Roth: Time to pay close attention to our energy future

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Last week, I discussed Oklahoma and U.S. exports and economic development.

Electricity is one obvious requirement for all of that

productivity. Farmers rely on it to pump water for crops, manufacturers and the industrial sector are one of the largest customers of utility companies, at the other end of the spectrum, you and I need it to charge our phones and make coffee in the morning to begin our own productive days.

When we consider how we obtain the electrons to enable this productivity, a natural next step is to contemplate the larger infrastructure that makes it possible.

Oklahoma is a member of the 14-state Southwest Power Pool. The SPP dispatches the least expensive energy first, and Oklahoma's affordable, abundant wind and natural gas help keep prices low for the entire region, while providing a boost to our state's exports.

As we plan for the future, one important consideration in the bulk power space is the health of the electric grid, which our utilities, with our financial assistance, are constantly repairing and upgrading. With Puerto Rico in mind, we are reminded it is an uphill battle, to say the least.

The 2017 American Society of Civil Engineers' Infrastructure Report Card gave U.S. electric infrastructure a D+ due to its substantial age and congestion issues. Most of it was constructed in the 1950s and 1960s with a 10-year life expectancy. Today, erratic weather and severe storms, combined with much greater demand for electricity increase grid health concerns. Add to these the modern-day threat of cyberterrorism, which has become a real risk to the security of our grid system.

With all of this in mind, we would be well-served to pay close attention to our energy future, both in terms of cost and security. After all, what good is investing millions of dollars into infrastructure that can be shut down remotely from a foreign country?

Discussions of grid reliability are ubiquitous lately. Sen.

Mark Warner, vice chair of the Senate Intelligence Committee, recently discussed the risks and consequences of an attack on the power grid. The following is a paraphrase, but his comments went something like, "we may be investing in the best planes, tanks, and guns, when much of the conflict in the 21st century will be in the realm of misinformation, disinformation, and cyberwarfare; and I don't think we're ready."

Just this month, commissioners of the Federal Energy Regulatory Commission referred to attacks on the grid as "constant" and of great concern.

As their costs continue to fall, distributed generation and smart grids are looking more promising and practical than ever before. Technology is rapidly changing. Consider when businesses each maintained huge in-house servers. The now outmoded technology is slower, more expensive to repair, and less reliable than cloud storage.

So, what is the future of the power grid? It is too early to know, but my guess is citizens will continue to demand the safest, cleanest, cheapest, and most reliable forms of power. A recent case-in-point: The United Kingdom just went 55 hours without burning coal and now has more offshore wind than any other country.

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