

# *EPA power plant regulations and clean energy*

*A new paradigm?*

April 19, 2012

Christopher K. Carr

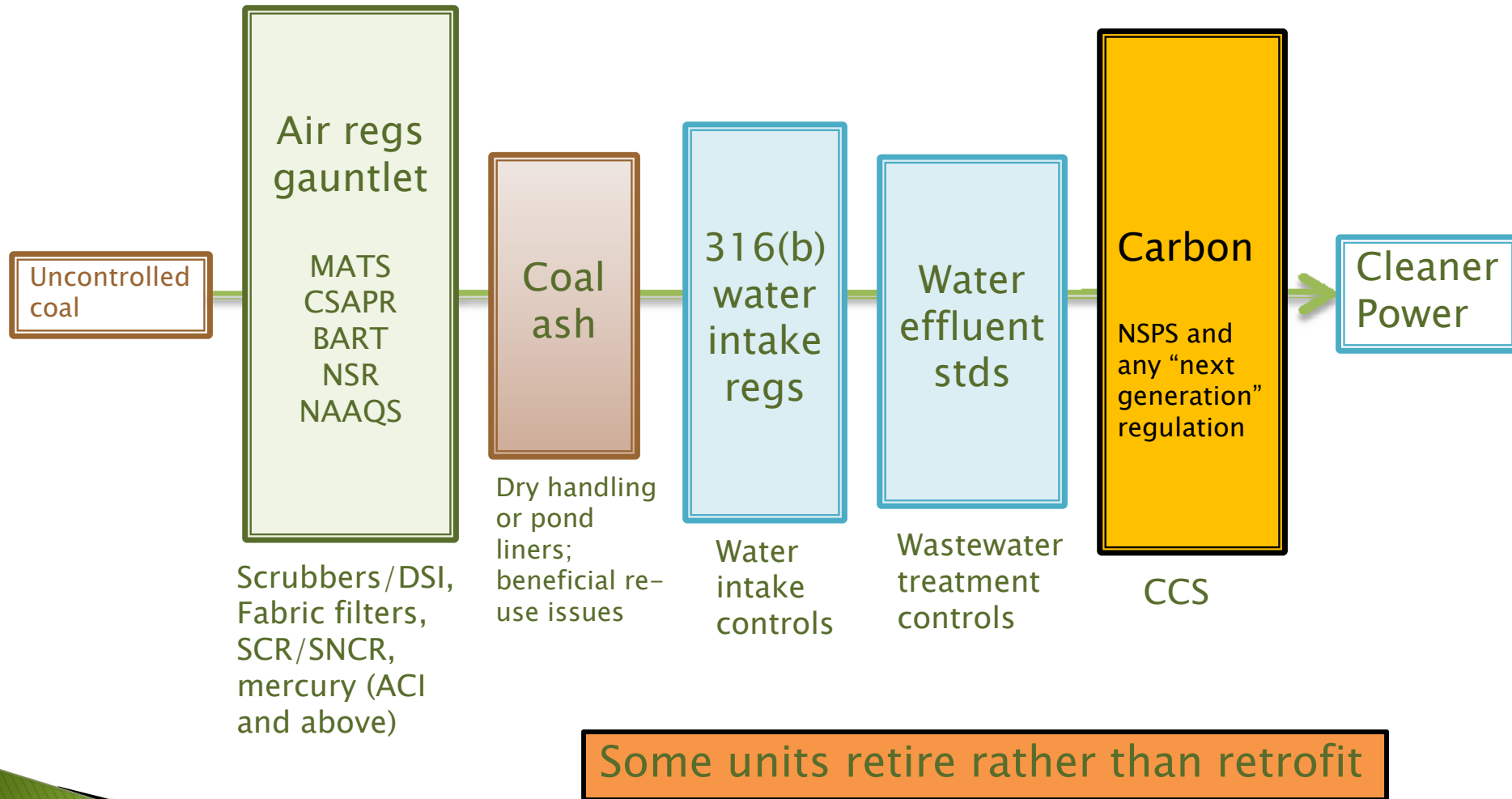
**C2E2 Strategies, LLC**

Climate Change + Energy + Environmental Strategies

# EPA regulatory snapshot

- ▶ CSAPR and MATS – key “conventional pollutant” air rules
  - Litigation update and implications
- ▶ NSPS for power plant CO<sub>2</sub>
- ▶ Thoughts for the future

