continuous transmission of medical data as well as two-way voice communication without the use of switches.

Comprehensive field tests of the Telecare system were successfully conducted earlier this year by SCI Systems, Inc., under direction of the Harris County Medical Society in Houston.

As a result, the City of Houston is equipping 28 rescue vehicles with Telecare units and training technicians in their operation. The system is expected to be in operation before the end of the year.

Cities throughout the country are currently evaluating Telecare for possible incorporation in their own emergency medical services programs.

HOUSE OF REPRESENTATIVES—Monday, November 5, 1973

The House met at 12 o'clock noon.

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

Let the peace of God rule in your hearts, and be ye thankful.—Colossians 3:15.

Eternal God, our Father, whose crea-

tive spirit is ever calling us to new frontiers of thought and action, we pause in Thy presence as we greet the coming of another day. For the daily task and challenge, may we rise renewed in Thee; in the heat and stress of duty may our souls find strength in Thee. With a

greatness of spirit, a genuineness of motive, and a goodness of life may we make ourselves ready for the responsibilities of these hours.

Kindle in our hearts and in the hearts of all people a real love for peace and may the rule of Thy spirit increase in