



Industrial Energy Consumers of America
The Voice of the Industrial Energy Consumers

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December 9, 2011

United States of America
Federal Energy Regulatory Commission

Reliability Technical Conference)	Docket No. AD12-1-000
)	
North American Electric Reliability Corporation)	Docket No. RC11-6-000
)	
Public Service Commission of South Carolina Office of Regulatory Staff)	Docket no. EL11-62-000

Summary

The Industrial Energy Consumers of America (IECA) represents energy intensive manufacturing companies that consume substantial quantities of electricity. As such, the price and reliability of electricity supply can often dictate whether we are competitive with foreign competition thus impacting jobs and U.S. economic growth.

The EPA electric utility regulations will have a profound impact to U.S. electric generation capacity. EPA may issue the utility MACT rule as early as December 16, 2011. Multiple studies confirm that the EPA regulations will shut down a significant portion of the coal-fired power generation capacity substantially reducing electricity reserve margins on a regional basis. Reduced reserved margins increase the risk of electric reliability problems that threaten the potential sudden shutdown of manufacturing facilities that create both a significant safety hazard for employees, either partial or permanent damage to manufacturing equipment and lost production.

We cannot remember a single issue in the last several decades where leadership by FERC is more important than acting quickly to intervene to ensure that electric reliability is protected. We cannot afford outages or worse yet, a cascading affect of outages in the middle of the summer. It took decades to plan and build the generation and transmission capacity that we have yet and FERC does not appear to be doing any planning, analysis or cumulative assessment to address the implication of the 38 GW of capacity retirements that have been announced nor the additional potential 59 GW that NERC expects to shutdown. The shutdowns are large and over a very short time frame. Consumers need confidence that careful cumulative assessments have been completed before utilities start taking generation off-line.

The Federal Energy Regulatory Commission (FERC) has the responsibility to ensure that the electricity supply is reliable. There is ample evidence from essentially every entity

with expertise or responsibility for maintaining reliability of the grid that there is justifiable reason to be concerned. We urge the Commission and EPA to take immediate action to protect electricity supply and reliability.

The Industrial Energy Consumers of America

IECA is a nonpartisan association of leading manufacturing companies with \$700 billion in annual sales and with more than 650,000 employees nationwide. It is an organization created to promote the interests of manufacturing companies through research, advocacy, and collaboration for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete in domestic and world markets. IECA membership represents a diverse set of industries including: chemicals, plastics, cement, paper, food processing, brick, fertilizer, steel, glass, industrial gases, pharmaceutical, aluminum and brewing.

Comments

It is alarming that the FERC and the EPA have not taken action to address concerns about potential reliability problems to electricity supply. The technical conference of November 29 and 30, 2011 had multiple speakers that expressed serious concerns that include the North American Reliability Corporation, four Regional Transmission Organizations (ERCOT, SPP, PJM, and MISO) and major electric utilities.

Reliability is a Safety Issue

Many energy intensive manufacturing facilities use “continuous” processes that operate 24/7. Examples include chemicals, steel, aluminum, pulp and paper, and glass. These processes run at very high temperatures and/or pressure. If the power goes off without warning it could present a safety issue for the facility employees and possibly the community in which we operate. There are literally thousands of these process units through out the U.S. A significant number of manufacturing facilities are located in States that are supplied by coal-fired power plants. Coal-fired power plants are usually the low-cost provider of electricity.

Reliability is a Significant Cost Issue

Think about the process of making steel, aluminum, glass or chemicals that are operating at temperatures in the thousands of degrees Fahrenheit – then shut-off the electricity. The molten steel, aluminum or glass begins to immediately cool and there is no way to restart the process so that the product can be removed from the production process.

When the lights go out, it poses the risk that the manufacturing equipment can either be partially or permanently damaged. The costs would be reflective of the size of the production facility but would easily cost in the tens of millions of dollars for smaller facilities and possibly up to a hundred million dollars for large integrated facilities like chemical plants.

