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U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

June 27, 2011

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TODD YOUNG
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Energy Information Administration
U.S. Energy Information Administration
1000 Independence Ave., SW
Washington, DC 20585

Dear Administrator Newell:

According to an article in today's The New York Times¹, officials at the Energy Information Administration (EIA) apparently have deep reservations about the projections of recoverable shale natural gas resources even as EIA's public materials -- some of which were created or based on materials provided by industry consultants -- continue to project increasing levels of such resources. Natural gas has been called a 'bridge fuel' that will take us from dirtier fossil fuels to cleaner renewable energy technologies. If natural gas reserves are indeed as large as has recently been projected, this has enormous implications for our conservation and exploitation of natural gas resources, and the increased use of natural gas as a source of power to meet our nation's future electricity generation, transportation, and other energy needs while reducing carbon dioxide pollution. For this reason, it is essential for policymakers to verify whether the foundation of this "bridge" is sound. In light of the concerns reported in The New York Times article, I would like additional information about the data and methodology that EIA has used to compile its current estimates of natural gas reserves.

According to EIA's Annual Energy Outlook (AEO) 2011, the United States possesses 2,552 trillion cubic feet (Tcf) of potential natural gas resources.² Natural gas from shale resources, considered uneconomical just a few years ago, now account for 827 Tcf of this resource estimate, more than double the estimate published in AEO 2010. According to your agency, "Shale gas resource and production estimates increased significantly between the 2010 and 2011 Outlook reports and are likely to increase further in the future."³

In addition, EIA projects that the share of U.S. natural gas production coming from shale formations will increase dramatically in coming years. According to the AEO 2011, "Shale gas production continues to increase strongly through 2035 in the *AEO2011* Reference case, growing almost fourfold from 2009 to 2035...shale gas production grows to 12.2 trillion cubic feet in

¹ http://www.nytimes.com/2011/06/27/us/27gas.html?_r=1&hp

² EIA, AEO 2011. Available at: <http://www.eia.gov/forecasts/aeo/>

³ EIA, Available at: http://www.eia.gov/energy_in_brief/about_shale_gas.cfm

2035, when it makes up 47 percent of total U.S. production—up considerably from the 16-percent share in 2009.”⁴ These projected increases in shale gas production are substantial and will have huge ramifications for U.S. energy and environmental policy.

However, some concerns have been raised regarding the uncertainties surrounding these estimates. As The New York Times article indicated, some within EIA evidently believe that the shale gas industry “may be set up for failure,” that the industry’s projections are based on “irrational exuberance,” and are based on the performance of only the highest performing wells while ignoring those that do not yield volumes of natural gas that meet pre-drilling projections. The article further reveals that two of EIA’s contractors, Intek and Advanced Resources International, provided the data for the AEO 2011 projections but also have major clients in the oil and gas industries, raising questions about the impartiality of this data. Moreover, even the AEO 2011 itself indicates that considerable uncertainty exists in estimating future shale gas production. EIA acknowledges that “There is also considerable uncertainty about the ultimate size of the technically and economically recoverable shale gas resource base in the onshore lower 48 States.” According to EIA, some of these uncertainties include the fact that “Most shale gas wells are only a few years old, and their long-term productivity is untested” and that “In emerging shale formations, gas production has been confined largely to ‘sweet spots’ that have the highest known production rates for the formation.”⁵

As you know, the House Committee on Natural Resources has jurisdiction over conservation and development of oil and natural gas resources on public lands and on the Outer Continental Shelf, as well as cooperative efforts to encourage, enhance and otherwise improve international programs for conservation of natural resources and the protection of the environment. It is therefore essential for the Committee and its members to have the most accurate, unbiased, and up to date information regarding domestic and international natural gas resources in order to inform our policy decisions. As the statistical and analytical agency within the Department of Energy, EIA data is critical in informing policy decisions regarding our domestic natural gas resource potential and international reserves.

In light of the concerns raised by The New York Times article I believe it is important for the Committee to have a better understanding of EIA’s estimates regarding natural gas reserves, as well as the uncertainties that may be associated with those estimates. Therefore, as the Ranking Democratic Member of the Committee, I request that you respond in writing to the following questions by 12:00 p.m. on July 8, 2011:

1. Please provide the methodology and all supporting materials behind EIA’s estimate of U.S. natural gas resources or reserves used in the AEO 2011. Has the methodology used to estimate U.S. natural gas resources or reserves changed from previous estimates? If so, how and why was the methodology changed?
2. Please list any outside contractors used in formulating EIA’s estimate of natural gas reserves used in the AEO 2011; the criteria used for selecting those specific outside

⁴ EIA, AEO 2011, Executive Summary. Available at: http://www.eia.gov/forecasts/aeo/chapter_executive_summary.cfm

⁵ EIA, AEO 2011, p. 37. Available at: [http://www.eia.gov/forecasts/aeo/pdf/0383\(2011\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2011).pdf)

contractors; all correspondence (including reports, emails, memos, phone or meeting minutes or other materials) between EIA staff and any outside contractors, natural gas industry representatives or members of academic institutions regarding estimates of U.S. natural gas reserves; all internal EIA staff correspondence (including reports, emails, memos, phone or meeting minutes or other materials) relating to uncertainties in estimates of U.S. natural gas reserves.

3. Please provide the methodology and all supporting materials behind EIA's estimate of future U.S. natural gas production, in particular production of shale gas. Has the methodology used to project future U.S. natural gas production changed from previous estimates? If so, how and why has that methodology changed?
4. Please list any outside contractors used in formulating EIA's projection of future U.S. natural gas production used in the AEO 2011 and all other agency reports or publications centering on shale gas; the criteria used for selecting those specific outside contractors; all correspondence (including reports, emails, memos, phone or meeting minutes or other materials) between EIA staff and any outside contractors regarding projections of future U.S. natural gas production; all internal EIA staff correspondence (including reports, emails, memos, phone or meeting minutes or other materials) relating to uncertainties in projections of future U.S. natural gas production.
5. According to The New York Times article, some of the outside contractors used by EIA to formulate estimates of natural gas reserves or projected levels of production have a financial or other interest in oil and/or gas companies or business relationships with such companies. Please provide details about each such contractor, the specific company and the nature of that interest or other relationship. How does EIA ensure that all outside contractors conducting work for the agency do not have financial or other interests or relationships that could bias the results of any report? How does EIA ensure proper disclosure of any such interests?
6. According to The New York Times article, some EIA staffers have reservations about the quality of the data provided by those contractors, specifically citing the use of press releases and media reports as a source of data. To what extent are EIA's projections based on press releases or media reports? What steps does the EIA follow to independently fact-check those press releases or media reports?
7. Among the documents published by The New York Times are emails in which EIA officials express concern about the financial stability of shale gas companies and the economic viability of shale gas production. For example, one EIA official says "It is quite likely that a lot of these companies will go bankrupt." Another describes "irrational exuberance" around shale gas production. Can you please elaborate on those concerns? If shale gas is more expensive to produce than previously understood, how will the EIA's projections about natural gas supply and consumption be affected?

Thank you for your prompt attention to this request. Should you have any questions, please have your staff contact Morgan Gray or Michal Freedhoff of the Committee's Democratic staff at 202-225-6065.

Sincerely,



Edward J. Markey
Ranking Member
House Committee on Natural Resources