ML STRATEGIES

Senate Energy and Natural Resources Committee: Full Committee Hearing to Consider the Nomination of Dr. Ernest Moniz to Be the Secretary of Energy

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Purpose

The purpose of this hearing was to consider the nomination of Dr. Ernest Moniz to be the Secretary of Energy.

Members Present

Chairman Wyden, Ranking Member Murkowski, and Senators Stabenow, Heller, Heinrich, Barrasso, Franken, Scott, Schatz, Lee, Manchin, Alexander, Udall of Colorado, Flake, Cantwell, Risch, Portman, and Hoeven participated in the hearing.

Speakers

The Honorable Jeff Bingaman (D-NM), Former Senator, U.S. Senate

Lieutenant General Brent Scowcroft, U.S. Air Force, Retired

Dr. Ernest Moniz, Nominee for Secretary, U.S. Department of Energy

Opening Statements

Chairman Wyden said Dr. Moniz will be at the center of the most pressing issues involving the economy and the environment. Chairman Wyden went on to say the following:

Dr. Moniz will have to consider issues such as managing natural gas reserves, combatting climate change, making the economy more efficient, and supporting new energy technology. The U.S. needs energy. Strong economic growth, reduction of greenhouse gas emissions, and energy innovation are the three pillars of energy policy.

Technological advances have allowed the industry to tap into previously uneconomic reserves of natural gas. He said natural gas will give the U.S. a lasting economic advantage. Natural gas allows the U.S. to bolster its standing on climate. The E.I.A. recently reported that carbon emissions dropped to their lowest levels since 1994, thanks largely to the rise of natural gas. There are concerns surrounding methane leaks and flaring; lawmakers can address these issues.

Chairman Wyden advocated for more renewable power. Renewables can reduce the U.S.'s carbon footprint. Congress did not anticipate the natural gas revolution when considering the 2007 energy bill; many industry stakeholders also did not anticipate the revolution. He said a similar revolution is possible in renewable energy. A lower carbon economy is smart; the U.S. will not lose its competitiveness. Only Congress has the tools to address the global issue of climate change. Renewables must be part of that solution. Hydropower and geothermal bills will be considered by the Committee in the upcoming weeks. Tax reform could also encourage renewable energy development.

Dr. Moniz will have to deal with the Department's loan programs. The taxpayers need more protection. Chairman Wyden advocated for separate financing programs based on technological and financial risk. The Committee will consider major issues in the upcoming weeks, such as Senators Shaheen and Portman's energy efficiency bill as well as disposal of nuclear waste. He also said contaminated waste sites like Hanford are a major issue; despite billions of dollars, there is a host of unresolved issues. There is hydrogen buildup in waste tanks. The Department still has no viable plan for cleaning up waste.

Ranking Member Murkowski said Dr. Moniz will probably garner bipartisan support. She is impressed by his work, knowledge, and intellectual honesty. She went on to say the following: Dr. Moniz has defended unconventional gas while refraining from opportunistically changing his mind about nuclear after the Fukushima Daiichi disaster. He will be in charge of thousands of scientists as well as a range of challenges and problems. The U.S. is still searching for a broad, coherent policy. Energy related programs remain fragmented, more funding is needed for research and development, and silos in the Department stand in the way of progress. There is concern that the Department is not keeping energy abundant, diverse, and secure. A strong voice is needed, especially in the wake of controversies like Solyndra and A123. She added that the Committee will increase oversight of the Department.

Testimony

Senator Bingaman said there are many challenges for the next Secretary of Energy. Senator Bingaman went on to say the following: In order to succeed, the Secretary needs to have certain attributes, such as knowledge of science and engineering, a demonstration of managerial capabilities, an understanding of how the Department works, a deep understanding of the current energy challenges, and an understanding of nuclear deterrence. Dr. Moniz has outstanding qualifications in these five areas. He urged bipartisan support for Dr. Moniz's nomination.

Lieutenant General Scowcroft said he did not know anyone more suited to lead the Department than Dr. Moniz. He praised Dr. Moniz's judgment, dedication, and enthusiasm. Lieutenant Scowcroft went on to say the following: He and Dr. Moniz worked on the President's Blue Ribbon Commission on America's Nuclear Future; Dr. Moniz was a major part of that commission. Dr. Moniz has advocated for international support for nuclear fuel leasing; Deputy Energy Secretary Poneman has written on this issue with Dr. Moniz. Dr. Moniz has also expressed support for small modular reactors (SMRs).

