of encouraging students to pursue careers in nuclear-related fields. The DOE provides such support to ensure that an adequate supply of highly qualified, well-trained scientific and technical professionals are available to meet current and future research and development needs.

The DOE will solicit applications from nonprofit and not-for-profit organizations with university associations that are experienced in academic interactions and relationships. The applying organizations should have some knowledge and familiarity with the Department's nuclear engineering research and development interests and the historical relationship with the universities involved in nuclear science and engineering education. The successful applicant will be expected to: (1) Provide information and application material to all qualified individuals; (2) receive, review and evaluate candidate applications; (3) arrange for practicum work and study opportunities at selected laboratory facilities; (4) provide approved payments to students and universities; (5) hold periodic reviews of fellows' progress with advisors and university coordinators; (6) prepare and review program budgets; (7) prepare annual reports; and (8) provide program and manpower information to the public, to appropriate congressional offices and other interested parties.

We anticipate that the proposed financial assistance award will be a five-year effort. The estimated cost for the five year period is anticipated to be $4,000,000. One agreement will be awarded with five (5) one-year budget periods estimated to start on or about June 1, 1998. The successful recipient will advertise, evaluate and award DOE fellowships under the Nuclear Engineering/Health Physics Fellowship & Scholarship Program.

Complete solicitation packages will be available from DOE, hicago Operations Office as mentioned above. The complete solicitation package with information on application preparation, evaluation procedures and criteria, the extent of Government participation in the Cooperative Agreement to be awarded, and other required data will be available upon request during the time the Solicitation is open. All eligible sources may submit an application which will be considered. Applications must be submitted to the DOE-Chicago Operations Office no later than December 4, 1997.

Issued in Chicago, Illinois on October 15, 1997.

J.D. Greenwood,

Acquisition and Assistance, Group Manager.

[FR Doc. 97–28400 Filed 10–24–97; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Docket No. EE–NOA–97–506]

Proposed Technical and Policy Analysis on Replacement Fuels and Alternative Fuel Vehicles

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy (DOE).

ACTION: Notice of availability and request for comments.

SUMMARY: The Department of Energy is today publishing this notice of availability of a proposed analysis, as required by section 506 of the Energy Policy Act of 1992, on issues relating to replacement fuels and alternative fuel vehicles. The Department is requesting public comment on the proposed analysis prior to submission of the final report to the President and Congress. A short summary of the proposed analysis is included in this notice.

DATES: Written comments (5 copies) must be received by the Department by January 26, 1998.

ADDRESSES: Copies of the proposed Technical and Policy Analysis (which is approximately 75 pages long, single-spaced) may be obtained from the National Alternative Fuels Hotline, 9300 Lee Highway, Fairfax, Va. 22031–1207, (800) 423–1DOE, or electronically from the Office of Energy Efficiency and Renewable Energy's Transportation Technologies website at: http://www.ott.doe.gov, under the Rules and Legislation section (http://www.ott.doe.gov/office.rules.html).

Written comments (5 copies) are to be submitted to the U.S. Department of Energy, Office of Transportation Technologies, EE–34, Docket No. EE–NOA–97–506, 1000 Independence, Avenue S.W., Washington, D.C. 20585, telephone (202) 586–3012.

Commenters are requested to provide a supplemental electronic copy of comments (1 copy), if possible, to facilitate the posting of comments on the Department's website. These optional electronic versions of comments should be stored in common text or word processor formats, and saved on a pc-compatible 3.5'' diskette and mailed to the address above; or emailed directly to afv-deployment @hq.doe.gov. Electronic versions are considered supplemental only—the Department is not able at this time to guarantee the inclusion in the docket of comments provided only in electronic format.

FOR FURTHER INFORMATION CONTACT: Mr. Paul McArdle, Program Manager, Office of Energy Efficiency and Renewable Energy (EE–34), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, DC 20585, email: afv-deployment@hq.doe.gov, or phone (202) 586–9171.

SUPPLEMENTARY INFORMATION:

I. Purpose
II. Summary of Findings of Technical and Policy Analysis
III. Availability of Proposed Technical and Policy Analysis
IV. Public Comment Procedures

I. Purpose

Section 506(c) requires DOE to seek and consider public comments on the draft Technical and Policy Analysis on issues relating to replacement fuels and alternative fuel vehicles prior to its final transmission to the President and Congress. DOE may revise the Analysis prior to such final submission in light of comments received. DOE is also required by section 506(c) to preserve all comments received on the Analysis for use in required rulemaking proceedings under section 507, including rulemaking to consider alternative fuel vehicle acquisition requirements for private and municipal fleets. In addition, DOE is in the process of devising a Replacement Fuel Supply and Demand Program under section 502. Comments received on the proposed Technical and Policy Analysis could be very useful in designing this program.

