Carbon Cap & Trade in the U.S.
The Regional Greenhouse Gas Initiative (RGGI)

3rd Annual Renewable Energy Conference:

"The Atlantic Market for Buyers & Sellers"

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Environment Northeast

About Us

- Policy Research and Advocacy
  - Non-profit NGO
  - Offices:

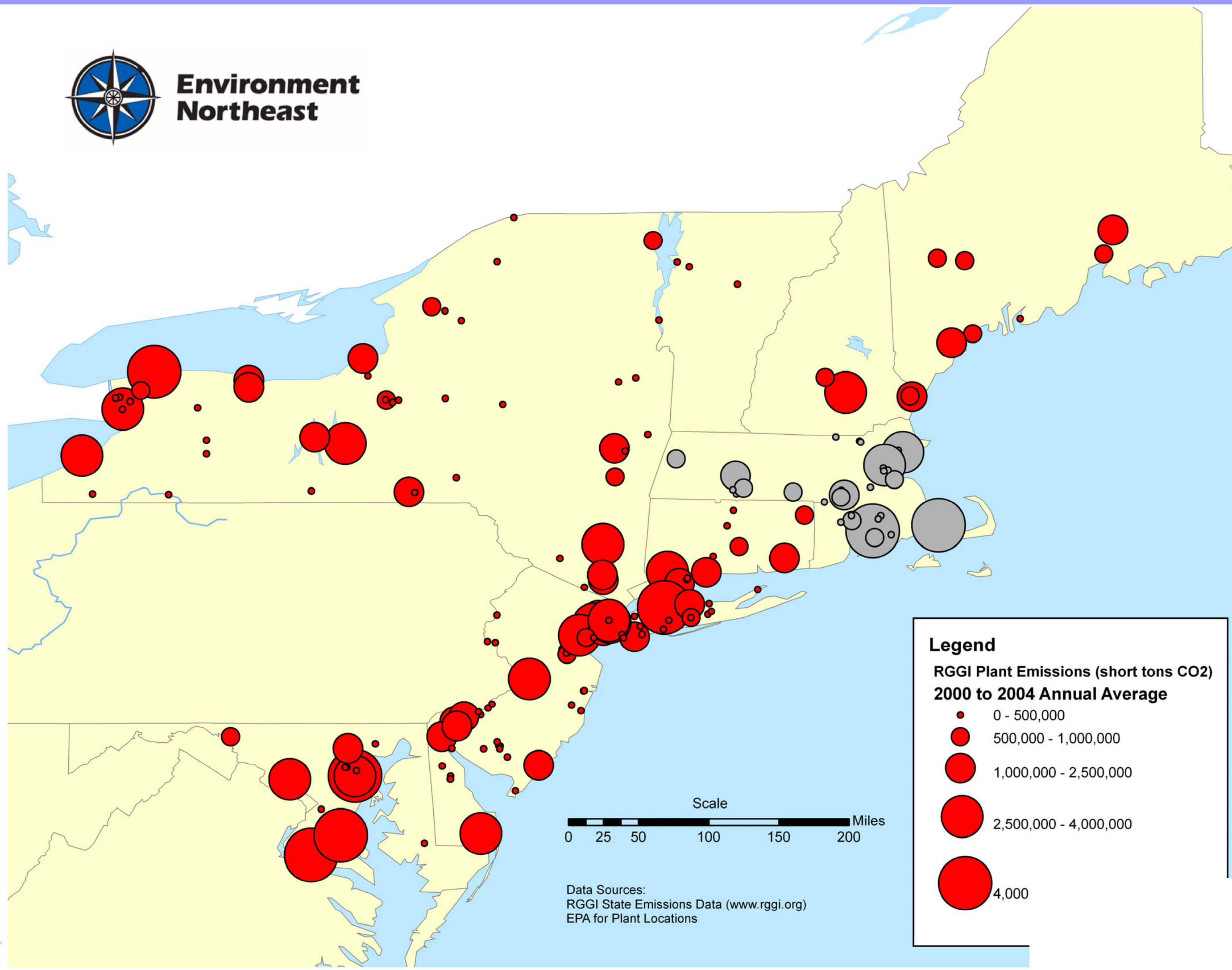
    Rockport, ME / Portland, ME / Boston, MA / Providence, RI / Hartford, CT / Charlottetown, PEI
- Mission
  - to provide compelling research and advocacy for environmental policies in the Northeast US and Eastern Canada
- Policy Areas
  - Energy & Climate
  - Transportation
  - Forest Practices and Land Use

