PLANNING FOR COAL RETIREMENTS IN FLORIDA

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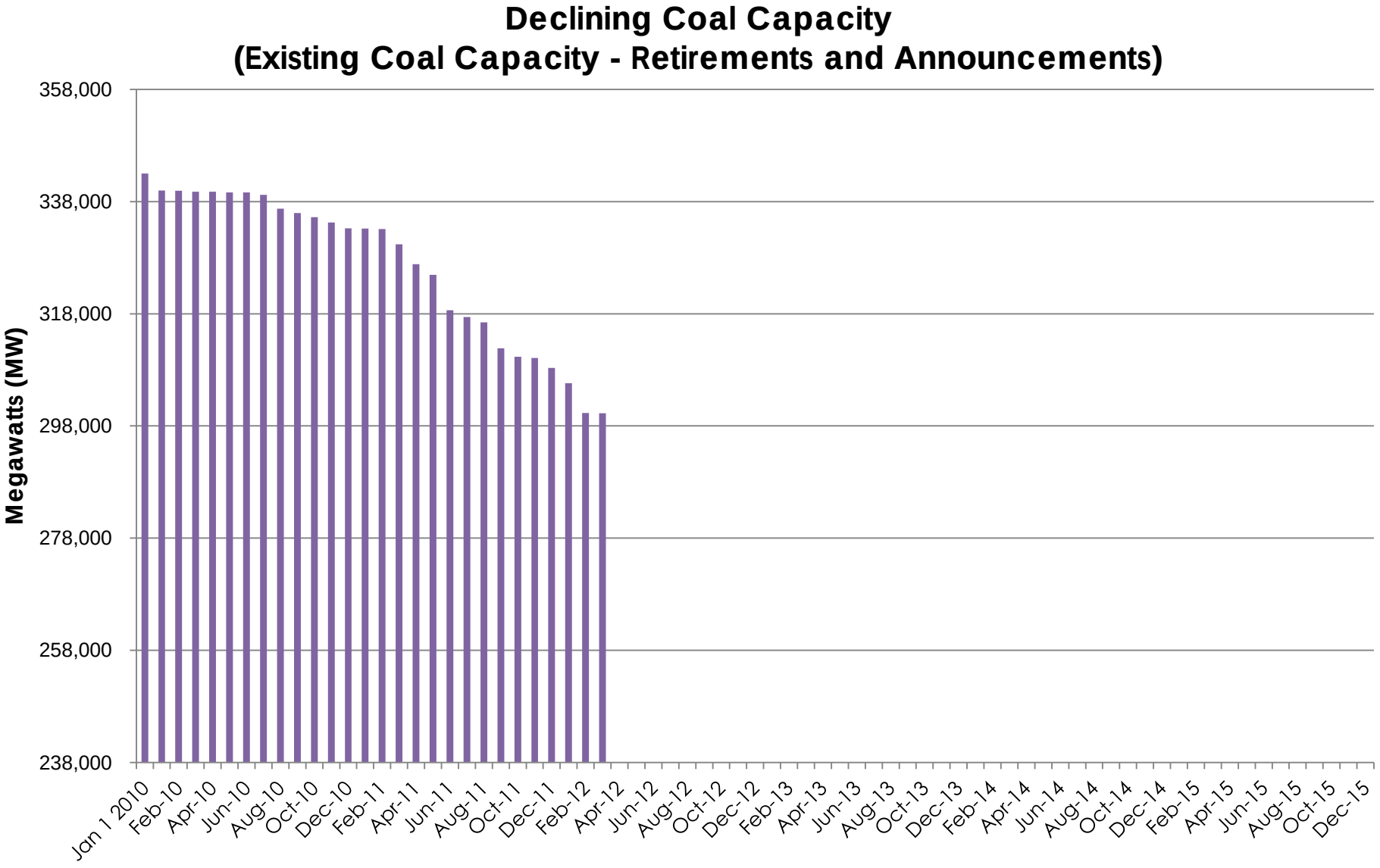
Coal capacity is retiring across the country.