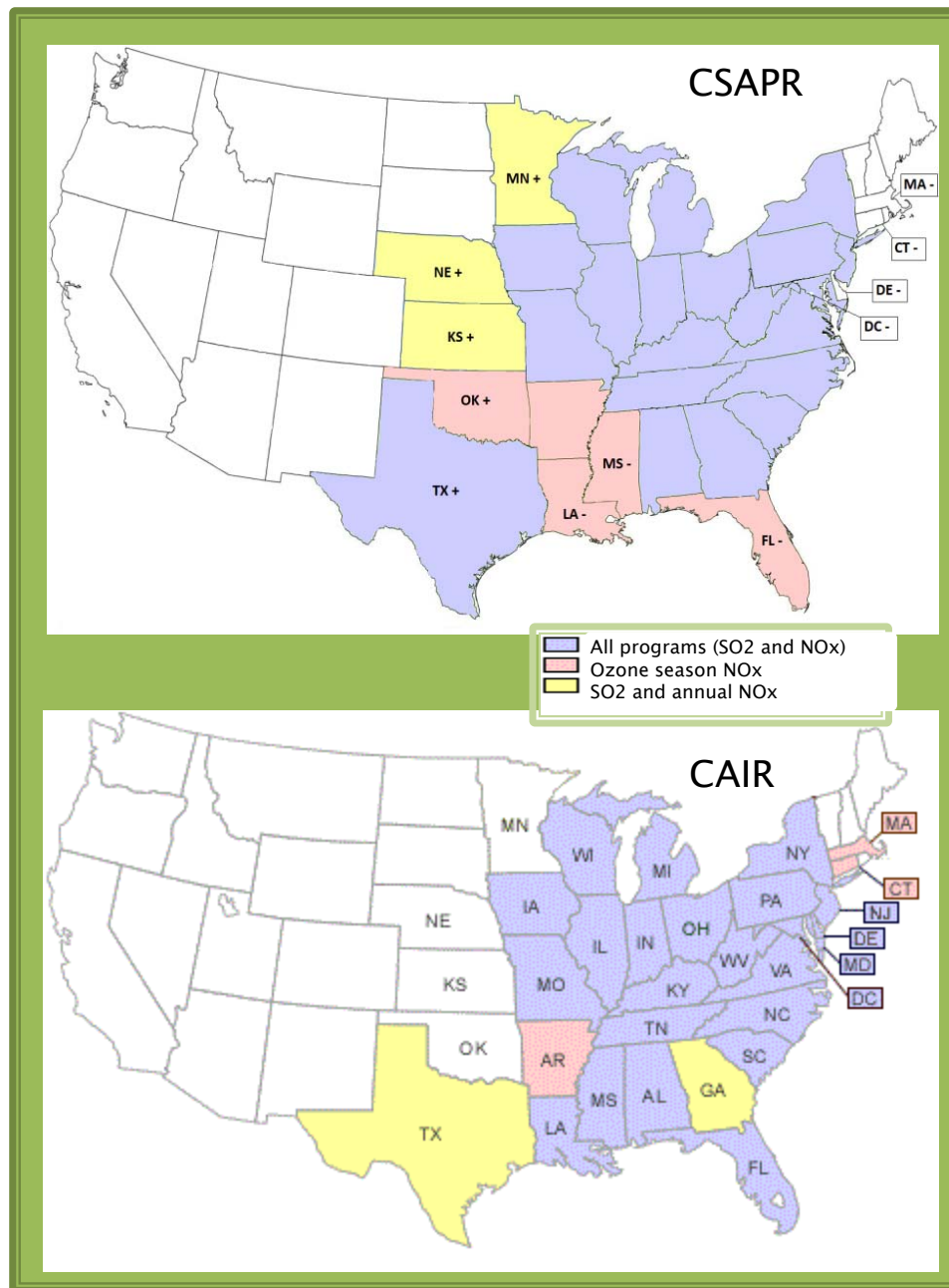
# The power plant regulatory gauntlet



Controls are indicative only.