ENE's Cap & Trade Experience

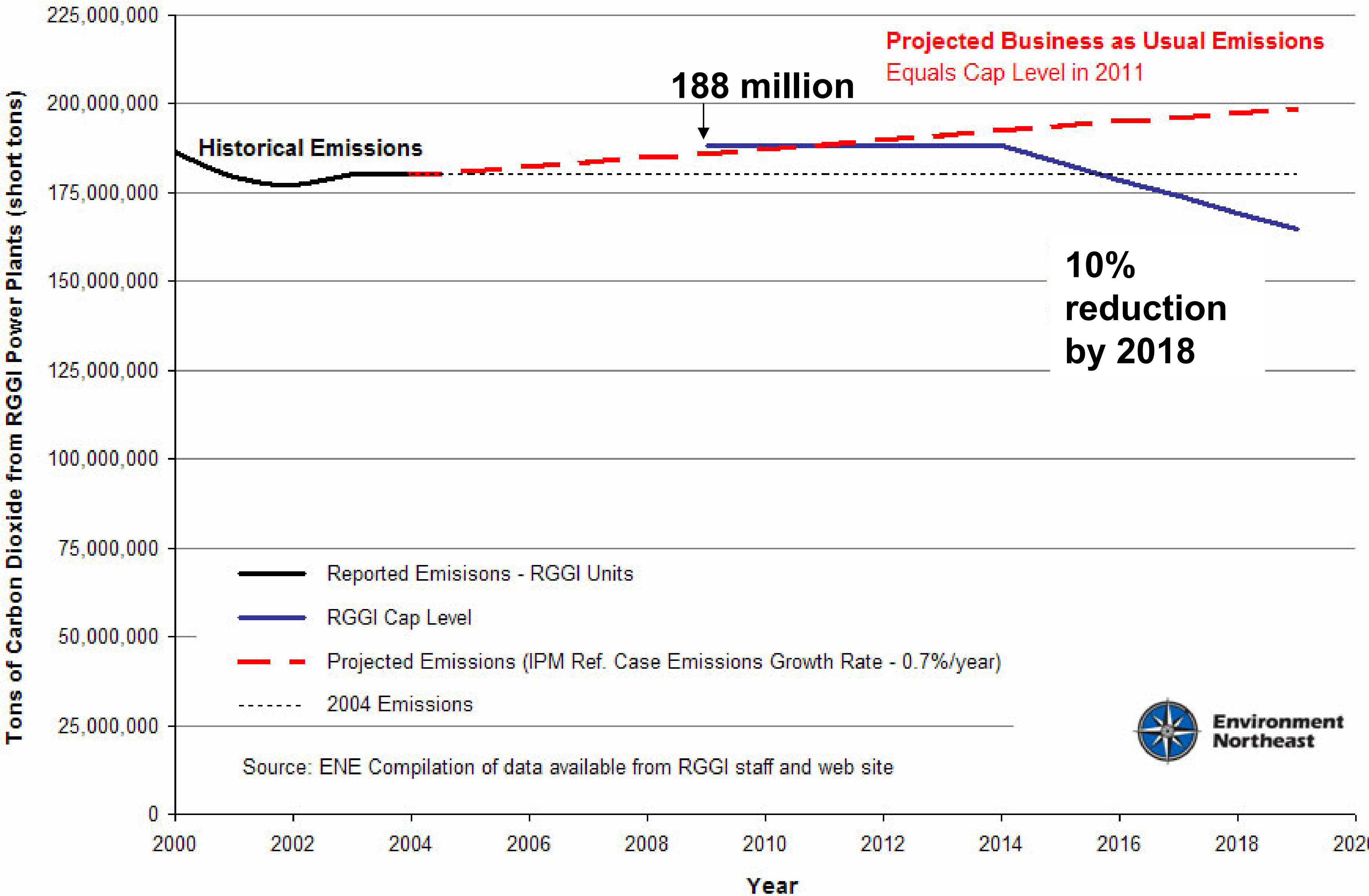
- ENE was 1 of 24 official Stakeholders (industry, ENGOs, academic) in RGGI – the Regional Greenhouse Gas Initiative
- Authored "straw" proposals for the RGGI Model Rule and state legislation / regulations
- Provided extensive input and analysis on economic and emissions modeling
- Reviewed and commented on rulemakings in all states
- Studying potential new categories of offsets
- Sharing "lessons learned"
  - U.S. Congress
  - other regions of U.S.
  - Canada