Time to start planning for retirements.

The question for regulators is whether to approve coal plant closures in the face of new and future EPA regulations, or to approve utility investments in costly pollution controls to keep the plants running..... In the end, regulators should enter a decision that addresses all of the relevant risks.

- *Practicing Risk Aware Electricity Regulation* at p. 9.

The Commission should carefully plan for coal retirements.

The PSC has the power and duty to address retirement and retrofit decisions in the Ten Year Site Plan (TYSP) process:

- **Utilities must provide "reasonably sufficient, adequate, and efficient service," and must do so at "fair and reasonable" rates. F.S. 366.03, 366.05.**

- **The Commission also has the authority to require construction of new facilities, or the repair of old ones, in order to meet reliability needs. F.S. 366.05(8).**

- **The TYSP process provides guidance as to a utility's "power-generating needs," and the future of its fleet. F.S. 186.801.**

- **Past TYSP reviews include consideration of conservation, retrofits, fuel diversity, new plants and retirements.**

<u>The Commission can and should use this process to begin understanding, and planning for, retirement risk.</u>

What's coming down the pike?

- Mercury and Air Toxics Standards (MATS) –
2015/2016 compliance deadline

- SO2 National Ambient Air Quality Standards (NAAQS) –
State compliance plan due 2013

- Regional Haze/ Best Available Retrofit Technology (BART) –
Compliance plan will be in force in 2013, for a five-year compliance period

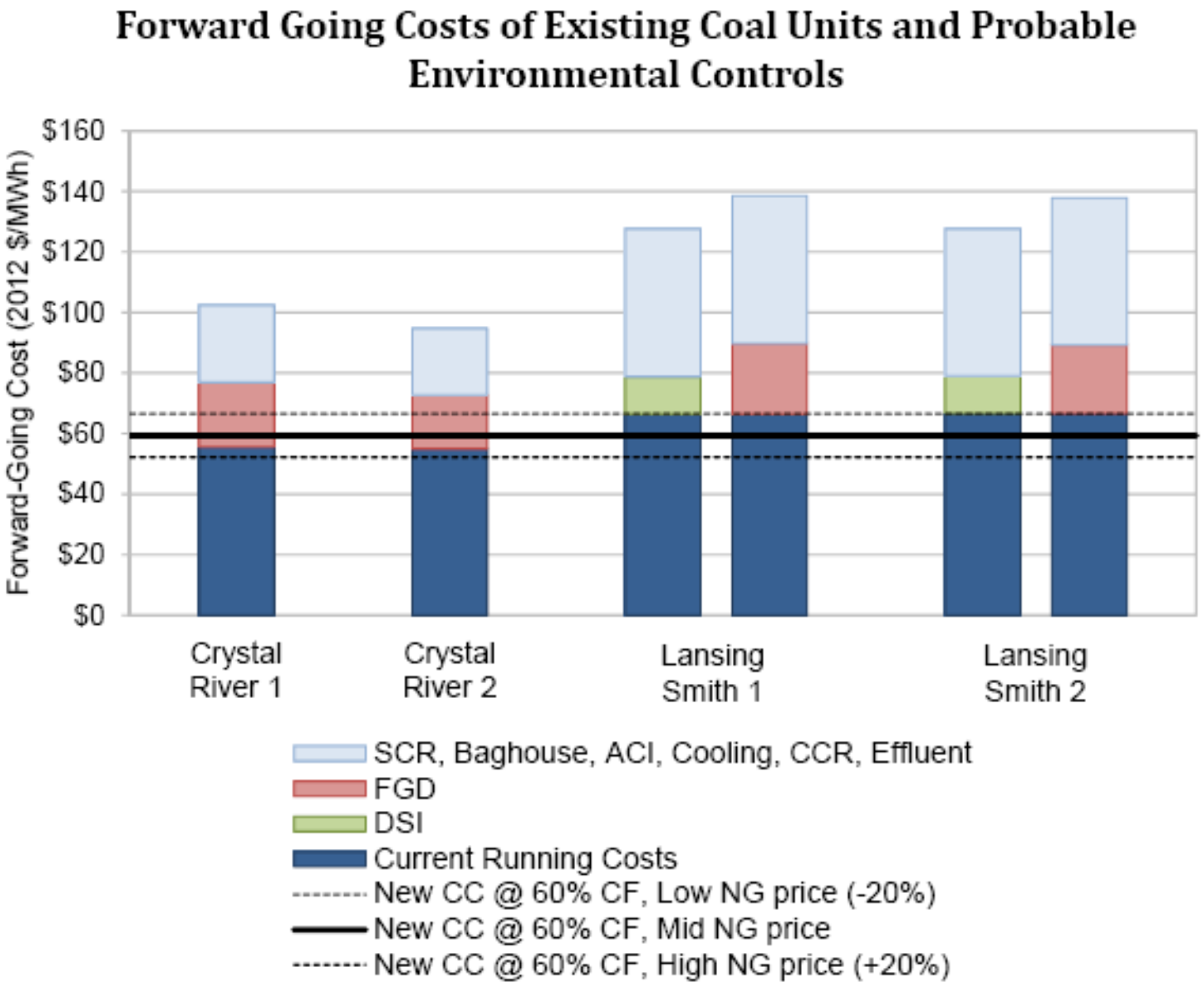
- Cooling water standards –
Final rule by June 2013