II. Summary of Findings of Technical and Policy Analysis

Energy Security Concerns

The geopolitical context surrounding energy security has changed enormously since the oil shocks of the 1970s, with the end of the Cold War, the Organization of Petroleum Exporting Countries (OPEC) in disarray, and the cementing of U.S. security ties to the most important oil exporting nations. Unfortunately, these developments have engendered a complacency on the part of the American public not unlike that which preceded previous oil shocks. Historically, periods of low prices have been followed by steep price spikes, a pattern that could well be repeated in coming years.

In contrast to the current geo-strategic environment, economic realities and trends seem to be recreating many of the preconditions for a potential oil shock in the U.S. sometime in the future. Economic growth in the Pacific rim is giving rise to a growth in world oil demand which could well lead to a short-supply situation within the next five to ten years. The world's oil resources are as concentrated as ever in the OPEC nations, notably in the Persian Gulf. DOE's Energy Information Agency (EIA) projects that by 2010, OPEC's market share is likely to reach the levels of the 1970s, as its share of world exports grows from 41 percent in 1993 to 53 percent in 2010.

The costs to the U.S. economy from a future oil price shock could be enormous. Based on analyses of previous oil shocks, a number of recent studies have estimated the macroeconomic impacts as reducing U.S. economic activity by an average of over 2 percent per year for three to four years or more, which translates into GNP reductions in the range of six hundred billion dollars over three years, up to possibly $3 trillion over fifteen years if the lost economic growth were not subsequently made up.

Unlike other energy using sectors, which have introduced substitute fuels and fuel switching flexibility since the oil shocks of the 70s and 80s, the transportation sector remains overwhelmingly dependent on petroleum based fuels (approximately 97.5 percent of transportation energy coming from petroleum) and on technologies that provide virtually no flexibility. The transportation sector currently accounts for approximately two-thirds of all U.S. petroleum use and roughly one-fourth of total U.S. energy consumption.

Substitution of petroleum-based transportation fuels (gasoline and diesel) by non-petroleum-based fuels (''replacement fuels,'' including alternative fuels such as electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas) could be a key means of reducing the vulnerability of the U.S. transportation sector to disruptions of petroleum supply. Centrally-fueled fleets are probably critical to the transportation sector's transition to alternative fuels and vehicles. Early introduction of alternative fuels in these fleets is more feasible since they generally refuel at a central facility and operate within a fuel tank's driving range of that central facility. Accordingly, fleets feature prominently in Title V of EPACT, which aims to displace substantial amounts of petroleum based motor fuel with alternative fuels.

Since EPACT was enacted in 1992, transportation petroleum consumption has risen from 10.3 million barrels per day to 10.7 million barrels per day in 1994. EIA projects this consumption to rise to 14.0 million barrels per day by 2010. U.S. dependence on imported petroleum has also grown since EPACT enactment. In 1992, 41 percent of total U.S. petroleum consumption was derived from foreign sources. By 1994, imports had increased to 45 percent. EIA projects U.S. petroleum import dependence to reach approximately 54 percent of consumption by 2000 and 57 percent of petroleum consumption by 2005.

In that dependence of U.S. autos and trucks on imported oil was one of the major driving forces behind Congressional passage of EPACT, the imperatives are even stronger now than at the time of passage.

Progress Toward Achieving the Goals Described in Sec. 502(b)(2)

Section 502(b)(2) of EPACT suggests tentative goals of displacing 10 percent of transportation fuel with replacement fuels by the year 2000 and displacing 30 percent by the year 2010. DOE is making steady progress in carrying out the provisions of EPACT Title V and related programs, which should yield measurable results in alternative fuel and AFV usage in the future. DOE supports and coordinates the Federal Fleet Program for acquisition of alternative fuel vehicles (AFVs), which had put over 25,000 AFVs into the federal fleet by the end of fiscal year 1996. DOE's Clean Cities Program promotes voluntary commitments and coordinated action by the key groups within participating city regions for installation of alternative fuel infrastructure and acquisition of vehicles. As of August 1997, 54 cities and over a thousand stakeholder organizations were participating. DOE is also carrying out the rulemaking and analytical activities prescribed by EPACT Title V, including its assessment of the technical and economic feasibility of reaching the 10 percent and 30 percent goals. The Research, Development and Demonstration program has been instrumental in fostering technology development in its two spheres, Advanced Vehicle Propulsion Technologies and Alternative Fuels Research and Demonstration. The latter is now turning its focus to alternative fuels infrastructure technology. DOE is also involved with the Environmental Protection Agency (EPA) in Clean Air Act programs that promote use of advanced technology vehicles, including alternative fuel vehicles, for use in ozone non-attainment areas. Many of the programs authorized by EPACT have not been in place long enough to allow a credible assessment of program impacts. The statutory requirement for this Technical and Policy Analysis actually precedes the start of implementation for some of the EPACT programs.