# CSAPR background

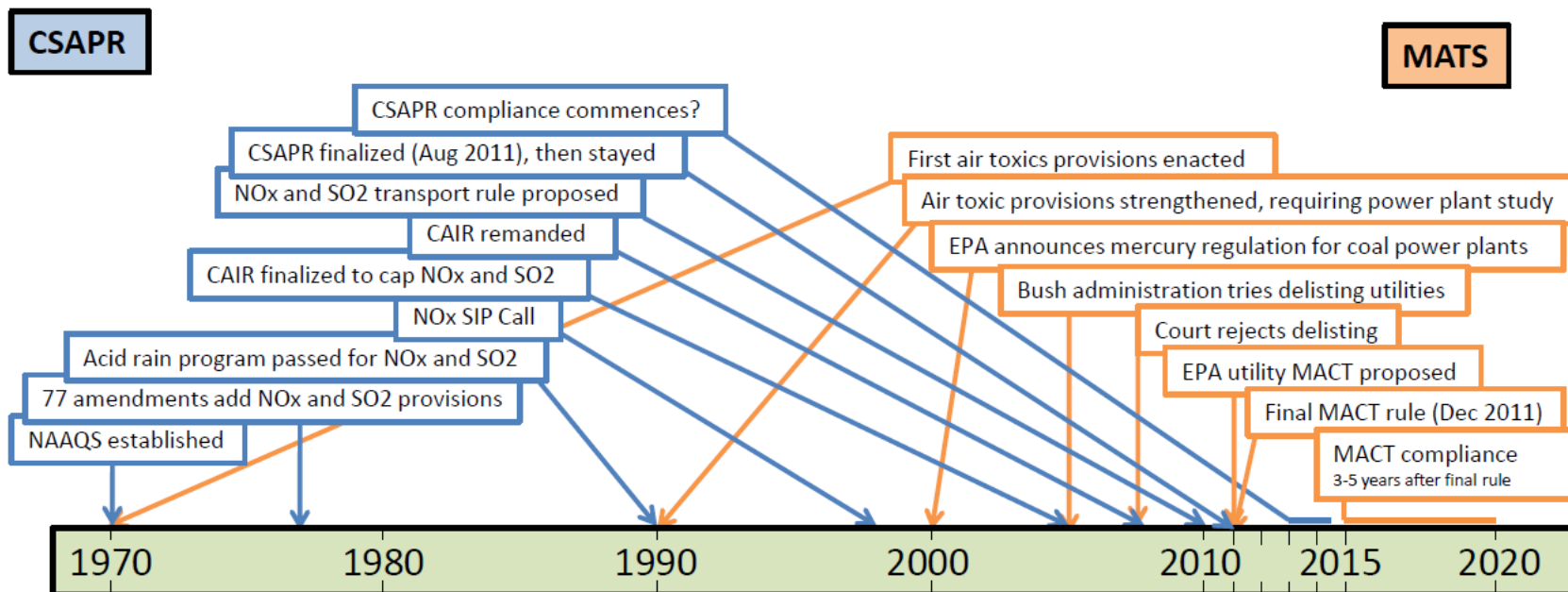
- ▶ CSAPR “finalized” August 8, 2011
- ▶ Lawsuits by high-emitting utilities and states
- ▶ Clean energy intervenors
- ▶ Status as of December 27:
  - EPA finalized regulation of 6 states, including OK for the first time, on December 27
  - Emission budgets for Texas and 8 other states *and* assurance provision not finalized (until February 2012)
- ▶ D.C. Circuit stay on December 30
  - The Friday afternoon before rule taking effect
- ▶ D.C. Circuit oral arguments last week (April 13<sup>th</sup>)