Northeast U.S. Cap & Trade Program

Regional Greenhouse Gas Initiative (RGGI or “Reggie”)



RGGI Aggregate CO2 Cap Level



Regional Greenhouse Gas Initiative (RGGI)

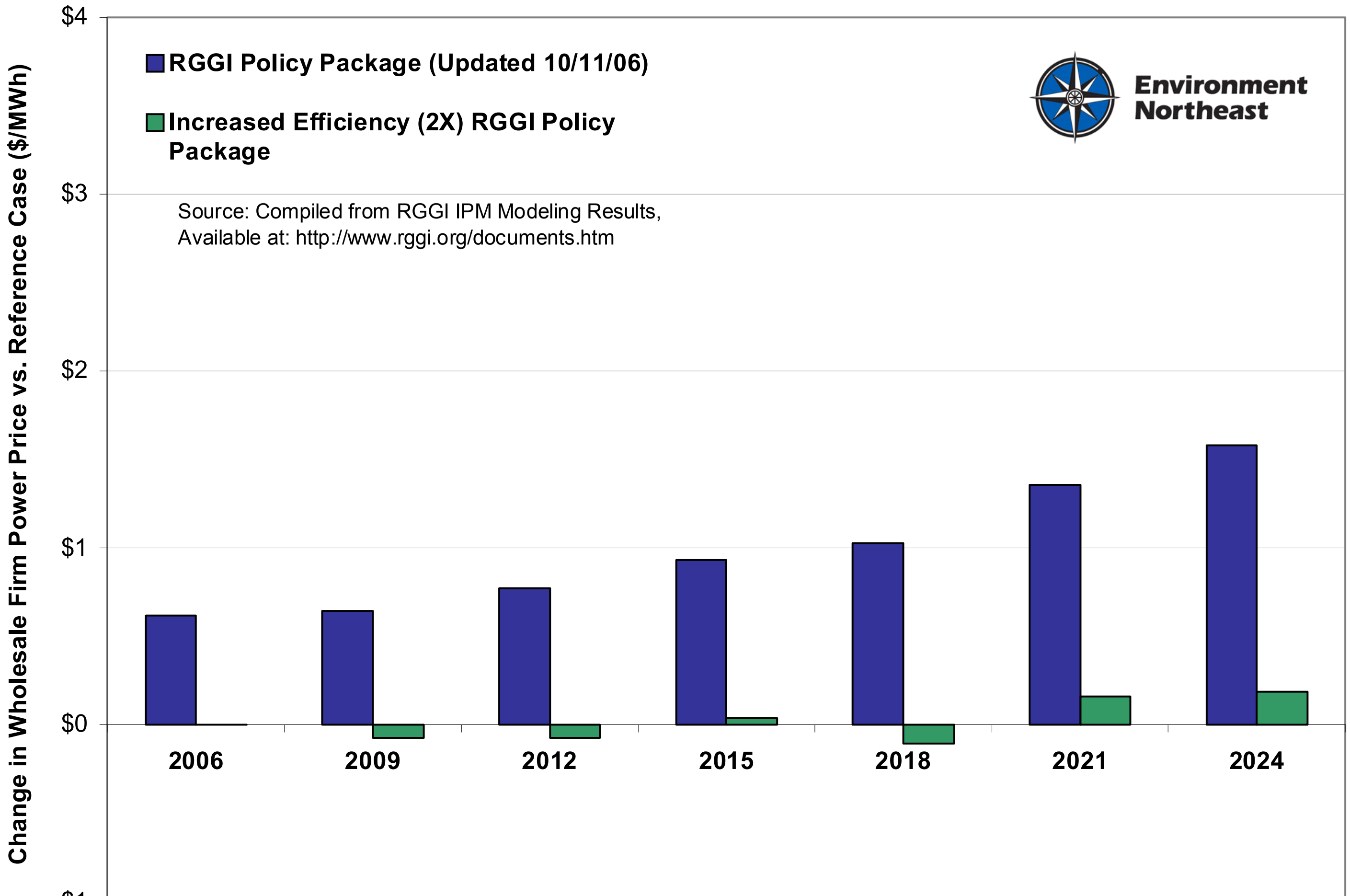
- 10 States
  - ME, MA, NH, VT, RI, CT, NY, NJ, DE, and MD
- 1st mandatory cap-and-trade program for CO_2 in the US
- One “allowance” or “permit” equals one ton of CO_2e
- Covers all fossil fuel-fired electricity generating units 25 MW or greater
- Starts Jan. 1, 2009
- 3 year compliance period, banking is allowed
- States auctioning most allowances, investing proceeds in energy efficiency and clean energy

