

The Coal Institute

April 14, 2016

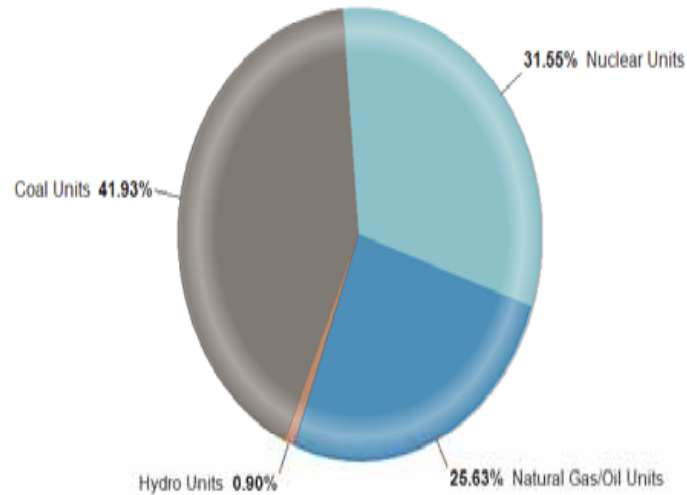


Operation Summary

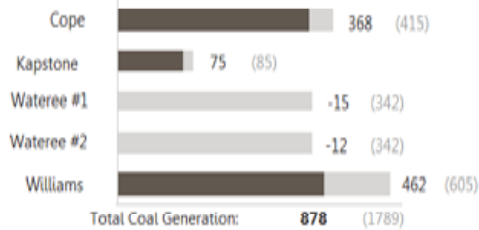
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Total Current Generation: **2094** Yesterday's Peak Load: **2645**
 Current Instantaneous Load: **2515** Today's Forecasted Peak: **2600**
 Last Hour's Integrated Load: **2450**

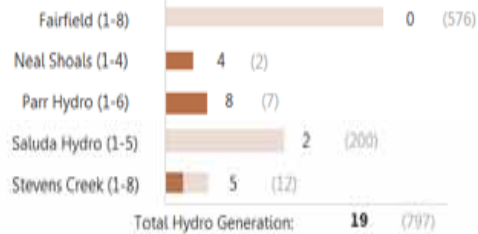
Generation Mix



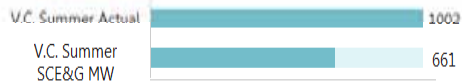
Coal Units



Hydro Units



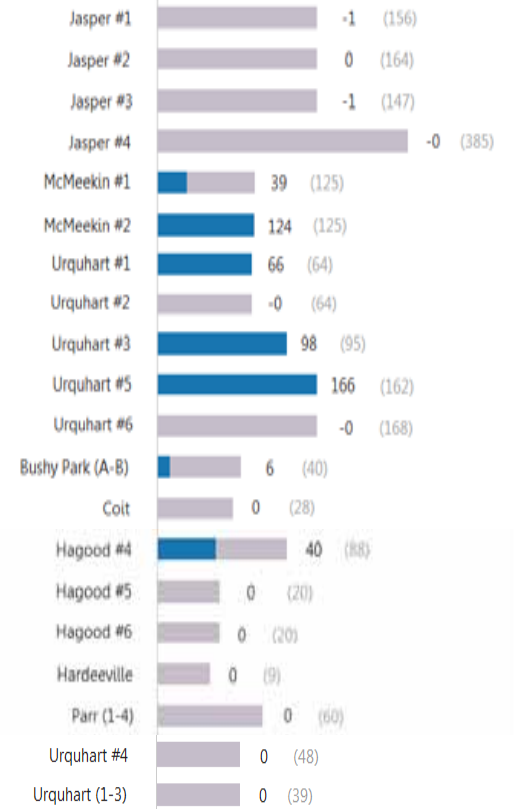
Nuclear Units



Scheduled Purchases



Natural Gas/Oil Units



Total Natural Gas/Oil Generation: **537** (2007)