- Coal combustion residuals (ash) standards –
Proposed rule in 2010; final rule coming soon

- Carbon pollution standards for existing power plants –
Standards for new plants have been proposed; standards for existing plants will follow

- Etc. (Effluent limitation guidelines, ozone and PM NAAQS…)

Retrofitting old plants does not make economic sense.



Our analysis squares with the utilities' cost estimates:

	FGD Capital Costs ($m) Synapse Estimate	FGD Capital Costs ($m) Company Estimate	SCR Capital Costs ($m) Synapse Estimate	SCR Capital Costs ($m) Company Estimate	Baghouse Capital Costs ($m) Synapse Estimate	Baghouse Capital Costs ($m) Company Estimate
Crystal River 1 & 2	**$517**	$445	**$200**	$182	**$146**	$250
Lansing Smith 1	**$114**	$112	**$40**	$66	**$29**	$36
Lansing Smith 2	**$136**	$133	**$48**	$75	**$36**	$43

But you don't have to take our word for it…

"Ultimately MATS will require the installation of controls on Crystal River units 1 & 2 or force their retirement."

Moreover: "[T]he capital cost and annual operating cost associated with retrofitting [FGD scrubber] systems on Units 1 and 2 was cost-prohibitive."

-Progress Energy compliance filing with FL DEP (May 2012)

But you don't have to take our word for it:

"[C]ompliance with unit specific emissions limits contained in the [EPA]s' newly released Mercury and Air Toxics Standards (MATS) rule may severely restrict Gulf's coal-fired generation or completely eliminate the generation produced by Gulf's coal-fired units at Plants Smith and Scholz as early as 2015.

[Further compliance obligations impose] total combined compliance costs that render controlled coal-fired operations uneconomical in the long term."

-Gulf TYSP at 3.

Next steps for the Commission

- Develop full environmental compliance obligation information, including potential costs and retirement timelines, in Ten-Year Site Plans.

- Develop and understand alternatives to continued operation of non-economic plants, including renewable energy and energy efficiency options. *See* F.S. 186.801.

- Where retirement is a possibility, undertake a transparent reliability analysis as soon as possible. Take further steps as necessary.