RGGI – Benefits of Auctioning CO2 Allowances

- At least 25% of CO2 “allowances” in each state’s allocation (“budget”) must be auctioned for Consumer Benefit or Strategic Energy Purpose
  - Most choosing to auction 100% (CT, Maine, Mass., NH, NY, NJ, RI, VT)

- Benefits:
  - Level playing field for old and new units
  - ~ $1 Billion/year (@$5/ton) from 10-state auctions, most could be reinvested in Energy Efficiency, some also in RE
  - Projected increases in Energy Efficiency investments from RGGI funds and other new policies sufficient to grow economy while <u>eliminating load growth through 2020</u>

Investing auction proceeds gives a bigger return than rebates



Efficiency funds are leveraged many ways:

- save $3-4 for every $1 of program investment
- savings stay local (but rebates to companies go back to headquarters)
- reduces demand for allowances, lowering cost of program

Offsets -- Defined

- ***Offset = An off-system emissions reduction project***

- In RGGI, 1 carbon “offset” represents 1 ton of CO_2 reductions “from actions that have reduced or avoided atmospheric loading of CO_2 or CO_2 equivalent or sequestered carbon...”
  - (RGGI M.R. – Subpart XX-10)

Use of Offsets

- allow flexibility in compliance with RGGI obligation, but limited use:
  - amount -- limited to max of 3.3% of total GHG emissions from a covered unit
  - geographic – project must be located
    - in RGGI states, or
    - other US states w/ Carbon C&T program, or
    - other US states w/ MOU regarding offsets w/ RGGI
      - requirements for audits, reporting
    - from certain areas outside the US in the event of a Stage 2 Trigger Event (see next slide)
  - retrospective – only get credit for past, verified reductions
- bankable
- tradable

Use of Offsets (2)

