Appendix A. Request Letters

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510–6175

January 8, 2007

Mr. Guy F. Caruso
Administrator
Energy Information Administration
U.S. Department of Energy
El-1, Forrestal Building
1000 Independence Ave. SW
Washington, DC 20585

Dear Mr. Caruso:

Increased prices of motor fuels in recent years have promoted interest in developing less expensive and domestic fuel alternatives to power vehicle fleets. For various reasons, ethanol has become the most popular of these alternatives. While Chairman of the Senate Committee on Environment and Public Works, I successfully moved legislation that became the historic renewable fuels title to last year's comprehensive energy bill (Public Law No: 109-58, August 8, 2005). Since that time, I chaired three oversight hearings concerning that title and future transportation fuels, and a legislative hearing on a bill to improve the permitting process for critical domestic fuels infrastructure.

Ensuring inexpensive, reliable, and practical sources of fuel for all Americans is a national priority. Therefore, I have been reviewing the various proposals with great interest both as ranking member of the committee of jurisdiction as well as a Senator from Oklahoma, one of the foremost energy states in the country.

To that end, I would appreciate your analysis of an assumed new federal mandate beginning in 2007 that requires 25% of the total energy used in the electric power and motor transportation fuels sectors come from renewable sources by 2025 (the "25 x '25 Policy Scenario"). You should use the relevant AEO 2007 forecast cases.

In particular, please apply the 25 x 25 Policy Scenario for each of the following AEO 2007 oil price/economic growth cases:

- Reference case (Mid-range economic growth with mid-range oil price)
- Reference case with low economic growth;
- Reference case with high economic growth;
- Low oil price case;
- High oil price case.

For each 25 x 25 Policy Scenario, please detail the difference in total U.S. energy expenditures (constant $) compared to the above-stated cases for the forecast period from 2007-2025. Please also provide the energy prices under each 25 x 25 Policy Scenario for the major fuels used in the

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electric power and motor transportation fuels sectors, including gasoline and retail electricity, shown separately for fossil-based and renewables-based fuel. Assume that federal subsidies for the various energy forms are not extended beyond their current statutory expiration dates. Also, please provide the estimated energy expenditures for 25 by 25 in total and also a subtotal for the electricity sector and a subtotal for the transportation sector.

If there would likely be any significant regional differences, please identify and estimate in terms of energy prices, expenditures, and economic impacts.

Finally, please describe the cellulosic technologies that are likely to be employed in meeting the 25 by 25 goal, and provide a forecast of the costs of renewable fuels feedstock.

Please provide me with your report no later than February 15, 2007.

Sincerely,

James M. Inhofe

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

January 30, 2007

Dr. Howard Gruenspecht
Deputy Administrator
Energy Information Administration
1000 Independence Ave. SW
Washington, D. C. 20585

Dear Dr. Gruenspecht:

This letter follows up on Senator Inhofe's letter of January 8, 2007, which requested that EIA provide an analysis of a proposed Federal mandate for renewable energy. It reflects a conversation I had with your staff on January 19 and provides further clarification of the request. The key features of the renewable energy mandate discussed included:

- The policy instrument to be used,
- How the sectors are covered (jointly or separately),
- What fuels are considered qualifying renewables,
- How the renewable shares are defined,
- Who is covered,
- What happens after 2025,
- Should any specific ethanol-related policies be assumed that facilitate the renewable fuels target, and
- Which scenarios should be evaluated.

Based on my discussions with your staff, I understand that EIA plans to use the following analysis approach:

- Each sector (electricity sales and gasoline plus diesel transport fuels) would meet its own renewable targets, that is:
  - 25 percent of electricity sales would be from renewable generators
  - 25 percent of gasoline plus diesel sales would be from either ethanol or biodiesel on a volumetric basis.
- Four cases will be prepared based on the reference and high oil price cases from the *Annual Energy Outlook 2007,* with and without the renewable standards.
- Existing renewable credit programs and ethanol import tariffs are assumed to sunset at their legislatively mandated dates in all cases.

<u>The key assumptions to be used in the Electricity Sector include:</u>

- Policy Instrument: Renewable Portfolio Standard (RPS) with tradable credits
- RPS characteristics:

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- Qualifying renewables include:
    - Biomass (used in dedicated plants or co-firing with other fuels)
    - Geothermal
    - Municipal solid waste (including landfill gas)
    - Solar thermal
    - Photovoltaic
    - Wind
    - Incremental Hydroelectricity above that existing in 2006.
- Existing qualifying generators (except for hydroelectricity) do receive credits.
- The required share is expressed as a percentage of electricity sales in kilowatthours.
- The required share starts at the share of qualifying renewable generation in 2006, increases to 25 percent in 2025, and is held at 25 percent for subsequent years (i.e. no provision sunsets).
- All retail electricity sellers are included.
- RPS (electricity) credit trading is only allowed within the electricity sector.
- There is no credit price cap.

<u>The key assumptions to be used in the Motor Transportation Sector include:</u>

- Policy Instrument: Renewable Fuels Standard (RFS) with tradable credits.
- RFS characteristics:
    - Qualifying renewables include:
        - Corn-based ethanol
        - Cellulosic-based ethanol
        - Biodiesel production from all sources including oil-based beans/seeds.
    - Existing qualifying sources do receive credits.
    - The required share is expressed as a percentage based on current *AEO2007* reference case projections for overall gasoline and diesel consumption, rising to 25 percent of gasoline plus diesel motor fuel consumption.
    - The required renewable share starts at the share of qualifying biofuels sold in 2006, increases gradually to 25 percent in 2025, and is held at 25 percent for subsequent years (i.e. no provision sunsets).
    - RFS credit trading may only occur within the transportation sector.
    - There is no credit price cap.

- Measures to facilitate compliance (e.g., mandates to produce cars, E-85 pumps at stations, etc.) will take the form of provisions in S.23, the Biofuels Security Act of 2007.

Ideally, we would like to have the report in March 2007. However, given the above analytical structure and agency workload, I understand that such a date may not be feasible and ask that the analysis be completed as soon as time and resources permit.

If you have any questions regarding this clarification of the request, please don't hesitate to contact me at (202) 224-0516.

Sincerely,

Frank Fannon