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INTERVIEW WITH DANIEL PONEMAN

Daniel Poneman, the longest serving Deputy Secretary in the history of the U.S. Department of Energy, announced today that he was stepping down from the position. Mr. Poneman was a critical player in some of the biggest decisions to face U.S. energy policy in generations. He sat down to discuss some of those issues with Jason Bordoff, Founding Director of the Center on Global Energy Policy.

Jason Bordoff: After five years as Deputy Secretary, why are you leaving the Department of Energy?

Daniel Poneman: When Secretary Moniz came on board, he asked if I would stay about a year to help him get his new team up and running. That year just ended. It's been a great experience and it's been a terrific opportunity to work with him. But it's been now five years, by far the longest tenure by a Deputy Secretary and I'm very excited to take on some new challenges.

JB: When you arrived at the energy department, climate change was at the front of the administration's agenda and the shale revolution was in its early days and not on the radar of many people, particularly in Washington. How did the focus of your job evolve over the years as the shale revolution became more apparent? When did the administration realize shale's potential as a game changer? What was your role in ensuring the potential benefits of shale were maximized and that the risks and concerns were addressed?

DP: At the level of the specialists, we realized very early on what the implications were of shale gas, although I don't think it had worked its way through the body politic. Understandably, while people were very focused in the first couple of years on trying to get comprehensive energy legislation through, there was less focus on the implications of shale gas.

I think an important turning point was the articulation of the overall strategy in the president's March 2011 speech at Georgetown which was all about energy security. He was already putting in place in that speech some goals to reduce our excessive dependence on foreign oil. About that time we were in the midst of this quite important National Petroleum Council study on the prudent development of oil and gas in North America. It was already conventional wisdom that we had a shale gas revolution on our hands, but there was a surprising conclusion that we were also in the midst of quite a remarkable oil transformation.

It changed our jobs quite profoundly. It changed the way the world looks at us, and the role that we can therefore have in helping other countries, helping them shape energy strategies that are consistent with the president's Climate Action Plan. You have heard the president talk about natural gas as a bridge fuel. But a bridge to what? It's obviously a bridge to the low carbon future he's trying to build with the Climate Action Plan. I think it is hard to exaggerate the overall positive effect of increased oil and gas production has had on us economically and from a national security perspective.

JB: You mentioned the president's Georgetown speech, and I think that is also the speech where he turned to then Secretary of Energy Chu and to you and called on you to study the risks associated with shale development and also the potential benefits, which led to the Secretary of Energy Advisory Board report. Can you talk about that process and how important it was to the development of the administration's position?



DP: It was important and it remains important. It talked a lot about transparency and governance, and emphasized the need to maintain a sustainable approach to the development of these resources. Not only sustainable in a technical, environmental way, but also sustainable in terms of public support.

It is not only important to the continued development of the resource in the United States. Even though it is a prodigious resource, I do not believe it is one we can take for granted and therefore I think getting the data right on methane emissions, getting the air quality issues right, dealing with the issues and concerns over chemical composition of fracking fluids, dealing with the water usage and the road usage issues, this is all very important to us here at home.

Also, as I go around the world there is keen interest in shale gas. When I speak to people who are very ambitious to develop their own shale resources, I never fail to mention the importance of getting the governance issue right, of getting the transparency right, and keeping the environmental stewardship front and center. We're a small planet and it is in everybody's best interest to develop this resource responsibly and safely everywhere because you can damage the credibility and therefore the public sustainability of the resource in one country if there is an accident or mishap somewhere else.

JB: Few people have been on the frontlines as much as you on the U.S. energy dialogues with some of the most important producers and consumers in the world. People talk a lot about the geopolitical impacts of the North American energy boom and sometimes they are not precise about what those are. How did the rise in U.S. production impact U.S. energy relations and the broader diplomatic relations?

DP: An important case was the implementation of the December 2011 National Defense Authorization Act, which carried another further round of sanctions against Iran. There were many scenarios that were spelled out that were quite worrisome. If we had found ourselves in a situation in which there was a massive evasion of sanctions against Iran and significant panic in the marketplace leading to a market spike, then in fact Iran could actually have benefitted economically. But in fact I think we were able to reassure the market that it would remain well supplied and work very closely with the other producers to put out a reassuring message to that effect. I think that is why the sanctions worked in applying sufficient pressure on Iran to open the door to the Joint Plan of Action to constraining their nuclear threat.

A second example, very recently, is the case of Ukraine. We have seen very clearly what happens when countries allow themselves to become overly dependent on either one technology or one geographic source for a resource. You subject yourself to the possibility of coercive actions such as being cut off from a resource.

Take a look at the net effect of US energy supplies in Europe in the context of the Ukrainian crisis and think that just a few years ago we were planning and building a number of U.S. LNG import terminals. All of that demand that would have gone to bringing LNG into the United States was taken off the market, which obviously took pressure off LNG prices elsewhere

We are now talking about exporting LNG. Increasing sources of supply over time makes Europe more resilient to the possibility of coercive actions from Russia on the natural gas front. At the same time gas prices have fallen in the United States, which backs out coal-powered generation. Coal prices have fallen, which makes coal cheaper to export to Europe. Again by virtue of our domestic transformation we have increased European and other countries' energy security.