Lake Levels



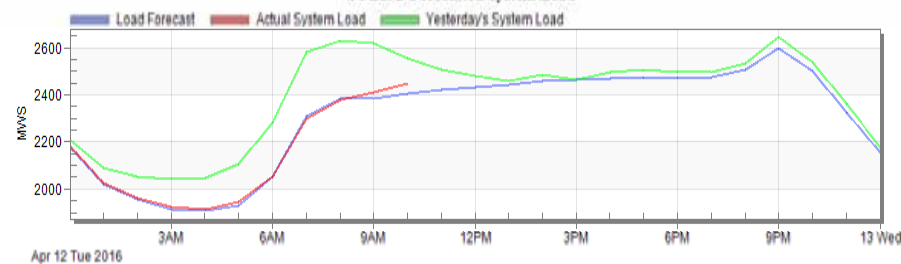
Display Pie Chart w/ Purchases

Go

View 24 hour Instantaneous System Load

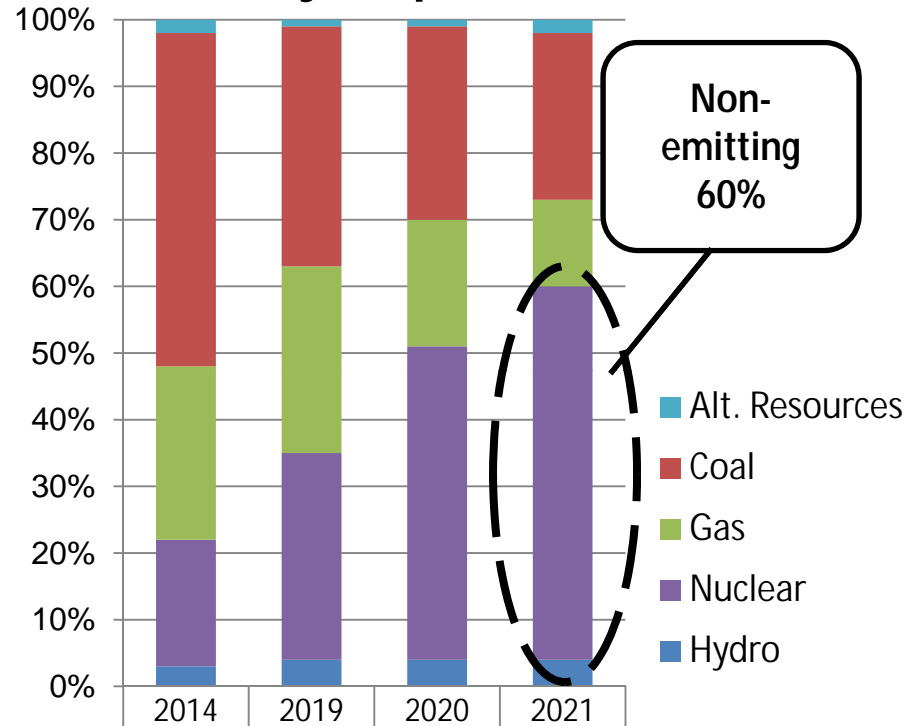
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SCE&G Forecasted System Load