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Additional Information on Compliance Obligations

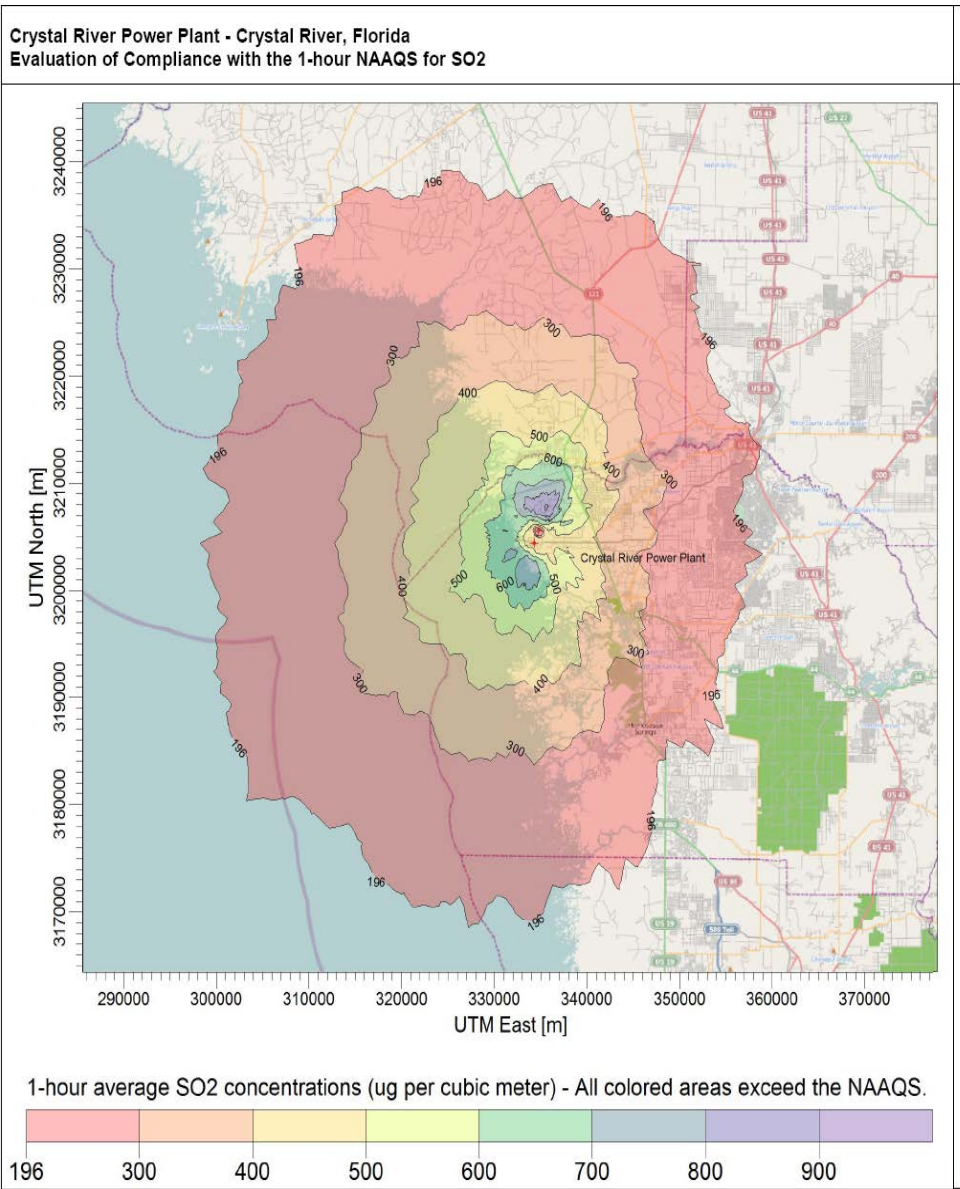
Compliance obligations at Lansing Smith and Crystal River: MATS