Actual and Potential Role of Replacement Fuels and AFVs in Reducing Oil Imports

While DOE modeling suggests that the potential use of replacement fuels in the U.S. is very high, by 1996 the transportation sector has barely scratched the surface of this potential. The actual use of replacement fuels in 1996 in the U.S. is estimated by EIA to be about 4.6 billion gallons gasoline equivalent (or 3.1 percent of total highway transportation fuel). Of this, 4.2 billion equivalent gallons was oxygenates blended into gasoline (2.9 percent of highway fuel) and 323 million equivalent gallons was alternative fuel use by AFVs (0.2 percent of highway fuel). The preliminary partial results of DOE's study of the feasibility of reaching the goals suggested by sec. 502(b) indicate that the potential use of replacement fuels sustainable by the market could be as high as 30 to 38 percent in 2010 under various scenarios and could ultimately be nearly double that.

In order to reach such levels of alternative fuel use, however, major transitional impediments would have to be overcome, including changes in relative fuel/vehicle prices to consumers. For example, the EPACT suggested goals of displacing 10 percent of transportation fuels in the year 2000 and 30 percent in the year 2010 would require that AFV sales—

- Grow to between 35 and 40 percent of total new light-duty vehicle sales by 1999 to meet the 2000 goal; and
- Stay in the range of 30 to 38 percent to build an AFV population sufficiently large to meet the 2010 goal.

Even to meet a 30 percent goal for year 2020, AFV growth would have to—

- Double every year between 1995 and 2000, going from approximately 30,000 to 500,000 sales per year;
- Increase by 50 percent per year to 4,000,000 in the period from 2001 through 2005; and
- Remain at a constant 32 percent of total light-duty vehicle (LDV) sales in the period of 2005 through 2010.

Under this scenario, the AFV population in 2020 (ten years later than

the EPACT 30 percent goal) would be large enough so that 30 percent of LDV motor fuel would be replacement fuel (alternative fuels plus oxygenates used in conventional vehicle fuel). This alternative scenario is believed to be more representative of new vehicle technology market introduction generally, than the growth paths necessary to meet the unmodified EPACT goals but would still be enormously ambitious.

Analysis indicates that currently authorized Federal, state and local AFV programs could displace approximately 220,000 barrels per day of motor fuel or roughly 3 percent of the LDV transportation fuel use projected by EIA for 2010, while replacement fuels in the form of oxygenates could contribute an additional 4.8–6.7 percent of LDV motor fuel during this period. The gap between these volumes and those necessary to reach or approach the EPACT sec. 502(b)(2)(B) goal of 30 percent fuel displacement by 2010 would have to be met by AFV use by motorists not covered by these programs, that is, largely by the general public.

Examination of international policy experience shows EPACT fleet programs to be a unique approach. Nonetheless, experience of other countries' programs does provide the following lessons:

- Spillover into voluntary use of alternative fuels and AFVs in non-mandated sectors is likely to be determined by the relative economic costs and benefits during each stage of the transition, including (at least for dedicated AFVs) some differential to compensate for future uncertainty and for the operational disadvantages of dedicated AFVs.
- Merely putting in place novel and limited infrastructure networks is likely to be insufficient in generating high levels of spillover to non-mandated motorists, even in conjunction with cognizance of societal benefits and potential future widespread availability.

Applying these lessons to the U.S. environment suggests that changes in the overall economics, access and convenience factors (or the perception of such imminent changes) will be necessary preconditions for AFV penetration in the general public. Such changes could occur in various ways, including policy induced changes, cyclical price swings or market disruptions.

Experience of other countries also suggests that the political will to support alternative fuel programs is greatest when oil prices are at peak levels. When incentives are most critical to sustaining alternative fuel momentum, at the low end of the oil price cycle, governments have often been least committed.