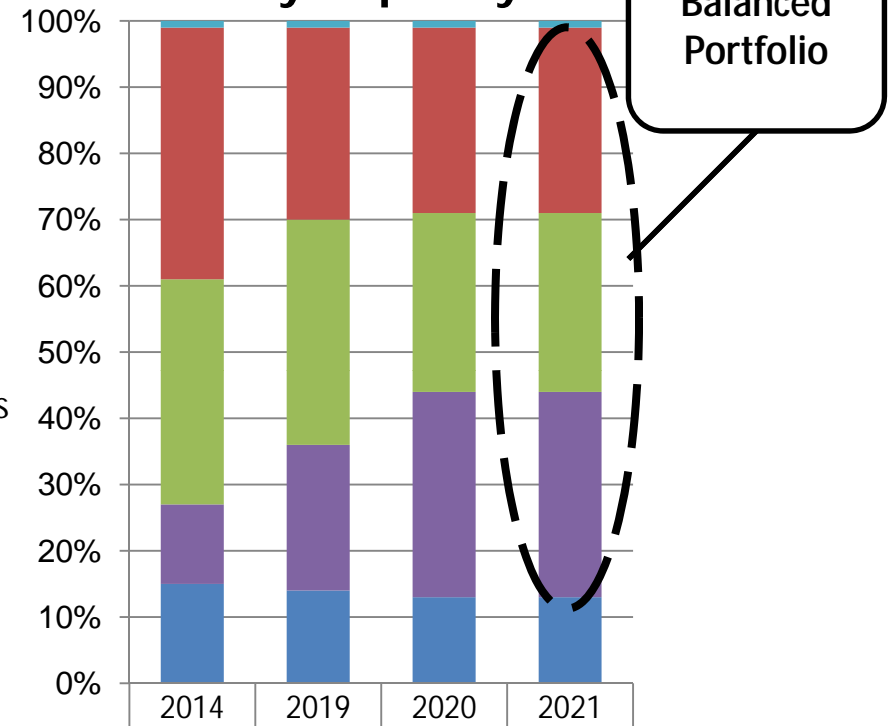


Generation Mix by Dispatch and Capacity

By Dispatch



By Capacity



	2014	2019	2020	2021
Alt. Resources	2%	1%	1%	2%
Coal	50%	36%	29%	25%
Gas	26%	28%	19%	13%
Nuclear	19%	31%	47%	56%
Hydro	3%	4%	4%	4%

	2014	2019	2020	2021
Alt. Resources	1%	1%	1%	1%
Coal	38%	29%	28%	28%
Gas	34%	34%	27%	27%
Nuclear	12%	22%	31%	31%
Hydro	15%	14%	13%	13%

South Carolina's Renewables – Act 236

Landmark legislation for the citizens of South Carolina produced by a coalition of Utilities, Cooperatives, Business and Governmental Organizations, Environmentalists, Local Solar Installers, Energy User Groups, Non-Profit Advisors, and the Office of Regulatory Staff.

Goal: To promote the establishment of a reliable, efficient, and diversified portfolio of distributed energy resources for the State.



Five Main Points of Act 236

1. Setting a “value” to solar in Net Energy Metering (NEM)
2. Establishing Distributed Energy Resource (DER) programs to promote Renewables
3. Developing Leasing Protections under The Office of Regulatory Staff
4. Special Program Considerations for Tax Exempts
5. Annual cost recovery caps in place at \$12/residential, \$120/commercial and \$1,200/industrial

Investment Tax Credits (ITCs)

Federal

- 30% Investment Tax Credit
- Scheduled to expire at the end of 2022 with stepped reduction (originally set to expire 12/31/16 until extended)

South Carolina

- 25% Investment Tax Credit
- Capped at \$3,500 per year and \$35,000 in total

JERRY ZUCKER SOLAR PARK

500kw - 2,014 panels - 3+ acres

Owned and operated by TIG SUN ENERGY III, LLC
A member of The InterTech Group.



In collaboration with



All inquiries to:

