

Seminole Electric Cooperative, Inc.

James Frauen, Vice President of Technical Services & Development

Good morning, and thank you for your time. My name is James Frauen, and I am the Vice President of Technical Services and Development at Seminole Electric Cooperative (“Seminole”) located in Tampa, Florida.

Seminole is one of the largest, not-for-profit generation and transmission cooperatives in the country. Seminole provides reliable, competitively priced, wholesale electric power to nine Member distribution electric cooperatives. Approximately 1.4 million consumers and businesses in parts of 42 Florida counties rely on Seminole’s Member distribution cooperatives for electricity. Seminole’s primary generation resources include the coal-fired Seminole Generating Station (“SGS”) in northeast Florida and the natural gas-fired Richard J. Midulla Generating Station (“MGS”) in south central Florida. Seminole also owns more than 350 miles of transmission line that connect its electric generating plants to Florida’s transmission grid.

In order to meet its Member load requirements, Seminole supplements its own generation with power purchased from other utilities, independent power producers and government entities. Seminole’s portfolio reflects a mix of technologies and fuel types, including purchases from renewable resources. The diversity in Seminole’s generation mix reduces exposure to changing market conditions, helping to keep rates competitive and to maintain reliability.

On behalf of Seminole and its not-for-profit, Member-owned distribution electric cooperatives, we would like to share with you our concerns regarding electric reliability as it relates to the U.S. Environmental Protection Agency’s (“EPA”) Clean Power Plan (“CPP”).

Through EPA’s CPP modeling, EPA is proposing that Florida reduce its overall carbon (“CO₂”) emissions by 38 percent. In order to achieve the 38 percent reduction, EPA projects that more than 90 percent of Florida’s coal-fired generation will need to be retired in order to achieve Florida’s interim and final CO₂ reduction goals of 794 and 740 lb CO₂/MWh, in 2020 and 2030 respectively. The retirements include Seminole’s 1,300 megawatt (“MW”) coal-fired power plant.

The delta between the interim and final goals is so slight that essentially all coal-fired units in the state will be forced to retire or significantly reduce emissions by 2020 to meet Florida’s interim goals. Florida’s final goals will allow only two coal-fired facilities (3 units in total) to remain in the state, each of which will be required to operate at significantly reduced capacities. Under the proposed targets, approximately 8,700 MW of coal-fired generation in Florida will be pre-maturely retired. This significant loss of coal-fired generating capacity within such a short time period will cause reliability impacts in the state.

If the CPP moves forward as currently planned, new gas-fired generating units will need to be constructed to meet generation demand created by the loss of the state’s coal-fired facilities. The new

gas-fired generating facilities, transmission infrastructure and gas pipelines cannot be permitted and constructed by 2020, even if started today, much less if started in several years when the EPA and State of Florida finalize their respective rule implementation plans. Seminole's Members, and other consumers in Florida, will be required to pay increased costs in their electric bills to accommodate construction and operation of these new facilities.

Fuel diversity is especially critical for Florida given its geographic location, lack of native energy production capacity and limited electric transmission import capability. With the exception of a limited amount of electricity that can be transported into the state (2,800 MW firm), Florida is essentially an island that relies on generating units within the state to serve approximately 52,000 MW of load. Florida's current electric reliability is dependent on electric generating units' ("EGU") ability to import fuel supply for either immediate consumption, or to store it for consumption later. Coal is a storable fuel source in Florida while natural gas is not. Florida does not have the geological formations to store economically a material amount of natural gas underground. A substantial amount of coal-fired electric generation must remain in Florida to ensure some level of fuel diversity and the resulting reliability benefits. To remove more than 90 percent of coal capacity from Florida would obligate Florida to rely solely on 'just in time' inventory for nearly all of its fuel supply, with reliability consequences for any disruptions in the supply chain.

Seminole believes it makes good business sense to have a diversified generation portfolio in Florida that includes coal, natural gas, and renewable energy. Fuel diversity reduces exposure to changing market conditions, helps keep rates competitive and provides much needed flexibility during extreme weather events such as hurricanes. Displacing existing coal-fired power plants, as proposed by the EPA, will lead to increased costs for consumers, will jeopardize reliability, and will place undue stress on gas and transmission infrastructure within the State.

Florida will likely experience serious generation facility reliability issues due to a lack of gas supply. By EPA's calculations, natural gas-fired combined-cycle ("NGCC") units will be required to produce more than 85 percent of Florida's electricity in 2025; however, as stated above, this will likely be as soon as 2020. Although EPA's proposal *assumes* adequate natural gas supply is available to all utilities to support the contemplated increase in gas-fired electric generation, this assumption does not account for fuel supply risks associated with the production, processing, storage, and transportation of natural gas supply to power plants in peninsular Florida.

