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CHEAPER AND CLEANER:

Using the Clean Air Act to Sharply Reduce Carbon Pollution from Existing Power Plants, Delivering Health, Environmental and Economic Benefits

CLOSING THE POWER PLANT CARBON POLLUTION LOOPHOLE:

SMART WAYS THE CLEAN AIR ACT CAN CLEAN UP AMERICA'S BIGGEST CLIMATE POLLUTERS

"We limit the amount of toxic chemicals like mercury and sulfur and arsenic in our air or our water, but power plants can still dump unlimited amounts of carbon pollution into the air for free. That's not right, that's not safe, and it needs to stop."
-President Obama, June 25th, 2013

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THE TIMELINE

2013	**January 20th**	Start of President Obama's second term.
	June 25th	President Obama announces Climate Action Plan.
	September 20th	EPA proposes carbon pollution standards for future power plants.
2014	**May 9th**	End of public comment period for future power plant proposal.
	June 1st	EPA to propose guideline for carbon pollution standards for existing power plants.
	June-September	Public comment period on existing power plant proposal.
2015	**June 1st**	EPA to finalize power plant carbon pollution standards.
2016	**June 30th**	States to submit implementation plans for existing power plants to EPA.
	July-December	EPA reviews state plans for compliance with its guideline.
2017	**January 20th**	End of President Obama's second term.

THE CLEAN AIR ACT AND EXISTING POWER PLANTS

THE "101" ON 111 (d)

EPA CO2 Emissions Guideline & State Plans

- ✓ EPA proposes "emission guideline" June 2014, final June 2015.
- ✓ Guideline includes performance standard and compliance provisions.
- ✓ States have until June 2016 to adopt and submit state plans. If a state submits no plan, or one EPA cannot approve, EPA must issue a federal plan.

"Best System of Emission Reduction"

- ✓ "Source-based" approach limited to options plants can do "within the fenceline" (e.g. heat-rate improvements) – yields limited reductions, higher costs
- ✓ "System-based" approach includes all options that reduce emissions –yields deeper reductions, lower costs
  - Heat-rate improvements
  - Shifting generation from coal to gas
  - Increasing zero -emission power (renewables and nuclear)
  - Increasing energy efficiency

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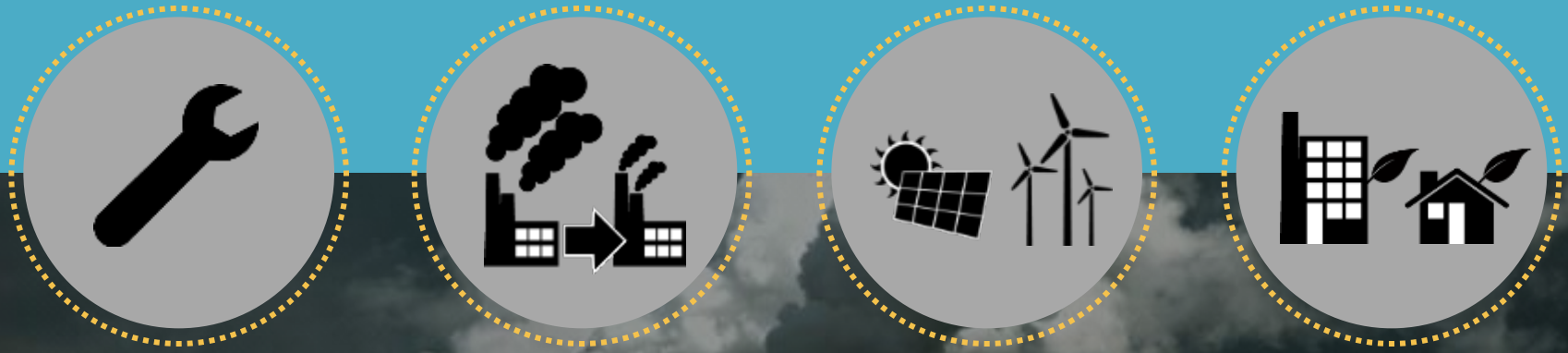
FLEXIBLE COMPLIANCE OPTIONS



Heat rate reductions

Cleaner power sources

More renewables

Investments in efficiency

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NRDC PROPOSAL

SYSTEM-BASED, STATE SPECIFIC STANDARDS

State-specific fossil-fleet average CO2 emission rates (lbs/MWh) for 2020 and 2025

Calculated by applying benchmark coal and gas rates to each state's baseline (2008-2010) fossil generation mix

Averaging allowed among all fossil units in state (including new units subject to the 111(b) standard)

Credit for incremental renewables and energy efficiency (equivalent to adding MWhs to denominator in calculating emission rate for compliance purposes)

States may opt in to **interstate averaging** or credit trading

Air Agency oversees emissions totals and averaging, and applies RE and EE credits, in consultation with utility regulatory agency

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COMMAND AND CONTROL
PLANT-SPECIFIC, AT-THE-SMOKESTACK STANDARDS

- **Individual plant emissions standards** applied to all fossil generators to achieve state emissions limits
- **Such "inside the fenceline" measures likely the costliest method for meeting federal emissions guidelines,** especially if guidelines based on system-wide approach
- **Air agency** provides permits for plants/units, based on an emission rate
- **EE and RE** would not count as emission reductions for the state

MASS-BASED ALLOWANCE PROGRAM APPROACH:
MARKET-BASED STATE OR REGIONAL CAP ON TRADEABLE ALLOWANCES

- **A State or region** allocates finite number or allowances that grant the right to emit one ton of CO2
- **Allowances** obtained at auction and invested in EE/RE programs to lower emissions, or distributed directly to utilities
- **Higher emitters** require more allowances and become less competitive, resulting in an open market and demand for allowances at market prices
- **Incentivizes RE and EE** stimulated by the market as a lower-cost investment than additional allowances
- **Additional RE and EE** requires less oversight, so long as the cap is met
- **Air Agency** oversees traded allowances, akin to SOX and NOX programs

PORTFOLIO APPROACH: RELY ON PRE-EXISTING OR IMPROVED EFFICIENCY, RENEWABLES, AND OTHER POLICIES

- **Existing EERS and RPS standards** utilized to achieve state emissions limits
- **Additional legislation** to make such measures mandatory would be required
- **Air Agency** provides oversight of RE and EE resources in collaboration with utility regulatory agency

ISO/RTO REGIONAL APPROACH:
LEAST-COST PLANT DISPATCH INCLUDING A CARBON COST "ADDER"

- **Subgroup of States** applies carbon cost to all fossil generators, based on each unit's emissions rate
- **Higher emitters** dispatched later than lower emitters
- **Incentivizes RE and EE** by increasing their competitiveness as zero-emitting resources
- **Carbon costs** could be returned to states, pro rata, for reinvestment in energy efficiency, or to consumers
- **RGGI's cost of carbon could be utilized as a "shadow cost"**
- **Air Agency** enforces adherence to a regional plan as an enforceable condition of generators' air permits

Federal Leadership on Energy Management

- **Presidential Memorandum** issued on December 5th, 2013 requires that no less than 20% of the energy consumed by each agency of the federal government come from renewable energy by the year 2020.
- **Sets a timeline** by which federal agencies must meet target
  - **10% in fiscal year 2015**
  - **15% in fiscal year 2016 and 2017**
  - **17.5% in fiscal year 2018 and 2019**
  - **20% in fiscal year 2020 and thereafter**
- Updates previous mandate of 7.5% by 2013 set by the Energy Policy Act of 2005

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