Partially damaged facilities could easily be out of production for months. Permanently damaged equipment would easily take over a year. The costs of lost production and customer orders that cannot be supplied could even bankrupt smaller companies.

Entities with Responsibility and Expertise in Maintaining Electric Reliability Are All Expressing Concern about EPA Regulations

1. National Electric Reliability Corporation (NERC):

(2011 Assessment and testimony to FERC) on 4 EPA rules: “Environmental regulations are shown to be the number one risk to reliability over the next 1 to 5 years.”

- 36-59 GW of retirements on top of 38 GW of retirements announced just in the last year, significantly higher than what the EPA is predicting. A total of 1350 units at 525 stations are affected.
- “So for regulators, based on the results of this specific assessment, more time is needed to ensure NERC reliability standards can be met.”

2. SPP:

(9/20/11 letter to EPA) on CSAPR: "negative implications to the reliable operation of the electric grid in the SPP region raising the possibility of rolling blackouts or cascading outages that would likely have significant impacts on human health, public safety and commercial activity.”

3. ERCOT:

(9/1/11 study) re: CSAPR: Texas is at risk of rolling blackouts this Winter and next Summer.

4. PJM:

(8/4/11 letter to EPA and 11/22/11 comments to FERC) re: MATS (Utility MACT) rule: “the analysis supporting the Proposed Rule has underestimated the risks to reliability of electric supply in light of the hard deadlines imposed pursuant to [Section 112 of the Clean Air Act, the statute under which EPA is promulgating the MATS rule].” “[T]he number of potential retirements and retrofits, and the tight time frame associated with the same, could be unprecedented in scope.”

5. MISO:

(10/13/11 report and 11/22/11 comments to FERC): (a) “[r]eliability in the Midwest will be severely challenged through implementation of the proposed rules;” (b) approximately 13 GW of capacity (and possibly as high as 22 GW) will retire as a result of EPA regulations in the MISO footprint alone (far higher than EPA predicted); (c) reserve margin deficiencies are observed as early as 2012 (and they got worse through 2015 and beyond); (d) \$880 million worth of transmission upgrades necessary to mitigate the impacts of those retirements on electric system reliability (\$523 million of these upgrades are “long lead time” upgrades that cannot be in place by 2015); (e) \$33 billion worth of infrastructure investment would be required in the MISO footprint “to retrofit and/or replace units;” (f) MISO staff not yet able to fully understand the reliability impacts of

retrofit schedules—i.e. how the system would be able to handle large amounts of maintenance outages necessary for significant retrofits by 2015.

6. Reliability First Corporation:

(Long Term Resource Assessment for 2012-2021): EPA-driven unit retirements could create reserve margin deficiency by 2015, “MISO would need additional resources beyond those [planned and conceptual resources] identified in this assessment.”

7. State Public Service Commissions:

(SC, SD, WV, NC, TX, LA, WY), expressing concern over lack of adequate reliability assessment, have asked FERC to convene joint FERC-state board to study the issue (FERC Docket No. ELII-62-0000).

8. Southern Company:

(11/22 comments to FERC): “We have concluded that the EPA regulations cannot be fully implemented consistent with our responsibility to provide adequate reliability and without interruption or rationing of electricity service until not less than six years after the Utility MACT regulation and requirements become final

There is not an adequate basis for the EPA to conclude that the reliability of the electric grid can be adequately maintained under the directives imposed by the Utility MACT rule.”

9. Westar Energy:

(11/22/11 comments to FERC): “largely because of the short time line for implementation allowed by EPA, evidence available to the [Federal Energy Regulatory] Commission and EPA demonstrates that CSAPR poses a grave threat to reliability of the electric system Westar would need to shed load that is, implement rolling blackouts – from April through August because the reduced generation necessitated by CSAPR compliance would be substantially less than customer demand for electric energy.”

10. FERC staff:

In 2010, FERC staff conducted a preliminary assessment showing 131 GW of electric generation “very likely,” “likely,” or “somewhat likely” to retire, a figure an order of magnitude greater than EPA’s estimate. EPA CSAPR and MATS reliability assessments are no more than regional resource adequacy studies which fail to assess effect of specific retirements on local reliability and potentially cascading impacts.