# CSAPR litigation

| Selected petitioner claims  | EPA response   |
|---|--|
| EPA illegally imposed FIPs rather than allowing states to first submit SIPs.  | EPA <i>must</i> impose FIPs for each of these States to address the interstate transport.  |
| EPA improperly based state contributions and budgets on uniform cost threshold. <ul style="list-style-type: none"><li>– <u>North Carolina</u> says EPA “can’t just pick a cost for a region, and deem ‘significant’ any emissions that sources can eliminate more cheaply.”</li><li>– What if measures costing below \$500/ton would be enough.</li></ul> | Each State’s budget was <i>calculated individually</i> based on specific emission reductions available at the specified cost thresholds (unlike CAIR where a regional budget was simply sub-divided among the States). |
| Revisions during rulemaking deprived petitioners of adequate notice and opportunity to comment.   | EPA provided notice and opportunity to comment on budget methodology and data. The final rule is a “logical outgrowth” of the proposal.  |
| Compliance timeframe is arbitrary and capricious.   | EPA had to craft a rule that eliminates downwind pollution “as expeditiously as practicable.”  |

# CSAPR and MATS – decades in the making and back-stopped



## Backstop

- ▶ CAIR, NOx SIP Call
- ▶ Section 126 petitions, CAA “good neighbor provisions”

## Backstop

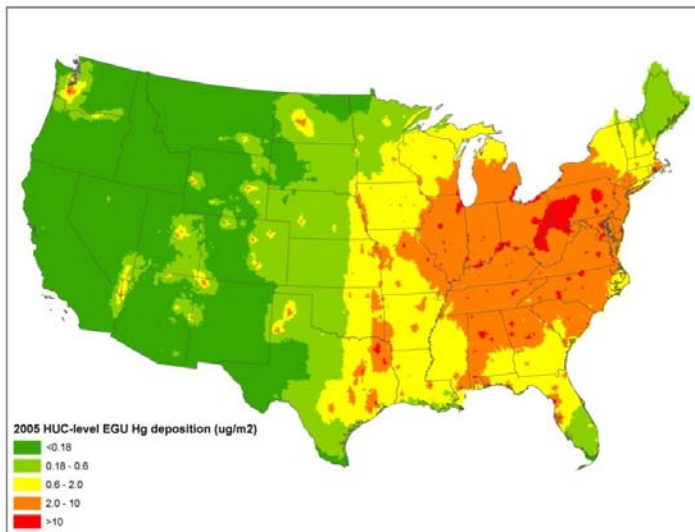
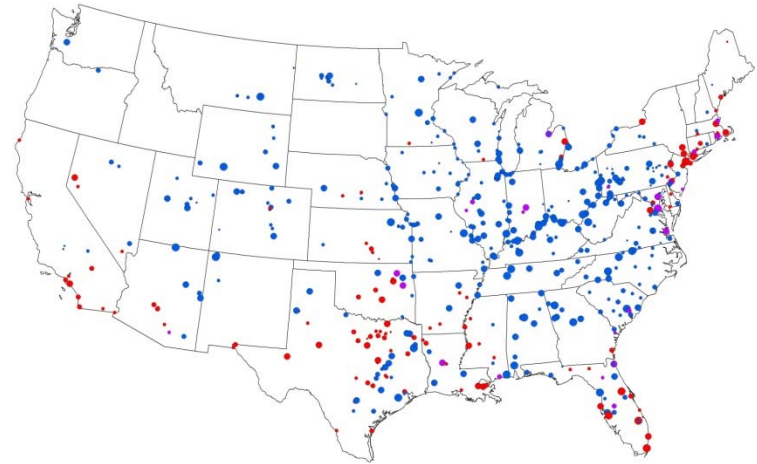
- ▶ State mercury controls
- ▶ Other CAA provisions (CSAPR/CAIR, BART, NSR, NAAQS)
- ▶ Affordable natural gas