- Stage 1 Trigger Event
  - if allowance price =/> $7/ton
  - for 12 month period
  - expand use <u>up to 5% </u>of covered source's compliance
  - from projects anywhere in the U.S.
- Stage 2 Trigger Event
  - allowance =/> $10/ton (adjusted for inflation + 2%/yr from 2006)
  - expand use <u>up to 10% </u>of covered source's compliance
  - including CO2 Emission Credit Retirements from outside the US
    - where carbon is regulated under a "specific tonnage limit" or
    - where a certified reduction is made pursuant to UNFCCC protocols
- Trigger resets at end of compliance period when priced drop below trigger threshold

Eligibility

- Currently Eligible Offset Projects in RGGI

(i) Landfill methane capture and destruction;

(ii) Reduction in emissions of sulfur hexafluoride (SF6);

(iii) Sequestration of carbon due to afforestation;

(iii) Reduction or avoidance of CO2 emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency in commercial or residential buildings; and

(iv) Avoided methane emissions from agricultural manure management operations.

M.R. Sec.10.3(a)(1)

Eligibility (2)

- *On-system* project types <u>not</u> eligible under RGGI:
  - electric energy efficiency,
  - renewable energy electric generation,
  - nuclear uprates,
  - improvements in power plant efficiency, or
  - activities that reduce electricity demand or increase clean electricity output fall within the capped grid-connected system

The 5-Point Test - R.S.V.P.(E.)

- **Real:** An offset project must be able to quantify an actual and measurable reduction in emissions.
- **Surplus** (additional): Offset projects must be additional or surplus to reductions in emissions that would occur under business as usual activities, meaning that a project only receives credit for activities and reductions in emissions that are above and beyond what would have occurred absent any funding for the offset project.
- **Verifiable**: The offset project must have sufficient measurement and documentation to allow independent auditors to assess and confirm project eligibility and performance
- **Permanent**: Offset project emissions reductions must be lasting, ensuring that a reduction in emissions is not capable of being reversed at some future point in time.
- **Enforceable**: States must be able to enforce compliance or require a return of the offset credit if other requirements are not met.

Fair warning – Offsets must be "Additional"