JB: What other actions did you and the U.S. government take to help bolster European and Ukrainian energy security in recent months.

DP: It breaks down into short, medium and long-term efforts. In the short term, they are benefitting from the things that had been done. European gas supplies and storage were sufficient in the winter months so that there was not so much a threat.

Now we are looking closely at next winter and there are a number of things we've been trying to do, advising on the reversal of some of the pipelines that already exist, looking for energy efficiency improvements that can be undertaken.

I think it is very important to look at what the president said in Europe about the longer-term need for Europe to look to the diversification of its sources of energy supply. We have already conditionally approved seven of these LNG applications for export which, if all receive final approval, together comprise 9.3 billion cubic feet per day or 95 bcm per year, which is equivalent to the overall European consumption of LNG per year. The president said that Europe has to look to the responsible development of its own resources. So I would say that the experience of Ukraine has been to validate the premise of the president's all-of-the-above energy strategy. Countries have to develop responsibly their hydrocarbons and clean and renewable energy sources, and improve efficiency. It has helped us make that case not just in Europe but elsewhere as well.

JB: After an early push for climate cap and trade legislation and for a robust deal in Copenhagen, climate change has really come back to the fore again, as witnessed by the Obama Administration's agenda with the climate Action Plan and now the steps the Environmental Protection Agency. In your time at DOE, how did you see the climate change policy evolve, what do you think was achieved, what still needs to be done, and what should we expect moving forward?

DP: I would say I have seen strategic continuity and tactical flexibility. Strategically, an efficient way to make the transformation take place to protect our climate would be to apply a universal price on carbon, but that is the kind of thing you get through comprehensive legislation. When it became clear that that wasn't happening, then the president shifted to his executive authorities as president to move the effort on to things that lie within his authority to get done.

The negotiations that we had with the automobile companies and others in terms of the fuel economy standards were very powerful. There were the appliance regulations that we promulgated through work with the Office of Management and Budget (OMB) that will have quite a significant impact on our emissions. The whole Climate Action Plan deployed large amounts of grid scale wind, solar photovoltaic, and concentrated solar under the Loan Guarantee Authority.

We made significant investments through the Advanced Technology and Vehicle Manufacturing Program that not only helped put Ford back on its feet but helped reduce the overall carbon emissions of its portfolio of vehicles. At the other end of the spectrum, we invested in the all-electric Tesla, which could have transformational effects.

The shifting of the efforts from the legislative front to the executive branch front has impacts not just on the mitigation side, but also in dealing with the climate effects that are already with us in terms of droughts, storms, hurricanes, and so forth. There is the whole grid modernization effort, the evolution of the smart grid, greater use of distributed generation and combined heat and power and other elements being explored in the aftermath of Hurricane Sandy. This is part of the emphasis of



the administration on adaptation to climate change that has already occurred, the second pillar of the Climate Action Plan.

The final piece is to recognize that if we don't get our arms around the climate change challenge in places like Asia and the Middle East, we could do everything right here and still end up on the wrong end of climate change and our efforts to prevent greater than 2 degrees centigrade temperature rise.

JB: Recent days have seen attention focused on the renewed turmoil in Iraq. In 2011, you led a diplomatic mission to Saudi Arabia, the United Arab Emirates and Kuwait before the release of strategic stocks to address the Libyan disruption. How were those plans received and what kind of coordination went on with our partner countries before the release of those stocks?

DP: It was gratifying to find that we were all approaching the questions from the same strategic perspective, that it was very much in our collective and individual strategic interest that markets remain well supplied and that we avoided the kind of price spiking that the panic of 2008 led to and which was followed by a horrific crash that took down the whole world economy. To have that level of cooperation was critical to our success at that time.

JB: There is a perception from some on the outside that this administration has a different approach to use of strategic stocks, a more activist approach and a willingness to use it more than in previous administrations. What do you think of the administration's policy toward using the SPR?

DP: I think about it in relation to how the world has changed since the early 1970s when the original mechanism was put into place. At that point there was no NYMEX market for oil futures contracts, there were no paper barrels, at that time we were really dealing with physical shortages.

Nowadays energy markets are much more sophisticated and futures markets are much more robust. What you are really talking about is the management of the forces of supply and demand and the manifestation of a crisis is not so much a mere physical shortage but rather a significant price spike that could basically tip the world into a global recession or worse.

I wouldn't say that we changed as much as that the world changed and our actions acknowledged that changed world. The decision to tap the Strategic Petroleum Reserve at the time that Libyan oil production plummeted was a very careful, thoughtful, and deliberate process in which all options were considered and that was the option that seemed most to advance our national security interest and to preserve what was at that time a very fragile economic recovery.

JB: Looking back to 2009, you were the chief U.S. negotiator in the talks with Russia, France, and Iran regarding Iran's nuclear enrichment program. What surprised you the most about those talks, what was the biggest disappointment? What areas were the most encouraging?