TIG SUN ENERGY III, LLC
4836 Jenkins Avenue
North Charleston, SC 29405

843.744.5174

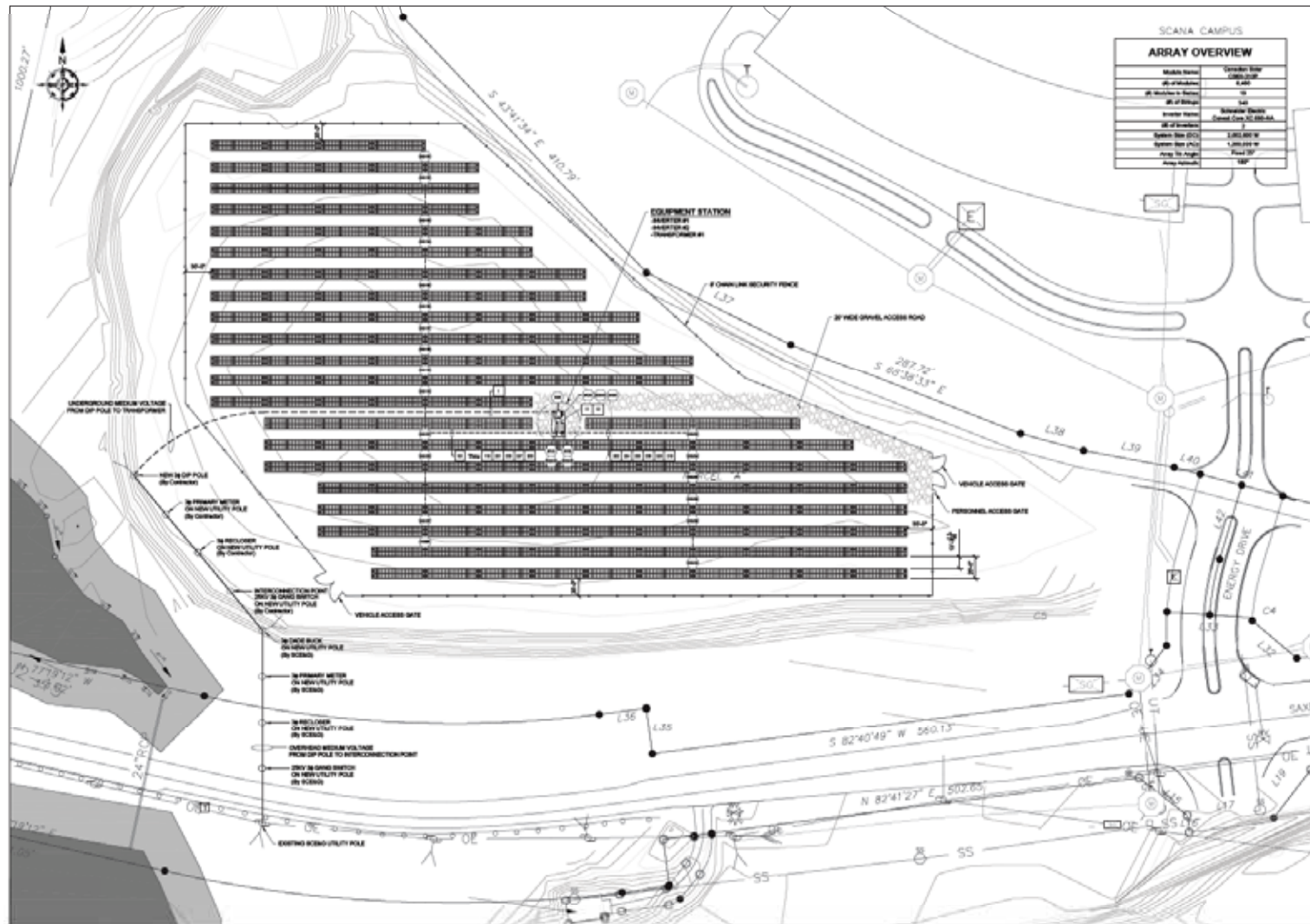


Utility-Scale Programs

- Company Sited Projects
 - Leeds Avenue (500 kW) in North Charleston
 - Otarre in Cayce
- Requests for Proposals
 - Full 40 MW of Solar Farms
 - RFP Issued in August 2015
 - Should be online by end of 2016



Otarre Solar – 2 MW



Lake Murray Dam – Future (Battery Storage)



Renewable Energy at SCE&G

Biomass Paper Byproduct

- 55 MW (Kapstone)