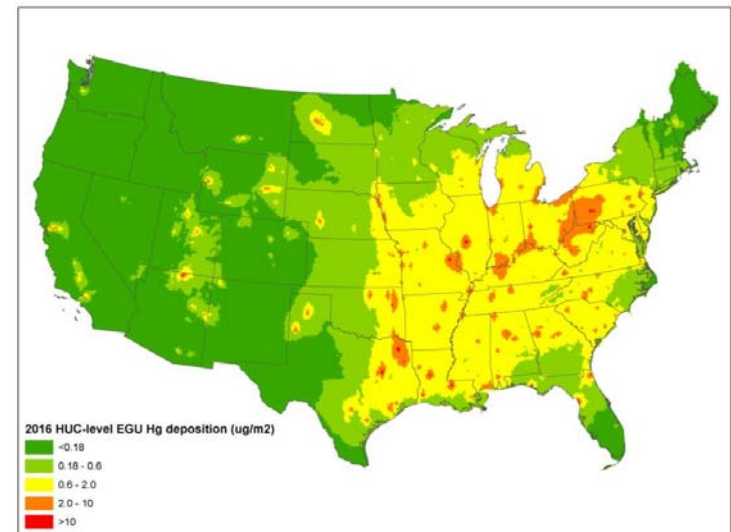
# MATS background

- ▶ Coal power plants are “by far” the largest U.S. anthropogenic source of mercury emissions.
- ▶ 7% of women of child-bearing age are exposed to mercury at levels capable of causing harm to a fetus
- ▶ Fish advisories exist in all states.

Location of Coal and Oil Power Plants



2005 power plant mercury deposition



2016 power plant mercury under MATS

# MATS litigation – the parties

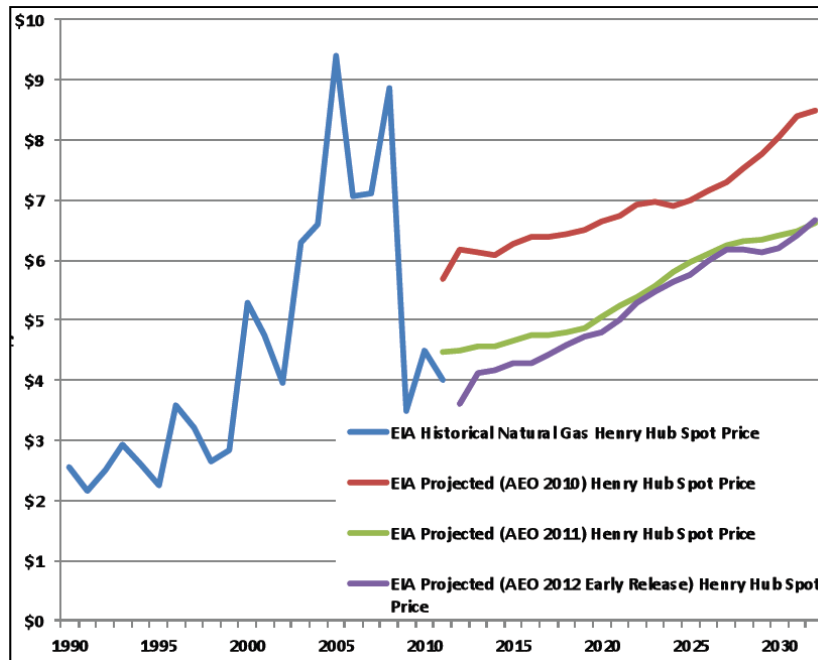
- ▶ **Challengers to rule (D.C. Circuit petitions due by April 16)**
  - White Stallion
  - National Mining Association, UARG, American Public Power Association
  - Black Chamber of Commerce, Institute for Liberty
  - Tri-State Generation and Transmission
- ▶ **Motions to intervene in support of EPA**
  - **States** – 12 plus D.C. (and NYC)
    - CT, DE, IL, IA, ME, MD, MA, NH, NM, NY, RI, VT
  - **“Clean” utilities** – Calpine, Exelon, PSEG
  - **Health-based organizations**
    - American Lung Association, American Nurses Association, American Academy of Pediatrics, American Public Health Association, Physicians for Social Responsibility
  - **Environmental organization**
    - Sierra Club, EDF, NRDC, Chesapeake Bay Foundation, Citizens For Pennsylvania’s Future, Clean Air Council, Conservation Law Foundation, Environment America, Izaak Walton League, Natural Resources Council of Maine, Ohio Environmental Council, Waterkeeper Alliance
- ▶ **Motions to intervene in opposition to rule**
  - **States** – 24
    - AL, AK, AR, AZ, FL, IA, ID, IN, KS, KY, MI, MO, MS, ND, NE, OH, OK, PA, SC, TX, UT, VA, WV, WY