Dr. Moniz said he will work to the best of his abilities on the four major pillars of the Department of Energy: energy, nuclear security, science, and environmental remediation. Dr. Moniz went on to say the following:

He has had experiences that will benefit his work. He has been on MIT's faculty since 1973; he has also served as Department of Energy Under Secretary. He will work with the scientific community to ensure that researchers have the cutting edge tools. He has focused in his research on a low carbon economy. The President has advocated for an all-of-the-above approach towards energy; he will further this goal at the Department. The Department should continue building research and development support for low carbon technology. Oil and natural gas development is also important.

He has been a member of the President's Council of Advisors on Science and Technology (PCAST), which recommended an administration-wide quadrennial energy review (QER). He pledged to develop this QER by working with Congress and industry. The President outlined his vision for nuclear security in 2009. He pledged to strengthen efforts to prevent nuclear proliferation and terrorism. National labs and intelligence group are pillars of nuclear security. Environmental remediation is needed for nuclear weapons stockpiled during the Cold War. He said it is a legal and moral imperative. He pledged to work in the most transparent way on this issue. He also pledged to elevate the focus of management and performance at the Department.

Questions and Answers

Chairman Wyden asked if the transition to a lower carbon economy was a priority for Dr. Moniz. **Dr. Moniz** supports this transition.

Chairman Wyden said the Department finances clean energy research and innovation. He asked how Dr. Moniz would work to help bring down the cost of renewables to make them price competitive. **Dr. Moniz** said he would emphasize, first and foremost, the research and development side to lower costs, and went on to say the following: The goal of innovation is to reduce energy costs. Remarkable cost reductions are already occurring, particularly in the solar energy sector. Wind is competitive in many areas. An all-of-the-above strategy, including carbon capture and SMRs, is needed.

Chairman Wyden said he felt Department data on natural gas is outdated and does not break down regionally. **Dr. Moniz** said strong analysis should be grounded in the best data. The export license question needs relevant data.

Chairman Wyden said there are public concerns about fracking practices. The current approach is a mix of state work, federal overarching policy, and strict disclosure requirements. **Dr. Moniz** said it is important to have public confidence in environmental stewardship as natural gas is developed. He went on to say that the Department is not in charge of regulation; however, the Department can work on methane emissions by providing new data. It can also work with the EPA and industry groups on this issue.

Ranking Member Murkowski said there is a shale natural gas boom in Alaska. She wanted to know about exporting natural gas. **Dr. Moniz** said Alaska has been exporting liquefied natural gas (LNG) for some time, and that license applications need public interest criteria. He went on to say that the Natural Gas Act suggests one should move forward with licensing unless there is a clear public interest issue, and that Secretary Chu noted that cumulative impacts would be considered in the license queue. All of these issues should come together to make a transparent consideration on a case-by-case basis.

Ranking Member Murkowski asked if hydropower is a renewable resource, and **Dr. Moniz** said it was.

Ranking Member Murkowski asked how expansive "all" of an all-of-the above approach is. **Dr. Moniz** said coal is a continued part of the energy supply, and that as the U.S. moves towards a low-carbon economy, investments need to be implemented to ensure that carbon capture and sequestration technologies are deployed.

Ranking Member Murkowski asked about the susceptibility of the electric grid to electromagnetic pulse (EMP) and geomagnetic disturbances (GMD). **Dr. Moniz** said he needs to improve his understanding of this issue, and that it is part of a broader issue of introducing robustness and resilience to the grid to combat natural and unnatural attacks.

Senator Stabenow asked about natural gas data. She said a strong natural gas economy can improve the manufacturing sector. **Dr. Moniz** said he will need to understand and observe the elasticity of production. In the overarching public interest criteria, the status of the natural gas market is clearly high, he said, and judgments should be made on a case-by-case basis.