DP: The most encouraging thing was that there was in fact a willingness to engage in some practical discussion of how to meet the genuine radioisotopic concern about the potential for Iran to run out of fuel for their Tehran research reactor. The French, the Russians, the Iranians, and the U.S. had the willingness to work together to that common purpose, that was the best news.

The worst news came after we had an agreement at the table in Vienna minutes before people had to get on planes. As has been reported, it basically said Iran would ship out 1,200 kilograms of their 3 percent enriched uranium out of the country. Then, because of the domestic situation in Iran, the



deal was not approved in Tehran. Much more effective oil sanctions were eventually imposed, that brought the Iranians back to the table to the place where we are today.

JB: The Fukushima disaster was one of the worst energy disasters that took place during your time at DOE. How did react and what lessons were learned from the event?

DP: As soon as we got the news from Japan, people were on the phone and sending emails asking what was going on and how can we help. I think it was inspiring in the way the U.S. immediately volunteered emergency responders, loaded radiation detectors on to C-17s and sent them over there. It was a great example of friends, partners and allies working together.

There were many lessons learned. We did not know what was happening on the ground, so we need to have better sensor technology. You have a case where the conventional thinking about design basis threat was inadequate to the challenge faced. That lesson has been learned over and over again. People have tried to codify these lessons in the IAEA process that followed.

There are lessons for building in passive safety features, and for not putting generators in places that are likely to get flooded in the event of a tsunami. It is not a series of point solutions but it is reforming the way you think about safety, about risk and risk management. I think the Japanese have really tried to apply these lessons, but it's a work in progress and they are moving in the right direction. Prime Minister Abe's policy is very responsible to try to bring nuclear power back as a no carbon energy source, but one that can be pursued much more safely.

JB: What is the outlook for nuclear power in the United States? What was your role in supporting nuclear power and research and development?

DP: We have had a traditional role in terms of advanced research and development of new designs that are not yet approved and ready for deployment. The NP 2010 process was very important in developing new light-water reactor designs. That generation of nuclear reactors developed in the United States is now in the process of selling both domestically and abroad. We have a program now where we are cost sharing the development of reactor designs for small modular reactors to get regulatory approval from the NRC, and hoping we can play a similar role in bringing forward advanced technologies.

We have 100 operating reactors that are getting upgrades and life extensions and are now older than their originally expected design life. We're doing work on understanding the aging of metals and other materials so that we can understand how the reactors can continue to be operated safely.

In terms of getting the first commercial reactors built in three decades, it was very helpful to have the Loan Guarantee Authority. We are now building five nuclear plants of commercial scale, the first time in three decades in the United States.

JB: Another energy crisis on your watch occurred after Hurricane Sandy with the weeks of fuel outages and power outages. What was it like to be right in the middle of that and what lessons were learned? What steps can be taken to prevent something like that in the future?

DP: The most stunning thing about that, even to this day, was the president's hands-on involvement in the response. He was not only chairing daily meetings and conference calls, but he was also talking to the local mayors and the governors of the affected areas. He said more than once that after preservation of life and limb after the storm, the restoration of power was the top priority, and the restoration of power was necessary to save lives in places like hospitals. The second thing that he said was that he would have zero tolerance for red tape. That moved mountains. It was an incredible team effort.



We learned a lot about the need to have waivers for certain regulations in emergency situations so that we can get power back to families who are in distress. We learned a lot about how much we didn't know about situational awareness on the ground – which gasoline stations had fuel but no power, power but no fuel.

JB: As you look back at your term, what is the legacy you leave behind and what do you wish you could have done more of?

DP: The president has been very articulate about reducing nuclear threats, through the process of the nuclear security summits and all of the related efforts to lock down nuclear materials that could be vulnerable to theft or terrorism. I'd also say the diplomacy used in tackling the Iran nuclear threat. The whole reduction of nuclear threats has been a very important legacy for this president.

Second, I don't think you will be able to think about energy and climate change in the same way in the future, I think we've turned a corner. We're in the process of building a low carbon future that is informed by scientific advances, expanded to a commercial scale by the Loan Guarantee Authority, and builds the predicate for a cleaner, more prosperous future for the nation and the world.

Obviously, there is the transformation of our energy economy on the basis of the oil and gas development we've discussed. Finally, we've worked very hard at the DOE on improving our project management, deepening our development of safety culture and security culture.

There are many things left to do, in every aspect of the things we've discussed. It's always going to be a work in process to enhance our safety and security culture. Otherwise, we will not continue to enjoy the confidence of the American people.

Daniel Poneman was appointed Deputy Secretary of Energy in May 2009. Mr. Poneman first joined the Department of Energy in 1989 as a White House Fellow. From 1993 through 1996, Mr. Poneman served as Special Assistant to the President and Senior Director for Nonproliferation and Export Controls at the National Security Council. Prior to assuming his responsibilities as Deputy Secretary, Mr. Poneman served as a principal of The Scowcroft Group for eight years.