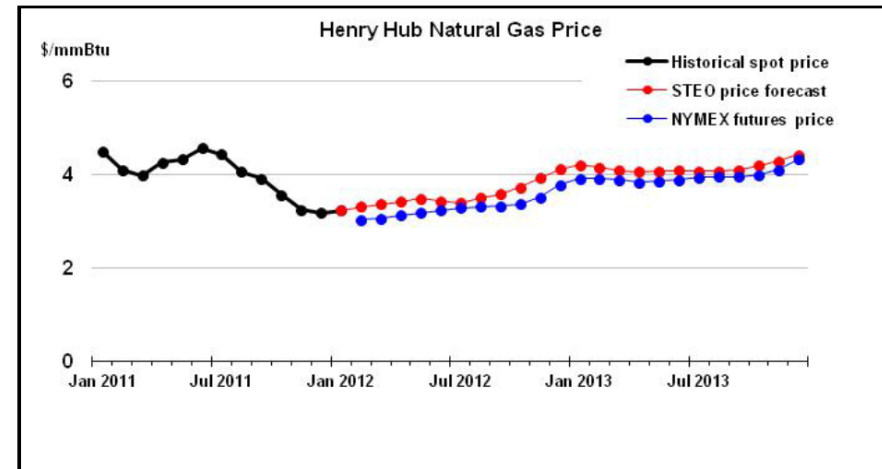
# MATS litigation

| Petitioners – selected likely arguments  | EPA likely responses   |
|--|--|
| Benefits don't justify the costs.  | Costs not considered in setting MACT floor.  |
| Controlling HAPs not “appropriate and necessary.”                              | Hg exposures above RfD and Cr cancer risk mean can't delist EGUs under CAA 112(c). |
| Can't bootstrap in other HAPs based on Hg “appropriate and necessary” finding. | Precedent supports EPA.  |
| Franken–MACT.  | Precedent supports EPA.  |
| Time for compliance is infeasible.   | 2 year+ extensions are possible. Timeline set by statute.                          |
| Various technical challenges.  | Deference to EPA discretion on technical issues presents hurdles.                  |

# Dramatic impact of low natgas prices



Source: EIA, *Annual Energy Outlook*; ACSF



- ▶ “*Natural gas prices have stabilized...as new drilling techniques have brought additional supply to the marketplace. As a result...utilities are likely to rely heavily on natural gas to meet new demand for electricity generation.*”\*
- ▶ Natgas emits no mercury, virtually no SO<sub>2</sub> and PM, little NO<sub>x</sub>.
- ▶ Synergies between natgas and renewables (load-balancing).

\*Source: Feb. 2012 EPA proposed power plant NSPS.

# NSPS for power plant CO2

- ▶ Signed on March 27, 2012.
- ▶ Proposes 1,000 lb CO2/MWh limit based on new NGCC.
- ▶ Defers regulating existing facilities.
- ▶ Requires CCS for new coal plants, but:
  - Exempts transitional sources (~15 facilities).
  - Allows deferral of CCS for 10 years for new plants, with a “30–year averaging period.”
  - Doesn’t regulate reconstructed or modified facilities.
- ▶ Rule relies heavily on the future of natural gas.
  - NGCC qualifies as the “best system of emission reduction.”
  - Natgas has “fewer nonair quality health and environmental impacts” than coal.
  - Proposal reflects “trend in the power sector to build cleaner plants, including new, clean-burning, efficient natural gas generation, which is already the technology of choice.”

# EPA – some things to watch for

- ▶ EPA power sector rule litigation (and some resolution): CSAPR, MATS
- ▶ The next regulatory wave
  - 316(b) – slated to be finalized July 27, may be extended
  - ELG – July 23 proposal slated
  - Coal ash – finalized end of 2012?
- ▶ Over 48 GW of announced coal plant retirements (generally by 2018)
- ▶ Natgas plays increasing power sector role
- ▶ Clean energy integration
  - E.g., FERC, reliability and grid issues, market rules