Solar Photovoltaic

- 6 MW existing (~600 customers)
- 500 kW – Leeds Avenue

Hydro Plants

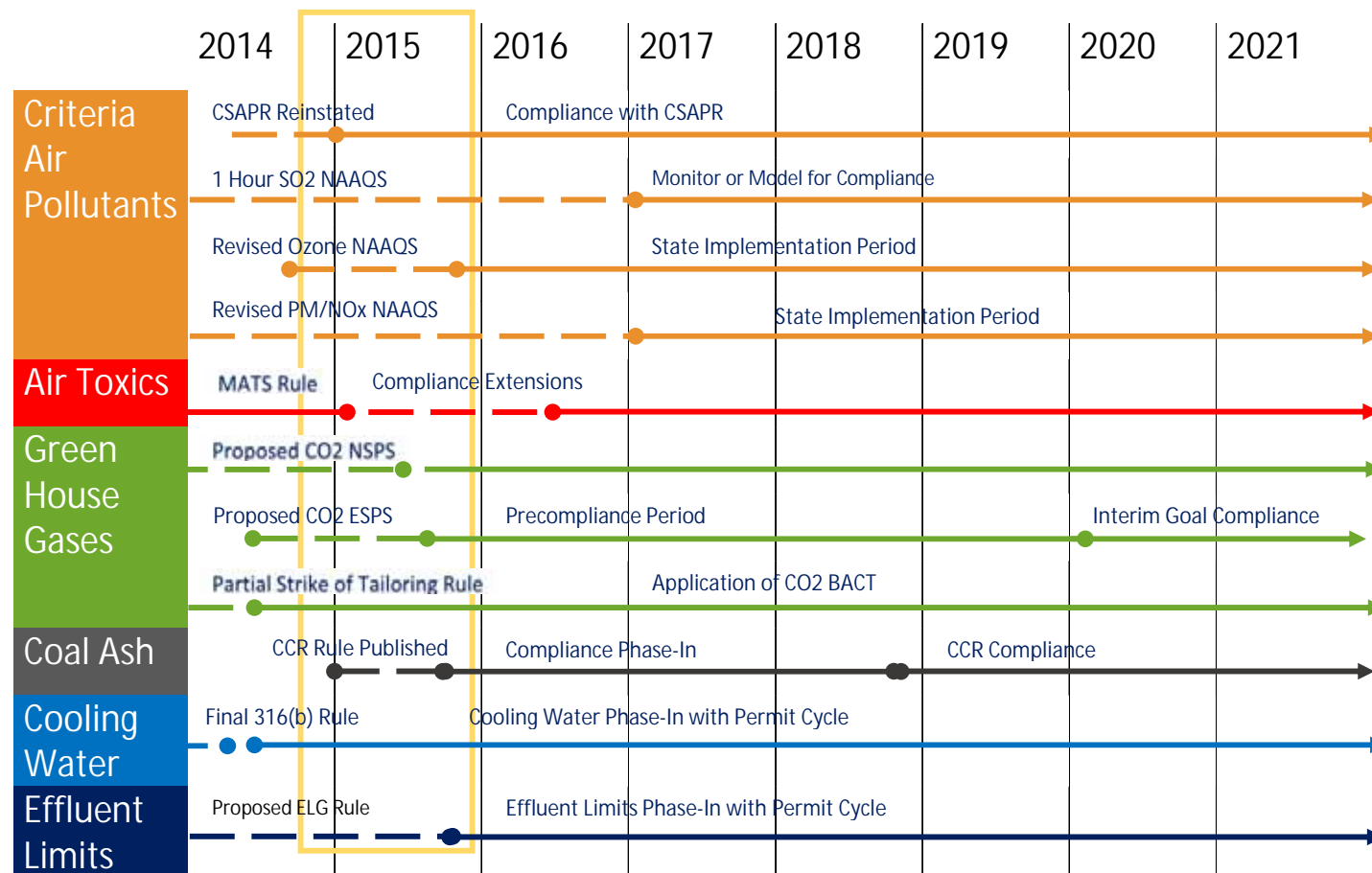
- 221 MW (Saluda, Neal Shoals, Parr, Stevens Creek)

Wind Research

- SCE&G Innovation Center Wind Turbine Drive Train Testing Facility at Clemson University Research Institute