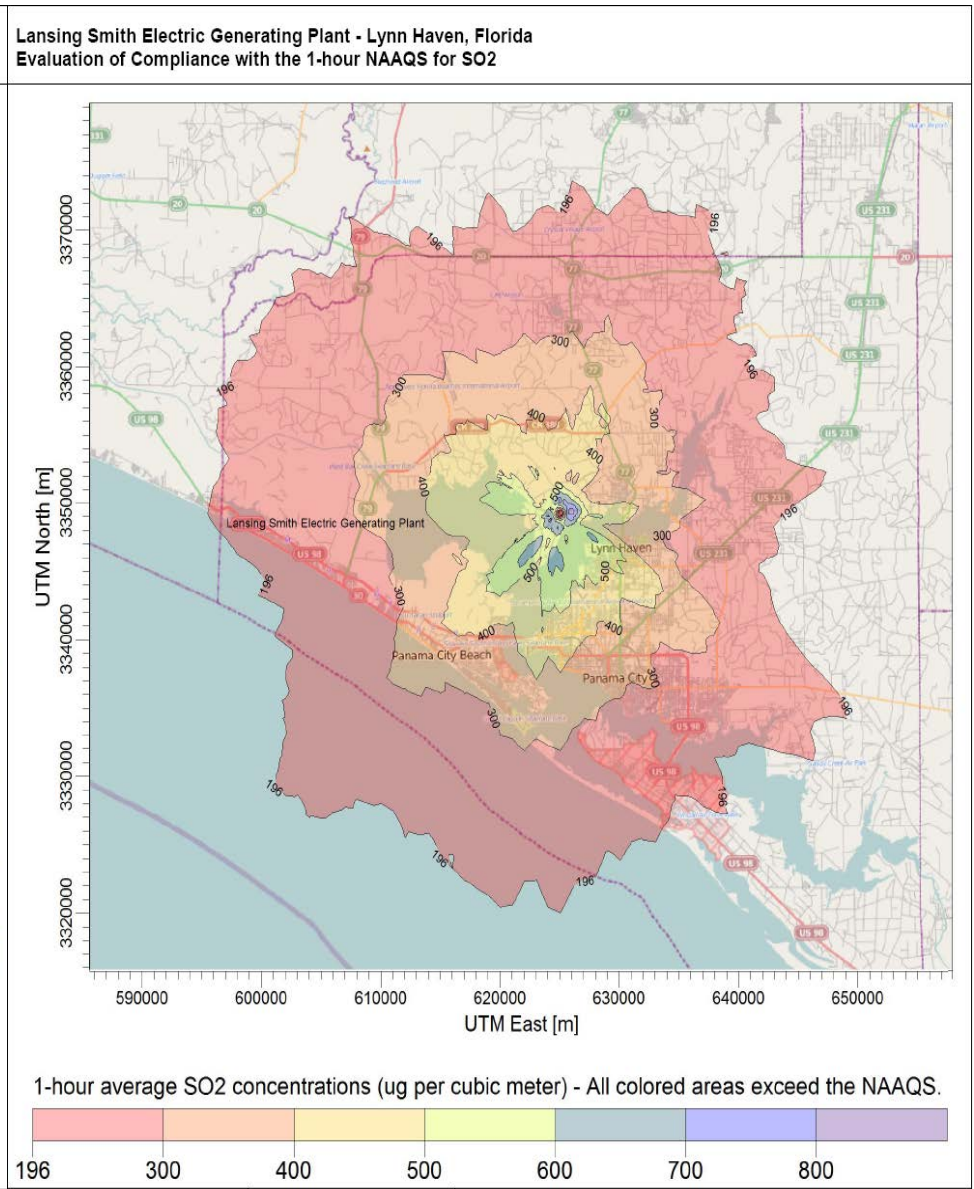
The unscrubbed Lansing Smith and Crystal River (1&2) units are currently permitted to emit SO2 at rates above the scrubber threshold in MATS.

Ergo, MATS compliance is likely to require SO2 controls – and probably scrubbers.

	EPA's Presumed Scrubber Threshold (lb SO2/mmBtu)	Permitted Emissions (lb SO2/mmBtu)
Crystal River 1	2.0	2.1
Crystal River 2	2.0	2.1
Lansing Smith 1	2.0	2.1
Lansing Smith 2	2.0	2.7
Lansing Smith (Combined)	2.0	4.5

Compliance obligations at Lansing Smith and Crystal River: SO2 NAAQS





Compliance obligations at Lansing Smith and Crystal River: Regional Haze Rule