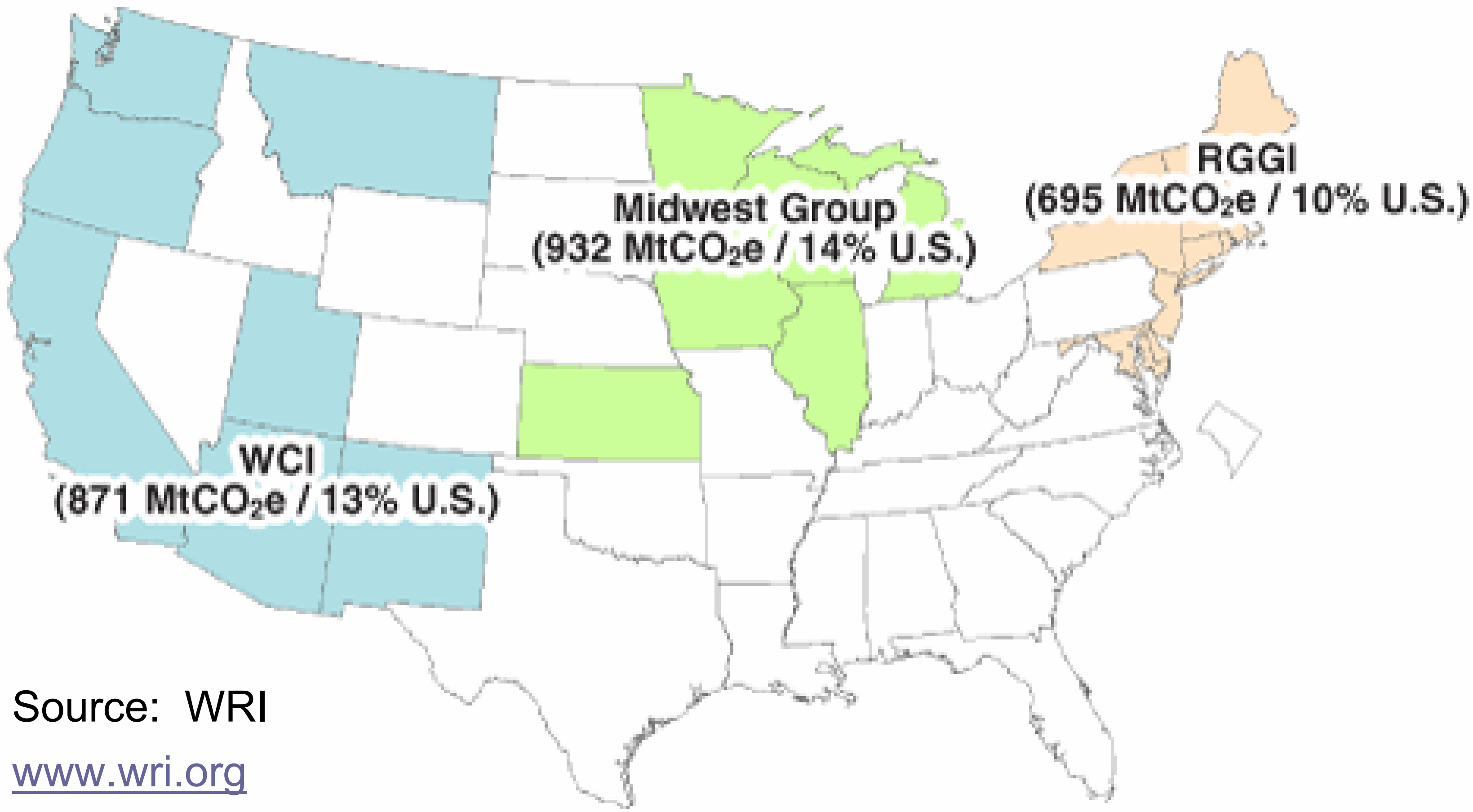
- Eligible offsets must demonstrate that the emissions reduction would not have happened without the offsets funding
- Cannot be driven by or simultaneously used for compliance with other regulatory requirements or publicly funded programs (e.g., RPS, efficiency programs)
- This is not an easy exercise and requires judgment calls
  - RGGI uses a performance standard method (set baseline)
  - Most projects and programs use a project-specific review and development of a baseline (see WRI/WBCSD GHG Protocol)

Concerns about "Leakage"
Criteria for Long-Term Power Purchases,

- Example - Maine Long-Term Contracts for Capacity and Energy
  - Maine PUC may direct utilities to enter long-term contracts for electric capacity or energy, to fulfill RPS or to lower cost of electric service, for periods up to 10 years
  - PUC "shall ensure that any long-term contract … is consistent with the State's goals for [GHG] reduction … and [RGGI]…"

35-A MRSA Sec. 3210-C(3)

U.S. Multi-state Cap & Trade Initiatives



Source: WRI

www.wri.org

U.S. Fed Cap & Trade

Lieberman-Warner Climate Security Act (a Bill)

- Sets a declining "hard" cap for GHG emissions
  - 2012 = 5,775,000,000 metric tons
  - 2020 = 4,924,000,000 (15% reduction from 2012)
  - 2050 = 1,732,000,000 (70% reduction from 2012)
- Combines auction and allocation of allowances, phasing out allocation
- Covers about 82% of US emissions -- any entity in the U.S. that:
  - uses more than 5,000 metric tonnes/yr of coal;
  - is a natural gas processing plant or produces natural gas;
  - manufactures or holds title at time of import to petroleum-based liquid or gaseous fuel, petroleum coke, or coal-based liquid or gaseous fuel;
  - manufactures or holds title to more than 10,000 carbon dioxide equivalents/yr of non-HFC greenhouse gas in the United States;
  - manufactures any hydrochlorofluorocarbon in the US
- Senate floor debate began yesterday
- All 3 presidential candidates support cap & trade

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