Senator Heller said the Department has a major presence in Nevada. He praised Dr. Moniz's comments on nuclear security, and said that the biggest question in Nevada involves the Yucca Mountain nuclear repository. He went on to say that the federal government only considered this site, and the data was unreliable. He recognizes the need to address spent nuclear fuel, and said the solution must be based around science. He asked about Dr. Moniz's stance on this issue. **Dr. Moniz** said he will advance the Blue Ribbon Commission agenda, and that consent-based siting is a major part of that agenda. He will work with Congress on the storage and repository issues.

Senator Heller said renewable energy is important to Nevada, and that the state looks to continue to broaden development of geothermal and other renewables. **Dr. Moniz** said he is bullish about renewable energy. He went on to say the following: Renewables can lower emissions and can improve the manufacturing sector. Renewables, including biofuels, are central to a low-carbon economy. Wind has had a significant performance, but more work is needed. He said offshore wind should become competitive. The solar industry is making advances in both photovoltaic (PV) and concentrated technology. Geothermal is also a major renewable energy.

Senator Heinrich asked about spent nuclear fuel. He noted that Secretary Chu released a new strategy in January, largely in response to the Blue Ribbon Commission, and that the Department must consider short-term storage and a long-term repository: the linkage between these two storage policies is an important issue. **Dr. Moniz** said storage is not disposal, and that the need to link the two is clear.

Senator Heinrich said Sandia and Los Alamos provide economic development in the area. He asked if the Department and the national labs are doing enough on technology transfer. **Dr. Moniz** said the Department can do more, and that there are some barriers that can be lowered. He suggested doing more on working with states to build up the innovation ecosystem. He said working with the universities is fine, but there are many stakeholders in the energy economy.

Senator Barrasso asked about LNG exports, and said many NATO allies are reliant on Russian gas. He noted that he introduced bipartisan legislation expediting exports to NATO allies and Japan, and that these countries have expressed an interest in American LNG. **Dr. Moniz** noted that the U.S. boom put pressure on Russian imports. He said he wanted to pursue the quadrennial energy review because it would be a mechanism to ensure national security is part of energy decisions.

Senator Barrasso asked about USEC, the United States Enrichment Corporation, noting that Dr. Moniz was previously a part of this organization. He said many believe the Department has been bailing out USEC. **Dr. Moniz**said he will consult with counsel on any recusal issue, he has not been involved with USEC for over a decade, and that issues include the requirement to maintain American technology and the consideration of domestic industry.

Senator Barrasso said former Nuclear Regulatory Commission head Gregory Jaczko might be an advisor at the Department. **Dr. Moniz** said he has heard that rumor but he has not had any involvement on that decision.

Senator Franken said former Lockheed Martin CEO Norman Augustine has said the country has yet to fully develop energy research, and that he fears sequestration will impair energy innovation. **Dr. Moniz** said the U.S. is underinvesting in energy, and that he would work to best leverage funding to develop technologies so the private sector can further these innovations. He added that the Department of Energy helped kick off the natural gas boom, and said that following this work, there was an extended period of public-private partnerships for the test drilling phase, and Congress provided a period of incentives for unconventional wells. The combination of these three efforts led to the boom.

Senator Scott said North Dakota has seen many benefits from the natural gas boom. He asked if Dr. Moniz was part of the MOX Agreement with Russia. **Dr. Moniz** said he was the lead negotiator of Russian materials while at the Department as Under Secretary, and that he supports the MOX approach; it changes the isotopes of nuclear material to make the material less usable in a weapon.

Senator Schatz praised work between the Department and Hawaii on clean energy, and asked about energy efficiency and conservation. He noted that Senators Portman and Shaheen have been working on energy efficiency, and that it presents an opportunity for success on a bipartisan basis. **Dr. Moniz** said substantial efficiency gains will facilitate a low-energy economy. He noted that the administration has put forward CAFE standards. He also noted that buildings use a lot of energy, and that research and development as well as cooperation with the states can reduce building energy use. He advocated for more combined heat and power (CHP).

Senator Schatz asked about the electric grid. **Dr. Moniz** said stimulus funding has improved smart metering and research. More needs to be done, including systems evaluations.

Senator Schatz asked how the Departments of Energy and Defense are working together. **Dr. Moniz** said he needs to do more research on this issue, but that he knows the two are working to lower the energy footprint of fixed assets, to develop microgrids, to improve fuels, and to address the energy needs of the troops.