All of the natural gas consumed by EGUs in Florida is produced outside the state and imported via interstate gas pipelines. This supply originates from production regions very far away from the state (Oklahoma, Arkansas, north Louisiana, and south Texas) and is dependent on multiple interstate pipelines to reach Florida. Florida's increased reliance on the 'upstream' pipeline network creates a new form of risk for the state that is not addressed by EPA's proposal. To put this in perspective, the following conditions exist for the existing gas pipelines serving Florida: the Gulfstream Natural Gas System pipeline is fully subscribed and the Florida Gas Transmission ("FGT") pipeline has varying volumes of unsubscribed capacity posted on its website as of March 6, 2015. These range from 0 Dths/day in summer 2016 to approximately 110,000 Dths/day during the 2017-2021 period. Beginning November 1, 2021, and beyond, FGT has 139,000 Dths/day of unsubscribed capacity. This capacity

would not be sufficient to serve Seminole's generating needs in 2021 if we were to replace our 1,300 MW coal facility with natural gas units. It is easy to see that when other Florida utilities are required to take similar actions, there will be insufficient gas transportation capacity available in the state of Florida to support our required NGCC generation. A third natural gas pipeline is in the permitting process, but based on the project's FERC filing, under Docket No. CP15-17-000 this pipeline is already subscribed for up to 93% of its 2021 capacity. EPA must provide ample time for EGUs to negotiate contracts for the requisite gas supply and transportation capacity and for the permitting and construction of the necessary pipeline infrastructure.

EPA does not recognize efforts made by Florida utilities over the last decade in reducing CO₂ emissions within the state while increasing generation. Florida utilities increased electric generation by 10 percent between 2005 and 2012, growing from 179 million MWh to 197 million MWh. During that time, Florida utilities reduced their statewide CO₂ emission rate by 21 percent, from 1,567 lbs/MWh to 1,238 lbs/MWh, and their total CO₂ emissions by almost 11 percent, from 134 million tons to 120 million tons. Given that EPA's proposal seeks to cut CO₂ emissions by 30 percent of 2005 levels, the great progress Florida's utilities have already made to reduce CO₂ emissions from 2005 levels should be taken into account in calculating Florida's goals.

Florida's bulk transmission system was designed around base load coal generation. Dispatching NGCC facilities out of economics (such as making today's intermediate-class units run at base load under EPA's Building Block #2) would cause power to flow across transmission lines/corridors that have insufficient capacity to transport this base-load generation. If the proposed rule were to take effect prior to sufficient generation or transmission infrastructure being constructed, significant reactive deficiencies may also occur throughout the state resulting in the possibility of depressed system voltages and voltage stability concerns during normal (steady-state) conditions and contingency events. EPA has failed to assess transmission reliability impacts in Florida, including the total reactive power deficiency. Florida must have sufficient time to evaluate and model the reliability impacts due to the loss of generating capacity, which also must include a review of the ability to maintain compliance with North American Electric Reliability Corporation ("NERC") Reliability Standards.

Seminole will suffer substantial harm as a result of EPA's proposal through the early retirement of its coal-fired facility – consisting of two (2) 650 MW units. Seminole plans to operate SGS through 2045, at a minimum, and will lose more than 25 years of remaining useful life if the units are retired early. SGS generates more than 50 percent of the energy provided to our Members. SGS is equipped with state-of-the-art environmental controls and is one of the cleanest coal-fired facilities in the nation. Over the life of the facility, Seminole has been proactive in meeting regulatory requirements and has invested more than \$530 million in environmental control technology at SGS, including more than \$260 million of emission control equipment installed within the last nine years.

Seminole, as a rural generation and transmission cooperative, has primarily relied on capital borrowed from the Federal Financing Bank and loan guarantees from the Rural Utilities Service ("RUS") for the construction of its generation fleet and capital improvements to its facilities. Currently, loans related to SGS account for more than 75 percent of Seminole's total outstanding debt. If SGS were to be retired prior to the end of its useful life, the debt service related to these loans would significantly impact the

electricity rates paid by our Members. Additionally, most of Seminole's loans also contain significant prepayment interest penalties, so a strategy to prepay the debt would only further increase the cost paid by our Members. Additionally, the remaining net book value (stranded asset) would be required to be written off and the expense would be paid by our Members. The Members would continue to pay the fixed costs related to SGS without receiving any energy or capacity from its operation. Seminole will still have to serve the full requirements of our Members, and the replacement capacity related to the early retirement of SGS will either have to be constructed or purchased. This will cause our Members to pay for both the stranded asset (SGS) and the new replacement capacity.

Seminole is greatly concerned about the economic impact this rule will have on our Members and their consumers. Based on a 2011 survey, residential consumers served by our Members are predominantly rural and approximately one-third have household incomes below the poverty level. More than 75 percent have household incomes less than \$75,000. Lower-income households spend a substantially higher percentage of their income on electricity usage. Accordingly, any change in rates as a result of the proposed rule will impact them disproportionately.

Conclusion

As a result of the EPA's CPP, Seminole would suffer substantial harm with regard to economics and reliability – a reality that must be addressed. Seminole is concerned about fuel diversity in Florida and the availability of natural gas resources for future power generation under an "as proposed" CPP scenario. Finally, Seminole is seeking more time for compliance through elimination of the 2020 interim goal and extension of the final 2030 implementation date. These time extensions would not only benefit the states in developing their implementation plans but would provide power generation entities the opportunity to plan and develop reliable generation and transmission resources.

In consideration of the forgoing information, Seminole has the following requests for action by FERC to help ensure reliability of the nation's electric system:

1. Provide recommendation and support for elimination of the 2020 interim goals for reliability purposes and extension of the 2030 goals for economic reasons, such as operation of existing resources for the remainder of their useful life.
2. Coordinate detailed review of reliability impacts associated with the CPP at both the national and regional levels.
3. Provide recommendation and support for implementation of a Dynamic Reliability Safety Valve concept.
4. Prepare and implement a national program for expedited permitting of natural gas infrastructure.