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Guest on THE INFRA BLOG

Guest on The Infra Blog: Dr. Ernest Moniz, United States Secretary of Energy

Conversation with Steve Anderson, Managing Director, InfrastructureUSA

Challenges and Opportunities for Energy Today

First of all we should emphasize that our current infrastructure for transmission, storage and distribution of energy is quite reliable today by any reasonable measure. However, the reason it's so important is that we are at a point of tremendous change in the energy system. We are at a point of needing to address, aggressively, major challenges like climate change, as we need to address the resiliency issues, some of which arise from things like extreme weather that we anticipate increasing, all the way to cyber threats. What we have to do right now is to make the investments in building and re-building the energy infrastructure that will be appropriate for the next decades ahead. That will include building infrastructure that is resilient against a whole variety of risks, but it also involves opportunity: the issue in the long term of transitioning to a low-carbon economy, and a tremendous increase in renewables, for example. And yet a third area, where I would say opportunity, is as we move to integrate IT much more fully into the energy infrastructure. So this is really about both challenge and opportunity. On the challenge side, of course, one of the issues which is common to much of our infrastructure, not just energy infrastructure, is that a huge amount of investment was made forty, fifty years ago. The aging of the infrastructure also drives us right now to think very, very much about renewal that is smart.

Energy's Close Link with Transportation and Environment

Almost, almost all the time people flip a switch and the lights come on. People go to the gas station and the fuel is available, so at the consumer level they are seeing that they are being served. However, that does disguise many challenges in terms of moving energy to the consumer, and it also disguises the fact that we are not prepared to meet all the challenges of the next years, nor are we prepared to take advantage of the opportunities. When we say energy infrastructure, as we address it in this *Quadrennial Energy Review*, we are addressing an infrastructure that goes well beyond wires and pipes for energy. Much of it does involve transportation infrastructures, for example, because they also are critical for moving energy commodities. A very good example that I think is brought out in the discussion is that of inland waterways. Sure, they are functioning, but they are going to be very, very inefficient. We have huge issues in many places: repairs and modernization of locks and the like. We have big challenges that have emerged at docks, for example. The whole issue of connectors from docks to inland transportation modes is quite critical. Another point is to go back and to recall, as I mentioned earlier, we're in a period of tremendous change in the energy system and there are many, many facets to that. Certainly one that is quite evident is the tremendous increase in oil and gas production, and furthermore an increase in oil and gas production that is in many important ways coming from new geographies. Pennsylvania for gas, North Dakota for oil would be two obvious examples. Now with regard to the latter in particular, that also has driven a rather dramatic shift to oil transportation by rail. And that's obviously led to a number of serious problems and incidents. The administration is working to get new standards in place to address that. But in this context what it really is is an example of how the changes in the energy system are in many ways stressing the infrastructure in place, and other changes in the energy system, like the dramatic increase in renewables, is also stressing the energy system. For example,

today, about 25% of the investments in new high-voltage transmission are specifically to move wind to market. And that presents, both physical challenges, if you like, but also other challenges like siting. How do we manage the regulatory issues to move energy over very, very long distances across multiple state boundaries? So those are all areas that we addressed in the QER.

Now Is the Time To Get Infrastructure Right

Getting this infrastructure right over the next decade or so, preparing for the future, is all about enhancing economic opportunity. There already has been, in the change energy sector, a tremendous impact on jobs that's going to just increase. In fact, we should also remember that there's the indirect effect. The tremendous expansion in natural gas has had this impact in terms of really stimulating much more additional manufacturing activity in the United States: we have added the better part of a million manufacturing jobs in the United States. So getting this right is critical and in fact, going back to this theme that a lot of infrastructure was built forty, fifty years ago, those are decisions and assets that we are living with today. And what I want to emphasize is that the decisions we make today on infrastructure will be critical for driving economic and environmental and security needs—or for answering those needs, for many decades. What I want to add, however, is the decisions we don't take today will have similar consequences. We really need to meet the challenge now of beginning robust investment in our energy infrastructure and in the shared infrastructures like rail and waterways that are critical to moving all kinds of commodities in the United States, including energy.

If Congress Leads, the Public Will Follow

Part of the public dialogue, of course, is what goes on in Congress. And I'm actually rather encouraged in the reaction to this *Quadrennial Energy Review* in the sense that we see the energy committees of both chambers, first of all having hearings, but secondly having the leadership of those committees come out very publicly in, roughly speaking, endorsing many of the recommendations of the QER, but I think more importantly talking about executing the legislation on energy infrastructure in both chambers. So I think that's a very important part of the public dialogue. I think that in turn will lead to presumably a lot more discussion in the media, and then hopefully as those investments are made and the new jobs are created and the new services are made possible, I think the broader public will come to understand the wisdom of continuing infrastructure investments as core to this country's future.

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