Senator Lee said Secretary Chu issued a memorandum in March 2012 outlining rate structures that would incentivize energy efficiency technology, and noted that there is a concern that the policy could increase the cost of energy. **Dr. Moniz** said he needs to better understand this issue moving forward, and that technology must be further developed.

Senator Lee asked Dr. Moniz if he supports a carbon tax. **Dr. Moniz** said the administration does not plan to introduce a carbon tax, and that the Department is not the locus of this policy. He added that the Department works on technology to lower the cost of energy, and that in 2008 he was involved in a letter to the next president, whoever he would be, on cap-and-trade.

Senator Lee asked about wind energy subsidies, noting that many departments, including the Department of Energy, allocate these subsidies. **Dr. Moniz** said he is supportive of providing the marketplace with low-carbon options; however, no one would support duplication of programs. He said has an open mind on this issue.

Senator Manchin said coal should be a part of the all-of-the-above approach. He added that there has been a big demand for coal power, but that there is not enough funding for sequestration research. **Dr. Moniz** said he will advocate for carbon capture research and development.

Senator Alexander asked if Dr. Moniz would support the America COMPETES Act which he and Senator Coons are leading. **Dr. Moniz** said he would support it.

Senator Alexander asked if the tax credit for unconventional gas should remain in place. **Dr. Moniz** said it is not under the purview of the Department of Energy, but he feels it has done its job.

Senator Alexander asked about the Blue Ribbon Commission's opinion on the linkage between storage and repository. **Dr. Moniz** said the linkage meant developing both storage and repository at the same time.

Senator Alexander asked about mercury contaminated waterways near Oak Ridge. **Dr. Moniz** said he does not know the details of that facility; however, protecting the safety of Americans is paramount.

Senator Alexander asked about carbon capture research, particularly though ARPA-E. **Dr. Moniz** said beneficial use of carbon dioxide would be a tremendous advance.

Senator Udall said Colorado relies on both renewable and traditional energy sources. He praised work by National Renewable Energy Lab (NREL), saying it uses a public-private partnership. He asked about these partnerships. **Dr. Moniz** said he is a big supporter of public-private partnerships, adding that regionally focused industries should work with public sectors on solutions that are regionally important. He said that regional issues are very big, and public-private partnerships can solve these issues.

Senator Udall asked about SMRs, noting that Ranking Member Murkowski and former Chairman Bingaman advocated for their use. **Dr. Moniz** said he testified before the Appropriations Committee on SMRs and that the most innovation in nuclear energy is going on with this technology.

Senator Udall asked about climate change and how technology can slow this problem. **Dr. Moniz** said the scientific basis for warranting action is completely clear, adding that there can be legitimate discussions on what needs to be done and at what pace. A low-carbon economy is needed, and natural gas can be a bridge, he said.

Senator Flake asked about the Navajo Generating Station (NGS) in Arizona. She noted that the facility is required to install the most expensive technology, and that a task force was formed in January to collectively find a solution. **Dr. Moniz** said the decision making lies with the Department of the Interior and the EPA, but that. the Department of Energy can help provide analysis and data.

Senator Flake said the President issued an executive order on cybersecurity and the electric grid. **Dr. Moniz** said cybersecurity is one of the greatest threats the country faces, and that the Department needs a lot of protection. He said that specifically regarding the grid, collaboration is needed to protect the

infrastructure. He added that the Department needs to work on the technologies and to work on combining national security aspects with the energy system.

Senator Cantwell said she is concerned about Hanford. **Dr. Moniz** said he would work to get briefings immediately, to visit the site, and to work on the issue with Congress.

Senator Cantwell asked about the Tri-Party Agreement. **Dr. Moniz** said the Tri-Party Agreement needs to be satisfied, and that he is open to discussions on science and technology.

Senator Cantwell asked about the Blue Ribbon Commission and about separating out military waste. **Dr. Moniz**said it was a spirited discussion in the Commission, and noted that the conditions that lead to comingled waste are no longer operative. He said reconsideration is needed, and that if confirmed, he would push the evaluation of this option.

Senator Cantwell asked about the smart grid. **Dr. Moniz** said the Department and the National Labs work best when working together on major priorities, and added that the grid is a major priority. He said he will work in a different way with the lab directors to engage them more on strategic decisions.