Actual and Potential Availability of Replacement Fuels and AFVs

Alternative fuel vehicle technologies are available for the principal alternative fuels believed most likely to play major parts in any transition to substantial alternative fuel use. Alcohol, liquefied petroleum gas (LPG), and natural gas vehicle technologies are sufficiently developed for such vehicles to be introduced into the market on large scales. Electric vehicle technology per se is also close to market-ready, but battery cost and range probably limit penetration to select market niches for the next five to ten years. Hybrid electric, fuel cell and hydrogen vehicle technologies are in various stages of development and could play significant roles in the future.

A number of types of vehicles are currently available for purchase from original equipment manufacturers (OEMs) by the public and fleets, but not the whole range of vehicles for each of the alternative fuels.

- Passenger cars are available for use with 85 percent alcohol/15 percent gasoline mixtures or any mixtures down to straight gasoline, at the same price as the same conventional model.
- A minivan will soon be available for 85 percent ethanol use.
- Pick-up trucks, vans and mini-vans are available from OEMs for CNG use. A full sized sedan is available for dedicated CNG operation and others may follow. Costs for dedicated CNG vehicles are generally $3000–$5000 more than conventional models.
- CNG vehicles (bi-fuel and dedicated) may also be obtained by conversions of conventional vehicles by many small conversion firms.
- Electric vehicles are now available, mostly sub-compact and small pickup models.

Although alternative fuel refueling sites have been proliferating in recent years, none of the alternative fuels are currently available at retail for vehicle refueling in adequate networks to support widespread use. Adequate refueling sites could be available as a transition proceeds but would involve additional capital costs.

All of the major alternative fuels are available at national and regional levels in volumes sufficient for transportation use at levels significantly greater than the current levels. While this available supply includes both domestic production and imports, domestic supply will be adequate to serve AFV needs for coming years. If alternative fuel use were to approach the levels suggested by the EPACT 30 percent goal, market pressures could change the split between domestic and import supply. Natural gas, ethanol and electricity have the greatest potential for domestic production to meet large-scale transportation use. LPG and methanol could be available in adequate quantities either domestically or internationally.

Key Issues and Perspectives

While available evidence indicates that substantial spillover from EPACT Title V programs into household AFV acquisitions is unlikely in the absence of some economic incentive to households to make the shift, such incentive might occur in any one of a number of ways. It would not necessarily have to represent a government incentive program.

An oil price rise could well cause dramatic changes in relative prices between gasoline and a number of alternative fuels, resulting in natural fuel-switching if the conditions enabling motorists to switch fuels are in place. Comparative historical movements in relative prices for alternative fuels and their feedstocks show clear divergences in price movements from crude oil and gasoline, particularly for electricity, ethanol and methanol. There is probably no way of reliably assessing the impact of a future oil price rise on the effectiveness of EPACT programs until such an event occurs. On the other hand, it does appear possible to infer from prior experience that a price spike is unlikely to result in major fuel switching in the transportation sector in the absence of certain preconditions relating to the availability of AFVs and alternative fuel infrastructure, which EPACT Title V begins to address. It should be noted that most of the fuel switching in Brazil and the Netherlands, the two countries where AFV programs have been most effective, occurred after an oil shock which had been preceded by more modest programs promoting the alternative fuel to which the country partly switched after the shock.

EPACT also provides incentives to restrain rising oil demand before it leads to a run-up in oil prices of the nature of those discussed above. EPACT programs could also reduce the likelihood or magnitude of a future oil shock in another way. One potential benefit of developing a fuel switching capability is the potential to alter the behavior of primary fuel suppliers. If viable competing fuels are available, the likelihood of a restriction of oil supplies could be diminished. EPACT has the potential to shorten the time lag

between an oil price shock and the oil use reductions following it and to magnify such reductions in the key transportation sector, where reductions have been small compared to other sectors. The perceived potential of the U.S. to introduce alternatives in the event of an oil price increase, may dampen the price increase sought by oil-exporting countries in the event of a supply disruption.[1]

It is also possible that a well designed EPACT-initiated process of fuel switching could avoid or reduce the magnitude of problems such as inflation, involved with the relatively abrupt technological transitions in transportation that historically follow major oil shocks and which have also characterized historical fuel switches. Alternative fuel transportation systems could be more fully ripe for widespread deployment and the American public more amenable to fuel switching as a result of EPACT fleet programs and DOE RD&D programs.

