

Presented at: Energy in North Florida: Policy and Resiliency Workshop

Gainesville, Florida August 13, 2012 Ted Kury Director of Energy Studies Public Utility Research Center University of Florida





- State of Carbon Policy
- The EPA as Energy Policy Arm
- Role of Natural Gas

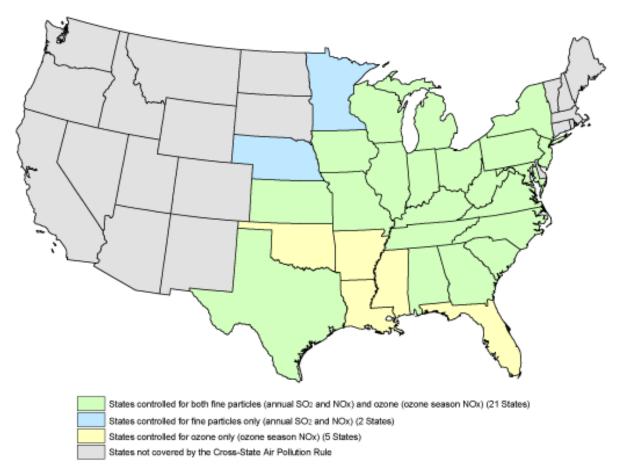
Carbon Policy in the U.S.

- No further movement since Waxman-Markey and Kerry-Boxer bills died
- State of the economy has reduced the willingness of the administration to address emissions reduction through an explicit carbon tax
- Likely no movement until the economy begins to show improvement
- Likely no movement with a change in administration
- Significant long term investments are being made, making some assumption about carbon prices
- Some are going to be wrong, leading to stranded assets

Cross-State Air Pollution Rule

- Revised rule to control SO₂ and NO_x emissions, replacing CAIR
- Initial allowance allocation this past summer caused significant outcry, most notably in ERCOT
- EPA revised allowance allocation in the fall, but some states remain in significant short positions
- With stay from DC court, CAIR is still in place with CSAPR implementation now delayed from 2012 until 2014

EPA Map of Transport Rule States





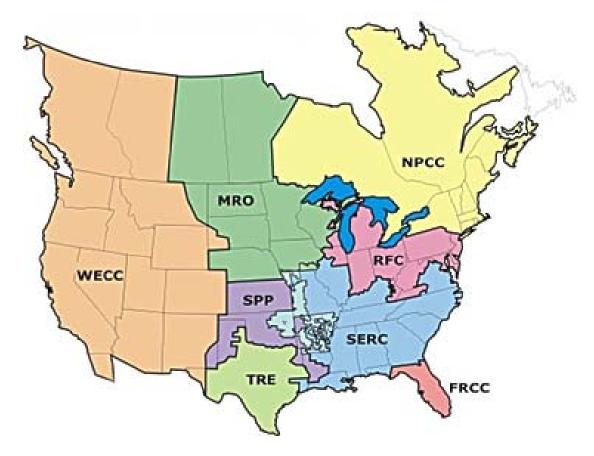
Balance between 2012 Allowance Allocation and 2010 Emissions

State	SO2	State	NOx
West Virginia	26,877	South Carolina	4,257
Tennessee	26,466	Alabama	3,618
Alabama	7,518	West Virginia	3,198
North Carolina	5,540	Georgia	185
Illinois	3,047	Tennessee	-55
Iowa	278	New Jersey	-1,297
Maryland	-433	Minnesota	-2,196
Minnesota	-435	New York	-2,859
Nebraska	-1,736	Maryland Wisconsin	-3,146 3,570
Kansas	-4,558	Arkansas	-3,579 -3,636
New Jersey	-7,756	Indiana	-3,692
South Carolina	-7,808	Mississippi	-4,040
Michigan	-18,707	Kentucky	-4,350
New York	-19,342	Louisiana	-6,040
Virginia	-25,403	Texas	-6,045
Missouri	-25,403 -32,881	Virginia	-6,724
	•	North Carolina	-7,078
Wisconsin	-33,136	Missouri	-7,426
Kentucky	-52,681	Iowa	-7,480
Georgia	-63,566	Ohio	-8,319
Indiana	-135,697	Kansas	-9,072
Pennsylvania _	-140,368	Florida	-9,254
Texas	-162,586	Nebraska	-15,621
Ohio	-268,097	Pennsylvania	-15,765
		Michigan	-21,402
ity Research Center		Illinois	-32,267
ity Research Center		Oklahoma	-71,433

Mercury and Air Toxic Standards

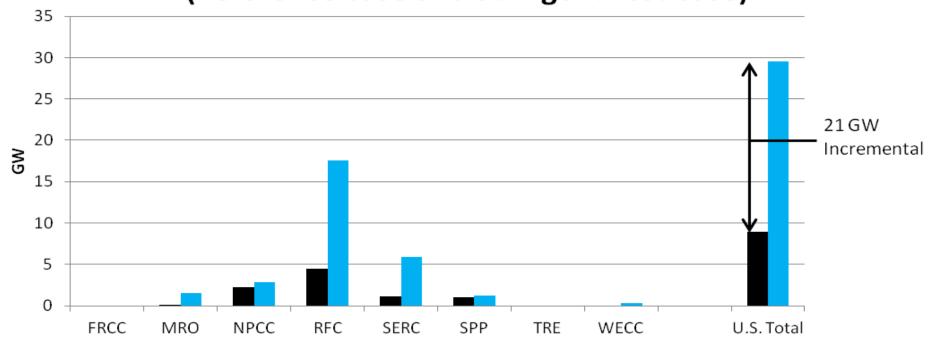
- Apply to all coal and oil-fired units 25 MW or greater
- Compliance scheduled to begin in 2015, but state authorities can authorize an additional year
- New construction must be as effective as any current comparable unit
- Existing construction must be as effective as the top 12% of existing comparable units
- EPA may regulate beyond these standards

