Plainsandeastern

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To: Plainsandeastern
Subject: Clean Line Plains and Eastern comment

This comment deals with the subject of reliability. I have already commented on the vulnerability of the Plains and Eastern transmission line to tornados. I would now like to address a different type of threat.

The entire Clean Line Energy Partners plan is fundamentally flawed in terms of security from attack. The Clean Line system consists of wind generation of AC electricity, conversion of AC electricity to DC, a long transmission line, then conversion of electricity from DC to AC.

If terrorists attacked the Plains and Eastern transmission line, anywhere along its 750 miles of towers, or at any of the transformer stations, how would electrical power be rerouted? The answer is that power could not be rerouted. The Clean Line design lacks any flexibility to compensate for damage to the system. An attack by terrorists, foreign or domestic, would result in the cessation of electrical delivery until the damages could be repaired.

Now let's consider an even worse scenario. What would happen if a group of terrorists simultaneously attacked the Clean Line Plains and Eastern, Grain Belt Express, and Rock Island systems? While the electrical grid in the eastern part of the USA might be able to compensate for the loss of one system, it would certainly not be able to deal with the loss of all three. Anyone who scoffs at such a scenario has a very short memory. Attacking three vulnerable transmission systems would be much easier than hijacking three commercial aircraft and flying them into buildings. The failure of the electrical grid in the eastern US would be a very alluring target to foreign or domestic terrorists.

I would like to cite some examples of terrorist attacks on electrical systems that have happened recently.

On April 16, 2013, a Pacific Gas & Electric Co. Power station was attacked. The attackers first destroyed fiber-optic lines. Then snipers destroyed 17 large transformers. As a result, the power station was off line for 27 days.

In October of 2013, an Arkansas man was arrested by the FBI for carrying out multiple acts of sabotage against power lines and a substation. The man used a mixture of ethanol and motor oil to burn a control house at the substation. On a separate occasion, he used a stolen tractor to pull down a transmission tower. In another act of sabotage, he climbed a tower and cut a shackle supporting a 500,000 volt line, which caused the line to fall onto a railroad track. His acts of sabotage created temporary power outages in the area.

Neither of these instances of terrorism involved explosives, automatic weapons, rocket propelled grenades, car bombs, or aircraft. Even poorly armed terrorists could easily shut down a Clean Line system.

In both instances of terrorist attack, the power supply to homes and businesses was only temporary because the existing AC grid was able to draw power from other sources.

If any proponent of Clean Line should argue that there is sufficient reserve generation capacity in the eastern US to handle the loss of one or more Clean Line systems for an extended period of time, then I have one simple question. If that generation capacity is already in place, then where is the need for the Clean Line systems?

If the DOE takes private land from private citizens and gives that land to a private company, the majority of which is owned by four billionaires, then the least we should expect is that these actions make our electrical grid more secure. Unfortunately, the Plains and Eastern transmission line will make our electrical grid more vulnerable.