Despite the many uncertainties, it preliminarily appears that the programs authorized by Congress in EPACT will fall substantially short of the year 2010 goal of 30 percent. DOE may need to modify that goal under EPACT sec. 504, possibly by rolling back the target dates. EPACT provides ample flexibility for DOE to so scale back the ambitious statutory goals rather than to adopt draconian policies. At the same time, DOE understands that many are concerned over what is perceived as EPACT's excessive reliance on mandates rather than economic incentives.

III. Availability of Proposed Technical and Policy Analysis

The Technical and Policy Analysis required by EPACT Section 506 is available in a draft report for pubic review and comment. Copies of the draft analysis, written comments, and any other docket material received may be read and copied at the DOE Freedom of Information Reading Room, U.S. Department of Energy, Room 1E–190, 1000 Independence Ave., S.W., Washington, D.C. 20585, telephone 202–586–6020 between the hours of 8:30 a.m. and 4:00 p.m. Monday through Friday except Federal holidays. The docket file material will be filed under ''EE–NOA–97–506 ''. An electronic version of the proposed Technical and Policy Analysis and electronically compatible portions of the docket material will be available from the Office of Transportation Technologies's website at: http://www.ott.doe.gov, under the Rules and Legislation section (http://www.ott.doe.gov/office.rules.html). Additional copies of the proposed Technical and Policy Analysis may be obtained from the National Alternative Fuels Hotline and Data Center, P.O. Box 12316, Arlington, Va. 22209, (800) 423–1DOE, (703) 528–3500 (local), Fax: (703) 528–1953.

IV. Public Comment Procedures

The Department of Energy encourages the maximum level of public participation in review and comment of the proposed Technical and Policy Analysis. The Department has established a comment period of 90 days following publication of this notice for persons to provide comment. The public comment period closes on January 26, 1998.

All public comments and other docket material will be available for review in the DOE Freedom of Information Reading Room at the address shown at the beginning of this notice. The docket material will be filed under ''EE–NOA–97–506.''

Interested persons are invited to participate in this proceeding by submitting written data, views or arguments with respect to the subjects set forth in this notice. Instructions for submitting written comments are set forth at the beginning of this notice and below.

Written comments (5 copies) should be labeled both on the envelope and on the documents, ''Section 506 Technical and Policy Analysis (Docket No. EE–NOA–97–506),'' and must be received by the date specified at the beginning of this notice. All comments and other relevant information received by the date specified at the beginning of this notice will be considered by DOE.

In addition, commenters are requested to provide a supplemental electronic copy of comments (1 copy), if possible, to facilitate the posting of comments on the Department's website. These optional electronic versions of comments should be stored in common text or word processor formats and saved on a pc-compatible 3.5″ diskette and mailed to the address above; or emailed directly to afv-deployment @hq.doe.gov. Electronic versions are considered supplemental only—the Department is not able at this time to guarantee the inclusion in the docket of comments provided only in electronic format.

Pursuant to the provisions of 10 CFR 1004.11, any person submitting information or data that is believed to be confidential and exempt by law from public disclosure should submit one complete copy of the document and 3 copies, if possible, from which the information believed to be confidential has been deleted. The Department will make its own determination with regard to the confidential status of the information or data and treat it according to its determination.

Issued in Washington, DC, on September 2, 1997.

Brian T. Castelli,

Chief of Staff, Energy Efficiency and Renewable Energy.

[FR Doc. 97–28401 Filed 10–24–97; 8:45 am]

BILLING CODE 6450–01–P

[1] While the U.S. share of world oil imports and its importance in the world oil market are likely to be less in the next century than in the 1970s and 80s, U.S. leadership in alternative transportation fuel policy and technology development could well catalyze similar developments in other importing countries.

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. AC97–185–000]

Aluminum Company of America; Notice of Filing

October 21, 1997.

Take notice that on September 25, 1997, Aluminum Company of America (Alcoa), filed a request on behalf of its wholly-owned subsidiaries Tapoco, Inc. (Tapoco) and Yadkin, Inc. (Yadkin), for approval of a change in the method of depreciating fixed assets. Specifically, Alcoa proposes to change from a composite depreciation method for fixed assets to a traditional straight-line depreciation method. The proposed change in depreciation method is for accounting purposes only, effective January 1, 1998.

Alcoa states that it is attempting to standardize and streamline its financial systems, which will include automating the fixed asset records of Tapoco, Inc. and Yadkin, Inc.

Any person desiring to be heard or to protest said application should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). All such motions or protests should be filed on or before November 20, 1997. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies