



# Clean Power Plan - What Next?



## Environmental Permitting Summer School

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# Really Now – What Next?

- EPA Administrator Gina McCarthy was Keynote Speaker at June 2015 AWMA Conference in Raleigh, NC
- Answered Questions from Audience through AWMA President in an Interview Format.
- Said they read many Thousands from the Millions of Comments Submitted and Took them into Consideration.
- No Hedging - EPA Really **will** Finalize a Section 111(d) Clean Power Plan Rule circa August with Aggressive State Implementation Plan (SIP) Guidelines.
- There will be a Federal Implementation Plan (FIP).



# We'll Have to Read it First!

- Did they Address Concerns of FDEP and FPSC?
  - E.G., Rule Punishes instead of Rewards for Early Implementation of Low Carbon Natural Gas Combined Cycle (NGCC) Technology.
  - Numerous Technical Misunderstandings or Errors.
- Did they Consider the Pleas of Munis/COOPs?
  - E.G., Stranded Costs from Early Retirement of Coal Plants and their Recent Expensive Air Pollution Control Equipment.





# Path to 2012 Baseline

- In 1998, CO2 Emissions from Florida's Fossil Fleet were Roughly 1,800 pounds of CO2/Megawatt-Hour (lb/MWH).
- About like a New Modern Supercritical Coal Unit.
- About What is Expected of Kentucky in 2030.
- By 2005 Emission Rate was ~1,500+ lb/MWH.
- By 2012 it was 1,200 lb/MWH. About a 33% Improvement.
- Per Draft EPA Wants Florida to Achieve 794 lb/MWH for period 2020-2029. Would Need to Achieve ~ 850 lb/MWH by 2020 (~30% Reduction), 740 lb/MWH by 2030 (~ 38%).
- 740 lb/MWH Represents Most Efficient H-Class NGCC Unit Maintained in New, Clean Shape, Fully Dispatched.



# Can it Possibly be Done?

- Not by Fossil Fuel Alone. But Fossil Fuel will Still be by Far the Main Method of Power Generation.
- Dispatch to Existing NGCC Units and Build New Ones.
- FPL NGCC Capacity increased went from ~2,000 MW of NGCC in 1998 to ~16,000 MW in 2016 when Port Everglades Starts ups. (I did Every Permit)
- ~80% of their Florida Fossil Fleet Capacity (ex. JEA piece).
- Maybe 90% of their Florida Fossil Generation. Closing in on 850 lb CO<sub>2</sub>/MW-hour in 2014.
- About Where State Needs to be by 2020 per Draft CPP.
- By New NGCCs, Improvements on earlier NGCCs, and solar/wind/biomass FPL will achieve 740 lb/MWH by 2030.



# Let's Look at Basic Process

- It took 17 years of Planning, Securing Capital, Public Service Commission Dockets, Environmental Permits, etc. To Transform FPL Fleet without Price Shocks.
- Could take that long to do the Same for Rest of Companies. Some Longer than Others.
- Each New NGCC, non-Fossil Project, PPA will Require PSC Finding that it is Prudent. They will be Subject to Competing Bids. IOUs will want to try Environmental Cost Recovery Clause.
- PSC, FRCC, Legislature, DEP, Energy Office, Customers, Markets will Maintain their Traditional Roles.
- I Don't Predict a SIP with 850 lb/MWH Target for 2020 or 794 lb/MWH Average for 2020-2029.
- Achievement of 740 lb/MWH by 2030+ is Plausible.





# Pyramids Built Using Ramps!

- Smooth Transition to Progressively more NGCCs.
- No Wholesale Coal Unit Shutdown in 2020.
- Single File Phase out of Coal. Oldest, Least Controlled Shut Down First (Crystal River 1,2, Lansing Smith 1,2 and so forth, Culminating in Crystal River 4, 5 in 2030+).
- Companies with Larger Customer Base Can Finance the Solar, Biomass, Nuclear. Maybe Others can Buy Piece of the Action.
- I think Coal-Heavy Munis/Coop will Prefer Mass Limits.



# Questions ?— Ask the Sphinx

