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NPC SEES ADVANCING TECHNOLOGY AS KEY TO FUTURE TRANSPORTATION FUELS

WASHINGTON, D.C., AUGUST 1, 2012—Transportation in the United States could evolve at an accelerated rate, depending on the speed of technology advancements and the economic viability of alternative fuels and vehicles, according to a comprehensive report approved and presented to the Secretary of Energy by the National Petroleum Council (NPC) at its 122nd meeting today. But sustained and focused efforts by industry and government are essential for progress to continue and accelerate.

“This study is unique in its depth, breadth, and use of subject matter experts,” said Clarence P. Cazalot, Jr., Chairman, President and CEO of Marathon Oil Corporation and chair of the NPC’s Committee on Future Transportation Fuels. “I believe this is a very promising technology story, and indeed a good news story for America’s economy, environment, and energy security.”

Advancing Technology for America’s Transportation Future is the NPC’s response to a request from Secretary of Energy Stephen Chu. The two-year study involved more than 300 participants from diverse backgrounds and organizations. “It is important that we have reports like this from the NPC,” said Secretary Chu. “We need the voices of all the stakeholders and the most analytically dispassionate analysis of what is going to happen.”

The report is available on the NPC website www.npc.org, where a webcast archive of the meeting and press conference are also available.

The Council also received an update on the NPC’s 2011 Prudent Development report from D. Clay Bretches, who served as chair of the Coordinating Subcommittee of the North American Resource Development study. In other action at the meeting, the Council elected James T. Hackett to serve as Chair of the NPC for the traditional one-year term. Mr. Hackett is the Chairman of the Board of Anadarko Petroleum Corporation, Houston, Texas. A member of the Council since 2002, he has served on several of its study and administrative committees, and recently chaired the NPC study on North American Resource Development. Charles D. Davidson, Chairman and Chief Executive Officer of Noble Energy, Inc., Houston, Texas, was elected Vice Chair of the Council. Mr. Davidson has been an active member of the Council for ten years.

The NPC is a federal advisory committee to the Secretary of Energy. The sole purpose of the Council is to advise, inform, and make recommendations to the Secretary of Energy, at his request, on matters relating to natural gas and oil or to the natural gas and oil industries.

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(Editors note: Attached is a copy of the letter approved today to transmit the report to Secretary Chu.)

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APPROVED LETTER TO TRANSMIT REPORT TO SECRETARY CHU

August 1, 2012

The Honorable Stephen Chu
Secretary of Energy
Washington, D.C. 20585

Dear Mr. Secretary:

In letters dated September 16, 2009, and April 30, 2010, you asked the National Petroleum Council (NPC) for advice about fuels, technologies, industry practices, and government policies through 2030 for auto, truck, air, rail, and waterborne transport. You also requested advice on potential industry and government actions that could reduce greenhouse gas (GHG) emissions from American transportation by 50 percent by 2050.

The enclosed report, Advancing Technology for America’s Transportation Future, is the NPC’s response to your requests, based on two years of review and analysis by more than 300 participants from diverse perspectives. The study found that transportation in America is undergoing changes that could evolve and accelerate depending upon how soon fuel and vehicle technologies advance along with their economic viability.

If the technology and infrastructure barriers identified by the study can be overcome, the scale and effects of this transition will yield incremental and cumulative gains for America. This comprehensive study concludes that:

- As cost competitiveness improves, existing technologies can be applied to substantially increase vehicle fuel economy.
- Overcoming twelve identified Priority Technology hurdles is essential to the commercialization of advanced fuels and vehicles.
- Implementing mitigation strategies can help overcome the substantial fuel-related infrastructure challenges.
- Continued investment in multiple combinations of advanced fuels and vehicles could yield solutions that benefit American consumers and significantly reduce GHG emissions.
- Achieving 50% GHG emission reductions in the transportation sector by 2050, relative to 2005, will require additional strategies beyond technology and infrastructure advances.
- Increasing the diversity of economically competitive fuels and vehicles will bolster the nation’s energy security.

Vehicles powered by petroleum and internal combustion engines – the foundation of travel for over a century – continue to become more efficient and cleaner. They now run on petroleum blended with biofuels, some of their engines are assisted by electric motors, and they are being joined on the nation’s roadways by vehicles running on
natural gas, electricity, and hydrogen. Natural gas is widely used in urban buses and refuse vehicles and is now being introduced in trucks; biofuels comprise 10 percent of U.S. gasoline; a growing number of plug-in hybrid and all-electric vehicles are becoming available to consumers; and, shortly, hydrogen fuel cell passenger vehicles will enter the market.

Profound changes are possible with disruptive, yet highly uncertain, innovations such as ultra-light-weight vehicle materials; new electric vehicle battery technologies; low-cost, low-pressure storage for natural gas or hydrogen; or breakthroughs yielding lower cost, low carbon transportation fuel.

Yet despite sustained investment in technology and infrastructure, these fuel and vehicle advances are not assured. There are competing priorities in the pursuit of new fuel and vehicle technologies that are at once reliable, affordable, and environmentally responsible. Striking a balance that meets individual and societal goals is the challenge at hand for both industry and government. While attempting to address these priorities, this study offers the following recommendations:

- Government should promote sustained funding and other resources—either by itself or in combination with industry—in pre-competitive aspects of the twelve Priority Technology areas identified, as well as in areas that could lead to Disruptive Innovations.
- There is a great deal of uncertainty regarding which individual fuel-vehicle systems will overcome technology hurdles to become economically and environmentally attractive by 2050. Therefore, government policies should be technology neutral while market dynamics drive commercialization.
- The federal government should take a leadership role in convening state, local, private sector, and public interest groups to design and advocate measures to streamline the permitting and regulatory process in order to accelerate deployment of infrastructure.
- When evaluating GHG emission reduction options, the government should consider full life-cycle environmental impact and cost effectiveness across all sectors. It should also continue to advance the science behind the assessment methodologies and integrate life-cycle uncertainty into policy frameworks.
- Fuel, vehicle, and technology providers should consider existing or new voluntary forums that include federal and state governments and other stakeholders, to address concurrent development of vehicles and infrastructure.

The Council looks forward to sharing this study and its results with you, your colleagues, and broader government and public audiences.

Respectfully submitted,

/s/

Enclosure