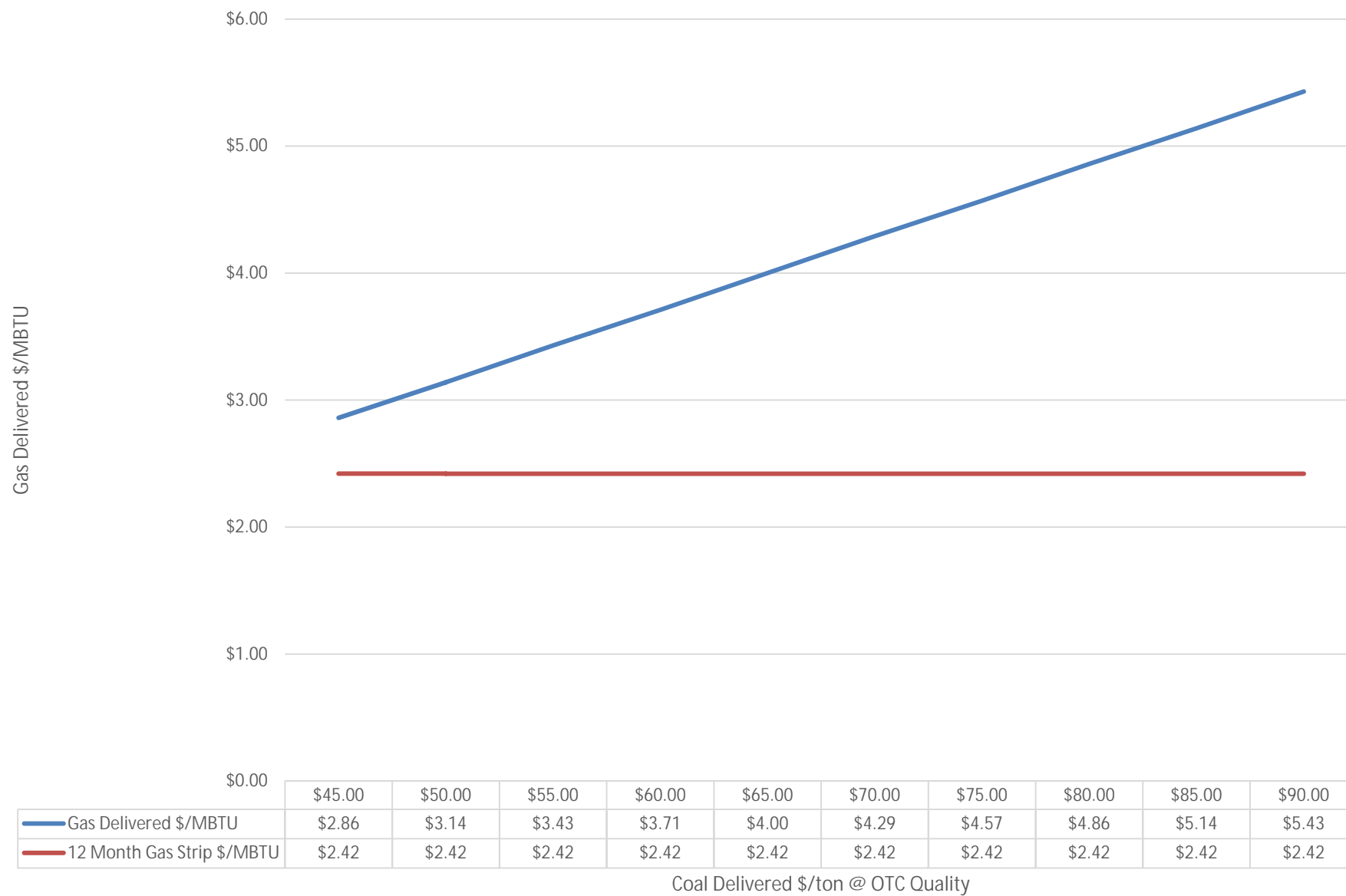
Timeline of Major EPA Actions for Electric Generation



Coal Fired Capacity

- Active Coal Units
 - Cope
 - (Gas Capable / Volume?)
 - CSX Only
 - Wateree
 - NS & CSX Served
 - Williams
 - CSX Served
 - Mid-Stream Ship Unloading
- Former Coal Units
 - Urquhart 1,2,3
(Converted to Gas)
 - Canadys (Dismantled)
 - McMeekin
(Converted to gas)

Coal \$/ton Delivered vs Gas \$/MBTU Delivered Breakeven Analysis



Immediate concerns:

- Outages and Start-ups:
 - If a unit is off line, harder to schedule back on
 - Minimum load restrictions (between 65% and 75% of net rating)
 - Start up/maintenance issues have increased
 - Attractive purchased power options
 - Combined Cycle Gas plants provide a large amount of flexibility.
- This leads to:
 - Inaccurate burn forecasts
 - Increased % of spot coal as part of our portfolio
 - Increased Inventories
 - Potential rail congestion into the plants
 - Inbound coal delivery back log
 - Transportation provider penalties

Looking Forward in Time (Coal Suppliers)

- Coal Procurement Flexibility
 - Multiple loading points on different RR's
 - Non-Ratable Production? Can it be or how can it be successful over the long term?
 - How do you overcome cash flow issues?
 - Variable quantity options, how variable can you get while maintaining reliability

Looking Forward in Time (Transportation Providers)

- RR ability to move coal on a non ratable schedule
 - » No contract minimum guarantee's
 - » Fixed variable rail contract
- Rail car management
 - » RR supplied cars?
 - » Car sublease agreements between utilities for base amount?
 - » Lease cars from the RR / they manage interchangeability between utilities and we pay by trip?
- Import Vessels
 - » Does import coal become the balance
 - » Do utility owned cycle trains from Charleston to Cope and Wateree make sense?

QUESTIONS?