NERC Planning Regions



DOE Impact Assessment

Cumulative Coal Retirements by 2015 (Reference Case and Stringent Test Case)



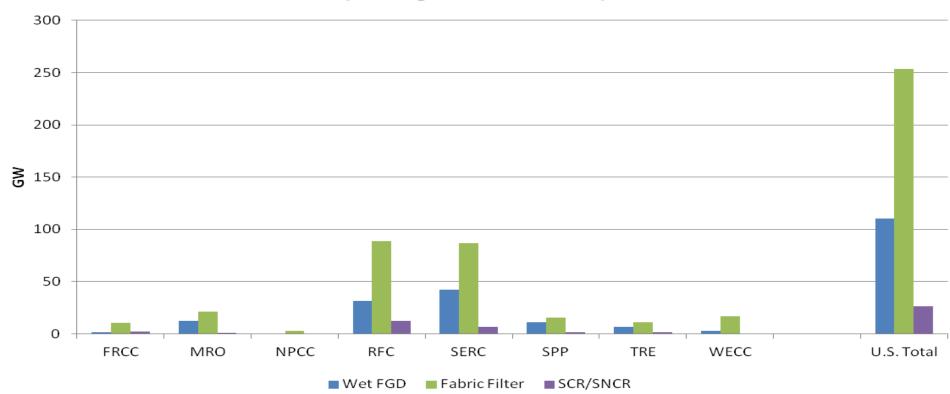
■ Reference Case

■ Stringent Test Case



DOE Impact Assessment

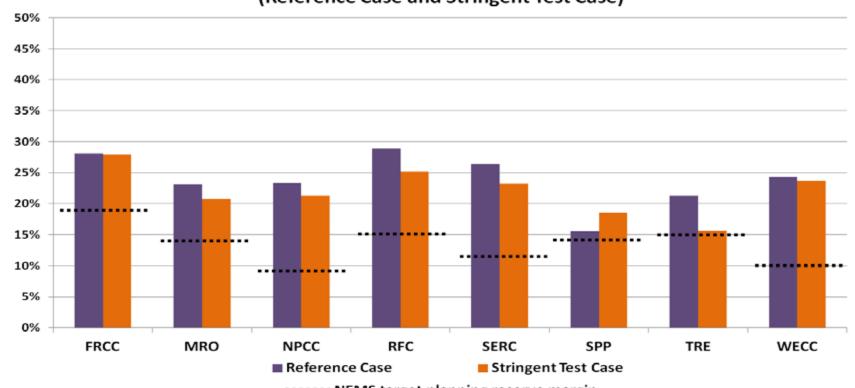
Cumulative Retrofitted Capacity by 2015 (Stringent Test Case)





Impact on Reserve Margins

2015 Planning Reserve Margins by NERC Region and Scenario (Reference Case and Stringent Test Case)



****** NEMS target planning reserve margin

EPA Regulation of Coal Ash

- Coal ash regulation in the wake of the 2008 containment failure at TVA's Kingston plant
- Two proposals for regulation
 - Ash as hazardous waste; provide standards for disposal
 - Ash as non-hazardous waste; supply guidelines for disposal, but states establish guidelines
- Environmental groups recently sued EPA over 'refusal' to regulate coal ash
 Public Utility Research Center

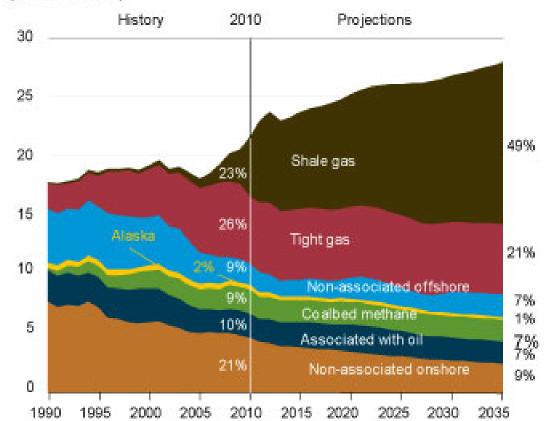
VERSITY of FLORIDA

EPA Draft Emissions Rule for New Power Plants

- Draft rule issued on March 25
- Would limit CO₂ emissions from new power plants to 1,000 pounds per MWh
- Plants must achieve emissions standard on average over 30 years
- Criticism stems from current problems with CCS technology
- Possible precedent in new natural gas rules



Figure 2. natural gas production, 1990-2035 (trillion cubic feet)







- U.S. now expected to become net exporter of LNG around 2016, and net exporter of all natural gas in 2021
- New rules for natural gas drilling on Federal lands could surface shortly from Department of the Interior, but were expected last fall
- Focus on chemical disclosure requirements, well integrity, and well construction
- Difficult to assess costs before rules are known, but certain to increase
- New EPA rule focuses on air pollution at well sites
 - Requires capture by 2015, allows flaring until then



- EPA continues to develop policy initiatives
- Uncertainty around the form that environmental regulations will eventually take
- Concern over the cost of the regulation without regard for the fact that delay costs money as well
- Flexibility and communication are essential to addressing the challenges



Ted Kury

ted.kury@cba.ufl.edu