



MEMORANDUM

DATE: August 20, 2010

TO: AGA FERC Regulatory Committee Members and Guests

FROM: Andrew K. Soto, Senior Managing Counsel, Regulatory Affairs

RE: Summary of DOE Proposed Policy on Full Fuel Cycle, EERE-2010-BT-NOA-0028

On August 20, the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy issued a notice of proposed policy, proposing to incorporate a full-fuel cycle analysis into the methods it uses to estimate the likely impacts of energy conservation standards on energy use and emissions. *See Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment; Public Meeting and Availability of Statement of Policy for Adopting Full-Fuel-Cycle Analyses Into Energy Conservation Standards Programs*, 75 Fed. Reg. 51,423 (Aug. 20, 2010). DOE stated that it will hold a public meeting on its proposal on Thursday, October 7, 2010, from 9:00 a.m. to 4:00 p.m. EDT, in Washington, DC, and that it will accept written comments from interested parties up to October 19, 2010.

In general, DOE proposed to use full-fuel-cycle measures of energy and greenhouse gas emissions, rather than the primary energy measures it currently uses. DOE also proposed to work with the Federal Trade Commission to make full-fuel-cycle energy and emissions data available to the public to enable consumers to make cross-class comparisons. 75 Fed. Reg. at p. 51,423.

DOE stated that it is required by the Energy Policy and Conservation Act to set conservation standards for specific products and equipment based on energy consumption at the point of use. 75 Fed. Reg. at p. 61,423. DOE added that it uses primary energy measures (primary energy being the energy consumed on site, plus energy losses that occur in the generation, transmission, and distribution of electricity) performing the national impact analysis and the environmental assessment to estimate the total projected amount of energy savings and emissions likely to result from the imposition of a conservation standard. *Id.* at p. 51,424. Under the Act, DOE adopts the energy conservation standard that it determines achieves the maximum energy efficiency improvement that is technologically feasible and economically justified. *Id.*

DOE noted that in response to the Energy Policy Act of 2005, the National Academy of Science recommended that DOE consider moving over time to use of a full-fuel-cycle measure of energy consumption for assessment of national and environmental impacts, especially levels of greenhouse gas emissions, and to providing more comprehensive information to the public through labels and other means, such as an enhanced website. *Id.* at p. 51,424. The Academy also recommended that DOE work with the FTC to consider options for making product-specific emissions estimates available to enable consumers to make cross-class product comparisons. DOE stated that it is proposing this policy to implement the Academy's recommendations. *Id.*

DOE is soliciting public comment on its proposal to use full-fuel-cycle measures of energy and greenhouse gas and other emissions in the national impact analyses and environmental assessments included in future energy conservation standards rulemakings. *Id.* at p. 51,424. DOE stated that the Greenhouse Gases, Regulations Emissions, and Energy Use in Transportation (GREET) model developed by Argonne National Laboratory is a model of full-fuel-cycle energy use and emissions that would be appropriate for that purpose. DOE is soliciting public comment on its proposal to use the GREET model to estimate full-fuel-cycle use and emissions. *Id.*

In particular, DOE stated that it will use the GREET model to convert primary energy impacts to full-fuel-cycle impacts. *Id.* Specifically, DOE stated that it will first estimate primary energy impacts by using the EIA National Energy Modeling System (NEMS) projections that include use of individual fuels in power plants as well as in home appliances such as water heaters, and then for each alternative energy conservation standard, DOE will use the energy conversion factors that are generated using the GREET model to convert primary energy use and emissions impacts to full-fuel-cycle energy use and emissions impacts. *Id.* DOE added that in order to account for the fact that energy production technologies and energy feedstocks will change over time, the energy conversion factors will change over time. *Id.* at p. 51,425. DOE proposed to use these conversion factors in its national impacts analysis, under which it looks at product shipment projections and information about the appliance efficiency base case and the new energy conservation standards efficiency case to project the energy savings of the new energy conservation standards. *Id.*

DOE further stated that it will use the GREET model to calculate the greenhouse gas emissions associated with energy consumption for DOE environmental assessments. *Id.* at p. 51,426. DOE explained that using the conversion factors described above, full-fuel-cycle energy use can be converted to full-fuel-cycle emissions with emission factors per unit of energy. *Id.* Alternatively, primary energy CO₂ emissions can be converted to full-fuel-cycle greenhouse gas emissions, if the type of primary energy is known. *Id.*

DOE proposed to include methane and nitrous oxide emissions in its energy conservation standards environmental assessments to provide a more comprehensive assessment of greenhouse gas emissions because methane and nitrous oxide have a direct association with the production and use of energy and have significant global warming potential. *Id.* DOE also proposed to include emissions from mercury, nitrogen oxide and sulfur dioxide in their environmental assessments to give a more complete picture of total emissions benefits associated with energy conservation standards. *Id.* at p. 51,427.

DOE proposed to use emission conversion factors in conjunction with NEMS to conduct environmental assessments for energy conservation standards. *Id.* at p. 51,428. DOE explained that NEMS model energy projections can be used along with the emission factors from the GREET model to determine current and projected emission for CO₂ and methane and nitrous oxide in CO₂-equivalents. *Id.* DOE is seeking public comment on its proposal to use the energy savings and/or emissions reductions generated by the NEMS model and the emissions factors produced by the GREET model to project emissions for CO₂, methane, nitrous oxide, nitrogen oxide, and sulfur dioxide for environmental assessments. *Id.*

Finally, in the area of disseminating information to the public, DOE proposed to significantly improve upon the FTC's existing on-line databases by making full-fuel-cycle energy use and emissions data available to the public. *Id.* at p. 51,428. DOE is soliciting public comment on whether this proposed on-line service would likely benefit consumers, and if so, the most effective way to present this information. *Id.*

DOE raised the concern that because greenhouse gas emissions associated with a particular class of products would be directly proportional to that class of products' estimated annual energy costs, simply comparing an individual product to products of the same class would add little useful information to the label, and that providing comparisons to the energy use, costs or emissions associated with other comparable products of different classes on the label may increase the complexity of the label, making the label more difficult to understand thus decreasing the utility of the basic annual operating cost information. *Id.* DOE is seeking comments on whether it should provide this type of information on Energy Guide labels and on the issues associated with disseminating this type of information to consumers via such label or by other means. *Id.*