Senator Risch said cleanup at the Idaho National Laboratory would further the Department's image, and asked about the National Laboratories. **Dr. Moniz** said the engagement of laboratory directors with the Department can be improved, and noted that he would treat them as resources as the Department plans how to move forward. He said he also supports multidisciplinary teams working around major visions in the labs.

Senator Cantwell commented that the Northwest delegation supports Bonneville Power Administration (BPA) having a strong jurisdiction within the Department. **Dr. Moniz** said the Department is committed to having low-cost power delivered to customers, and that he supported collaboration between the Department and the BPA.

Senator Cantwell asked about the Manhattan Project National Park. **Dr. Moniz** said he has not fully investigated both sides of the debate.

Senator Cantwell asked about renewable energy as part of the portfolio and about financing clean energy solutions. **Dr. Moniz** said he is interested in different approaches, such as extension of master-limited partnerships (MLPs) and real estate investment trusts (REITs) to clean energy. **Senator Cantwell** praised the Small Business Administration (SBA) and its work with energy development.

Senator Portman said he supports SMR development, and that nuclear power needs to play a role in the low-carbon future. He then commented that natural gas provides an economic advantage, and said enriched uranium is needed for energy and for the nuclear arsenal. He said this approach allows the U.S. to supply allied countries with uranium, meaning they do not need to have domestic supplies. **Dr. Moniz** said the U.S. should have American-origin technology.

Senator Portman asked about his legislation with Senator Shaheen. **Dr. Moniz** said efficiency is a major issue that needs to be addressed. **Chairman Wyden** praised work by Senators Shaheen and Portman, and noted that energy efficiency has bipartisan support.

Senator Hoeven asked about hydraulic fracturing. **Dr. Moniz** said the application of hydraulic fracturing differs between regions. He noted that at a very high level, there needs to be best practices, and that what those practices are will vary by site. He added that the states will play an important role in this decision, that the Department will not create regulation, and that the Department can encourage transparency. He also noted that the companies must address local water issues and that research should be done around water use.

Senator Hoeven said investment drives technology deployment. He asked how Dr. Moniz can further investment. **Dr. Moniz** said he wished to replicate the success of Department of Energy work, public-private partnerships, and legislation.

Senator Hoeven asked about clean coal technology and carbon capturing sequestration. **Dr. Moniz** said there are many ways to advance this technology. Long-term, decadal deployment can ensure public confidence. On the cost reduction side, these are areas still in the research phase. Development of enhanced oil recovery from carbon dioxide is needed, he said.

Senator Hoeven asked about partnering traditional and renewable stakeholders. **Dr. Moniz** said he is an all-of-the-above person. He is happy to work with Congress on this issue.

Chairman Wyden said the Committee will start natural gas workshops in May. One workshop will focus on federal lands. **Dr. Moniz** said he would work with the Committee if confirmed.

Chairman Wyden asked about energy storage. He said it is a field of great promise, and that coupled with expanding renewables, energy storage would cause costs to drop. **Dr. Moniz** said he will push the plan on energy storage, and that his only reservation to completing a study within 60 days of confirmation is that he wishes to bring together individuals from within the Department and from outside the Department. He said he will present a timeline within 30 days of confirmation,

Chairman Wyden asked about Hanford. He asked if the status quo handling of Hanford is acceptable. **Dr. Moniz**said it is not acceptable. He said he will visit the site, will meet with stakeholders, and will work to create a plan, and agreed to meet with the contractors and the whistleblowers.

Senator Cantwell asked if the issues at Hanford are solvable scientific problems. **Dr. Moniz** said he needs to carefully examine Hanford. He added that he believes he will come to the conclusion that the key uncertainties are identifiable; however, work will need to be done to fully understand some issues. He said he will be as pragmatic as he can to move the project forward, and that resource efficiency is an important factor in moving the project forward.

Chairman Wyden said Hanford is the most contaminated piece of federal property, and that it is not acceptable from a public health and public safety standpoint. He praised the bipartisan support for Dr. Moniz, and said that senators from both parties recognize that the gridlock on energy has to give way to problem solving. He added that Dr. Moniz has expertise, and that he supports the nomination.

Authors