

The Honorable Andrea M. Boland
22 Kent Street, Sanford, ME 04073

April 29, 2015

Representative Max Tyler and
Esteemed Members of the
Colorado House Committee on
Transportation and Energy

Re: HB15-1363, A Bill for an Act Concerning Fortification of Colorado's
Lifeline Infrastructure to Withstand Large-Scale Electromagnetic
Disturbances

Chairman Tyler and Esteemed Members of the House Committee on
Transportation and Energy:

Good afternoon. My name is Andrea Boland. I am a former member of the Maine House of Representatives, and sponsor of LD 131, our legislation to begin the process of protecting our State's transmission system, and her people, from geomagnetic disturbance (GMD/extreme solar storms) and electromagnetic pulse (EMP), together known as natural and manmade EMP. My original bill asked that protections against GMD and EMP be provided only for all future expansions of the electric grid and for any grid projects currently under construction. It would have been a simple request, if the electric utilities understood the problem and were prepared to correct it. We had the biggest expansion of our grid in history under way, so it was timely to focus on that, a \$2.4 billion project. Protections would have added about 1/3 of 1% to the total cost, and the design had actually made us more vulnerable.

As it turned out, the electric utilities were not willing or prepared to respond. They argued that their operational procedures were adequate to respond to an EMP or GMD. They said it would be too hard to install protections while the grid expansion was ongoing. They couldn't answer many questions that were asked them. The independent experts, including those here today, presented material precisely and fully. The Committee listened intently, troubled by the sadly obvious disparity in competence. They determined it necessary to amend LD 131 to include the whole transmission system, and require a report be done by the Public Utilities Commission, to examine grid vulnerabilities, options for mitigation, costs, policy implications, etc. – much as HB 1363 proposes.

The PUC was also to include in its resources any input that the independent experts cared to volunteer. The Committee passed it unanimously. It went on to pass the House unanimously, and pass the Senate by a vote of 32-3. The Governor and I had a good conversation about it, and, although it was all new to him, he focused on the economic opportunity it offered, and allowed it to pass into law without his signature. It was considered landmark legislation, because efforts to pass grid protections in Washington had been unsuccessful for years.

We took a panel of experts to the NCSL to bring the issue directly to the other states, since few people were aware of it. I met Representative Tyler there and later learned of Representative Ginal's initiative here. It's great to see Colorado contemplating action. Other states are also moving forward.

Here are some things we did right:

I credit myself for taking up this astonishing challenge, and reaching out to the experts as they became known to me.

Starting with Peter Pry, they invested in Maine, and came to testify. Tom Popik and John Kappenman also came, along with a few others – representing science, intelligence, policy, physics, law, and defense.

Individual citizens testified – a fire chief who wondered how he'd be able to respond in such an emergency, a nurse concerned about medicines and hospitals, legislators from science and military backgrounds.

Committee members listened intently, got it, and acted.

The PUC said they could fund the study out of their budget, and put it up online, where anyone could contribute or read the contributions of others. It was a transparent and open process, but not without stress.

Ultimately, we amassed highly significant information that is actionable and of modest cost. The industry and the experts agree on the most valuable methods of mitigation and protection, but the electric companies don't agree they need them. They continue to minimize the problem, exaggerate costs, argue for low standards, build liability protections for themselves into their contracts with the states, offer no validation for the standard they propose, and refuse to even consider protecting against manmade EMP – which actually puts them out of compliance with Maine law.

This is where state legislatures come in. We have a job to do that we are fully empowered to perform. Please pass HB 1363 and join the leading states.

Thank you for listening. I'd be pleased to take questions.

MRSA Title 35-A, S3195, 4:

- 4. Ratepayer protection.** In determining the reasonableness of any rate-adjustment mechanism, the commission shall consider the transfer of risks associated with the effect of the economy and the weather on the utility's sales. To the extent these risks are transferred from the utility to its customers, the commission shall consider in a rate proceeding the effect of the transfer of risk in determining a utility's allowed rate of return.

Central Maine Power's tariff limits its liability

As with other power companies, it challenges ratepayer protection:

"In no event shall Central Maine be liable for any incidental, consequential, multiple, punitive, special, exemplary, or indirect damages, or loss of revenue or profits, attorney's fees or costs arising out of, or connected in any way with the performance or non-performance of this Schedule 21-CMP or any Service Agreement hereunder, even if such damages are foreseeable or the damaged party has advised Central Maine of the possibility of such damages and regardless of whether any such damages are deemed to result from the failure of inadequacy of any exclusive or other remedy."

STATE OF MAINE

IN THE YEAR OF OUR LORD
TWO THOUSAND AND THIRTEEN

H.P. 106 - L.D. 131

Resolve, Directing the Public Utilities Commission To Examine Measures To Mitigate the Effects of Geomagnetic Disturbances and Electromagnetic Pulse on the State's Transmission System

Emergency preamble. Whereas, acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, the North American Electric Reliability Corporation has identified 2013 as a peak year of solar activity that could result in a geomagnetic disturbance; and

Whereas, the impact of a significant geomagnetic disturbance or electromagnetic pulse on the reliability of Maine's electric grid is unknown; and

Whereas, the Public Utilities Commission may be able to identify measures to protect Maine's electric grid through a focused examination; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

Sec. 1. Examination of vulnerabilities and mitigation. Resolved: That the Public Utilities Commission shall examine the vulnerabilities of the State's transmission infrastructure to the potential negative impacts of a geomagnetic disturbance or electromagnetic pulse capable of disabling, disrupting or destroying a transmission and distribution system and identify potential mitigation measures. In its examination, the commission shall:

1. Identify the most vulnerable components of the State's transmission system;
2. Identify potential mitigation measures to decrease the negative impacts of a geomagnetic disturbance or electromagnetic pulse;
3. Estimate the costs of potential mitigation measures and develop options for low-cost, mid-cost and high-cost measures;

4. Examine the positive and negative effects of adopting a policy to incorporate mitigation measures into the future construction of transmission lines and the positive and negative effects of retrofitting existing transmission lines;

5. Examine any potential effects of the State adopting a policy under subsection 4 on the regional transmission system;

6. Develop a time frame for the adoption of mitigation measures; and

7. Develop recommendations regarding the allocation of costs to mitigate the effects of geomagnetic disturbances or electromagnetic pulse on the State's transmission system and identify which costs, if any, should be the responsibility of shareholders or ratepayers; and be it further

Sec. 2. Monitor federal efforts regarding mitigation measures. Resolved: That the Public Utilities Commission shall actively monitor the efforts by the Federal Energy Regulatory Commission, the North American Electric Reliability Corporation, ISO New England and other regional and federal organizations to develop reliability standards related to geomagnetic disturbances and electromagnetic pulse; and be it further

Sec. 3. Report. Resolved: That the Public Utilities Commission shall report the results of its examination required pursuant to section 1 and the progress of regional and national efforts to develop reliability standards under section 2 to the Joint Standing Committee on Energy, Utilities and Technology by January 20, 2014. The Joint Standing Committee on Energy, Utilities and Technology may submit a bill to the Second Regular Session of the 126th Legislature based on the report.

Emergency clause. In view of the emergency cited in the preamble, this legislation takes effect when approved.