11. PJM:

(8/4/11 comment letter to EPA on MATS): EPA’s analysis falls short in providing the detailed and rigorous examination of reliability as PJM has described in the previous sections, especially as applied to local reliability issues.

12. FERC Chairman Wellinghoff:
(9/14/11 hearing before Subcommittee on Energy and Power of the House Energy and Commerce Committee), regional and national resource adequacy studies of the type EPA conducted are irrelevant in assessing reliability.

13. FERC Commissioner Moeller:
(8/1/11 response to Senator Murkowski), referring to issues that relate to localized reliability concerns, “[a]ccording to the information that I received from Commission staff, they have pointed out to EPA that a reliability analysis should explore transmission flows on the grid, reactive power deficiencies related to closures, loss of frequency response, black start capability, local area constraints, and transmission deliverability.”

14. FERC Commissioner Moeller: (at 9/14/11 Energy and Power Subcommittee hearing):
“[W]hat really matters is how [retirements] impact operations and reliability at the local level, because of the specifics of load pockets and the physics of electricity flow. And I actually thought the FERC staff study was pretty good, because it went into a lot of the variable factors....”

15. FERC Commissioner Spitzer (at same hearing):
“The aggregate studies aren’t helpful on the question of reliability. They have some merit in determining potentially wholesale power prices across the country and across the grid, but, as my colleagues have all pointed out, location matters in electricity. And substantial excess capacity in Nevada may not help the folks in Arizona where I come from if 3 coal plants disappear from the grid.”

16. FERC Commissioner Norris (at same hearing):
[H]ere’s my concern from a reliability perspective: smaller plants are typically dirtier and older, but there are advantages in the system to smaller plants. They ramp up and down faster, they might be in locations where the voltage support is key. And I can go through a variety of other examples of where they’re located can make a lot of difference. And that’s why I think we need to dig down deeper into the impacts here, because they will be a disproportionate number of smaller, older, dirtier plants affected. But their role in the overall electric grid needs to be better analyzed.”

FERC Criticism of EPA’s Failure to Conduct Cumulative Assessment

1. FERC Commissioner LaFleur (9/14/11 prepared testimony to Energy and Power Subcommittee):

“For some time now, we have been hearing about the EPA’s proposed air and water regulations and their potential to affect our energy supply. Although not all of these regulations are final, I believe it is important to consider them as a package when assessing their potential effect on reliability. This is because the owner of a power plant will appropriately consider all of its EPA compliance obligations, among other factors, in determining whether it is economically feasible to retrofit or repower a unit, or whether it makes economic sense to retire the unit.”

2. FERC Chairman Wellinghoff (responses to questions from the Energy and Power Subcommittee following hearing):

Question: Why did Commission staff take the position that it was important to cumulatively assess the impact of all the upcoming EPA regulations? During meetings with EPA staff, did EPA explain its preference for completing “individual best case studies” (as opposed to a cumulative assessment), as suggested in the documents accompanying the Commission’s July 27th letter?

Answer: Commission staff took this position because the effects to system reliability are based on the cumulative impact of all the proposed regulatory factors. I do not know why EPA did not do a cumulative assessment.

3. FERC Office of Electric Reliability:

EPA’s analysis “focused only on the effects that the Transport Rules would have on the nation’s electric generation capacity—specifically the reduction of coal plants [and] did not consider the cumulative impact from additional legislative initiatives, including water restrictions, coal ash byproduct sequestration or any renewable generation mandates” (note of 10/20/10 meeting with EPA in material produced by FERC for Senate Energy Committee); FERC OER “wants EPA to use a holistic approach when studying the impacts of the EPA rule ... whereas EPA would like to do individual best case studies” (note of 11/4/10 meeting with EPA in material produced by FERC for Senate Energy Committee).

We look forward to hearing from you and working to ensure electricity reliability in the United States.

Respectfully

Paul N. Cicio
President