



Opening Statement
Senator Maria Cantwell (D-Wash.)
Hearing on Opportunities to Improve American Energy Infrastructure
March 14, 2017

“Thank you, Madam Chairman, for holding this important hearing. And to all our witnesses for being here today—you should be commended for making your way through the snow to help us.

“When Americans wake up in the morning, they flip on the light switch, turn on the hot water in the shower, grab their fully-charged cell phone before heading out the door and fill up their cars at the gas station. The average person probably does not give much thought to the vast network of energy infrastructure that produce, transport and deliver energy to our homes and businesses.

“It is not an exaggeration to suggest that our economy, our national security and our way of life all depend on the reliable, secure and efficient operation of energy infrastructure. And it has served our nation well. In fact, the National Academy of Engineers named electrification as the greatest engineering achievement of the 20th century.

“As the first two installments of the Department of Energy’s (DOE) Quadrennial Energy Review have pointed out, we are facing several challenges that threaten to disrupt American’s access to reliable and affordable energy.

“First, our hydroelectric dams, power plants, electric transmission lines and pipelines are aging. And the pace of investments has not always been sufficient to keep these facilities in good working order. According to the GridWise Alliance, our aging infrastructure is responsible for approximately 25 percent of all power outages in the United States. The Electric Power Research Institute estimates that power outages and reductions in power quality cost the U.S. economy as much as \$20 billion annually.

“Second, much of our energy infrastructure is susceptible to increasingly severe storms, flooding, drought and wildfires—as we’ve experienced in the Northwest where we’ve had so many transmission lines burn up. It’s a real issue and the chairman and I are going to continue to work on that.

“Third, our electric grid is being stressed, due in part to technological innovations, such as smart appliances and solar rooftops, which improve the consumer experience but rely on



operations for which the grid was not originally designed. As we move from one-way to two-way communication, this is a very important issue. In addition, we do not have enough electric transmission capacity to access the growing demand for electricity from remotely located wind and solar farms, which are now cost-competitive with conventional electric generation.

“Finally, there is the issue of cybersecurity that keeps me up at night thinking about potential hacks from Russia or foreign actors, as we see large-scale attacks happening in other places. If we do not make the necessary investments to prevent, defend against and minimize the impact of these cyberattacks, our enemies may succeed in causing a widespread blackout or devastation to our economy.

“Chairman Murkowski and I put together a bipartisan energy bill that would have made needed investments in our energy infrastructure and workforce. It would have doubled the amount of funding to protect us against cyberattacks and would have improved the security of the energy supply chain. We need to know where in the supply chain these attacks are coming from. We passed that bill in the Senate by an 85-12 vote and then spent several months negotiating a conference report with the House.

“Unfortunately, Speaker Ryan and the House of Representatives, in my opinion, dropped the ball in implementing this important energy legislation that would’ve helped our country move forward. I hope this year the Speaker will finally recognize that protecting our electricity grid from attack and making needed investments in our energy infrastructure needs serious attention.

“Today, I am calling on the Trump administration to protect the public from growing cyber threats that Russia and other foreign actors pose against our energy assets. That is why today I am sending a letter to the President to make sure that we clarify the Department of Energy’s role as a lead agency in our nation’s cybersecurity matters, both on the defense side and on the response side to respond to potential hacking of our critical energy infrastructure. That is very important because we’ve heard rumors of an executive order further designating the Department of Homeland Security as the lead on this matter. I equate this to seeking medical attention and seeing a doctor, but in reality you need a dentist, because what you have is an oral problem. We need the right experts doing the right things to protect us.

“Although digitization of the electric grid offers tremendous benefits, it also makes the grid more susceptible to cyberattacks. This particularly troubling issue increases the concerns that we have about foreign actors and their capabilities of doing significant damage to the grid.



“As Admiral Rogers, the director of the National Security Agency and the commander of the U.S. Cyber Command during the Obama administration, recently told Congress, ‘Russia holds the cyber capability to cripple our infrastructure.’ According to a recent NBC News report, the Russians have conducted more than a dozen significant cyberattacks against foreign countries, including the United States. In addition, the Department of Homeland Security and the FBI recently released a Joint Analysis Report documenting Russian malicious cyber activity in the United States.

“We all know that the Russians most likely hacked into the Ukrainian distribution utilities, knocking power out to more than 225,000 customers for several hours. And it appears that it might have been done again two months ago; a utility in northern Kiev reported that their grid was brought down as a result of a cyberattack.

“Fortunately, the U.S. grid has not yet been successfully attacked. But, we do know that there are frequent attempts to hack into our utility systems. Just recently, the Houston Chronicle put out a report about our U.S. oil and gas pipelines and how susceptible they are to hackers using new malware that disrupts the control system. And the story goes on to detail how these hackers could increase the flow in a manner that could potentially cause an explosion. Madam Chair, I’d like to enter that article about protecting our pipelines into the record.

“Our economy and way of life have grown increasingly dependent on the electric grid and smart tools. So, we need to make sure that we are deploying energy in new ways to help them.

“The electrification of the economy requires a more robust, smarter, modern electricity grid to accommodate the 21st century. And by reducing overall energy consumption and facilitating consumer access to cleaner technologies and grid modernization, we also can make improvements in the competitiveness of our U.S. economy.

“The World Economic Forum recently estimated that the digital transformation of electricity technology will create \$1.3 trillion economic value during the next 10 years. To me, it is imperative that the U.S. lead in this effort.

“As the Quadrennial Energy Review pointed out, we need to invest in the energy workforce that is needed. Approximately 200,000 workers with STEM skills will be needed for the electricity grid of the future.

“Our energy bill last year would have created a Department of Energy Workforce Advisory Board to make sure we have the curriculum established to get those workers ready for the future.

U.S. SENATE COMMITTEE ON

ENERGY & NATURAL RESOURCES



SENATOR MARIA CANTWELL, *Ranking Member*

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“Madam Chair, I look forward to hearing from the witnesses on these important issues and continuing to make investments in the energy infrastructure that we need for our nation.

“Thank you very much.”

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