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# Trading Energy Savings Experience in the US

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The Regulatory Assistance Project (RAP)®

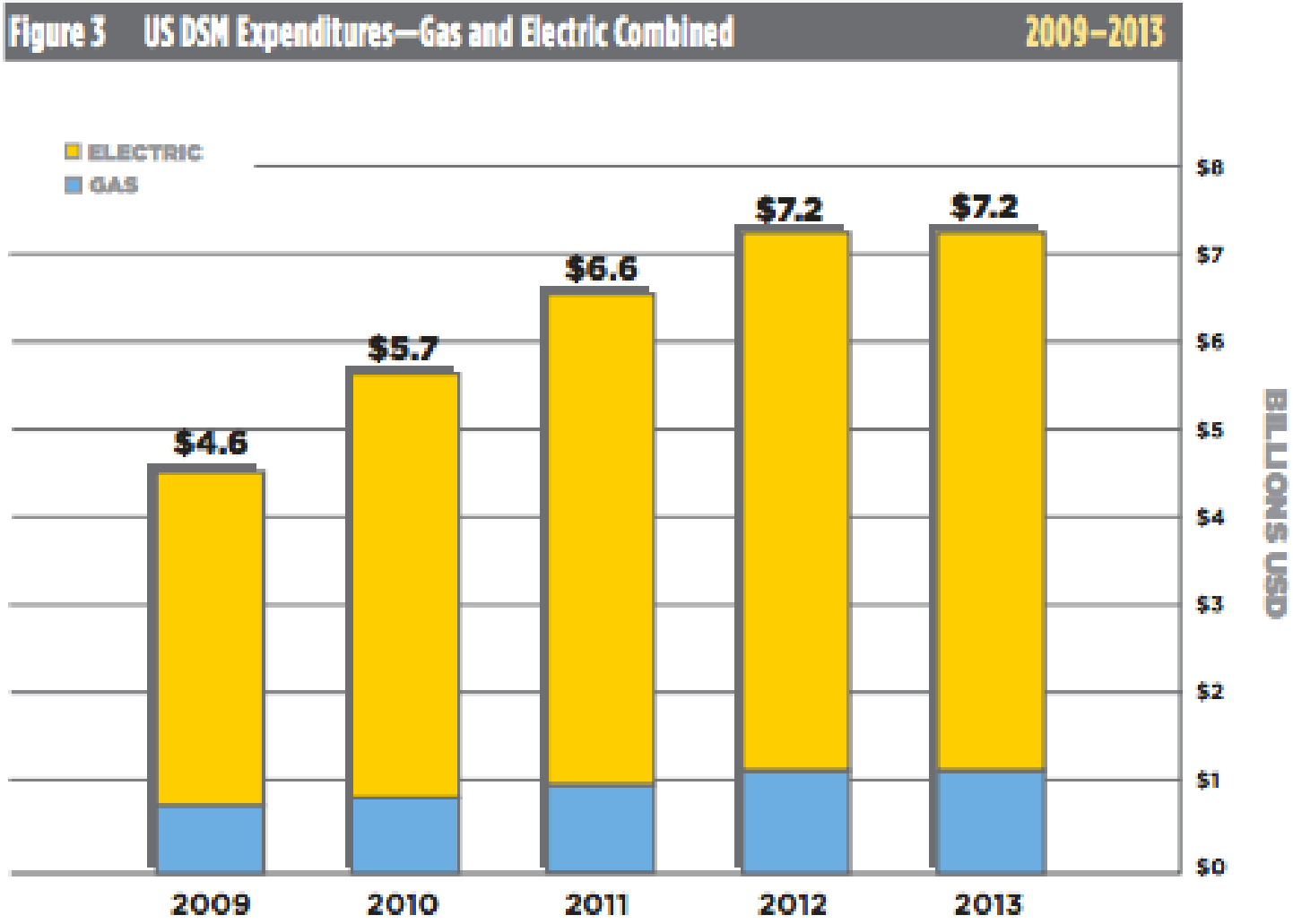
# Framing the Discussion

- Energy efficiency certificates – electronically-tracked energy savings that qualify under a given compliance regime.
- Who can generate EE certificates?
  - Only the obligated parties?
  - Third-party providers?
- How are certificates traded?
  - Through bilateral transactions
  - On a shared platform/exchange
- What is the role of trading in driving compliance? Does trading account for a significant portion of compliance with requirements?

# State of EE policy in the US


Figure 1. States with electric EERS policies in place (as of April 2015).

# Utility-driven Spending on EE (Electric and Gas)




Source: Consortium for Energy Efficiency

# Who is Obligated and Who Can Deliver Energy Savings?

- Obligated:
  - Utilities (vertically-integrated; distributors; retail providers)
  - Third party program administrators (VT, OR, HI, IN, WI)
- Who delivers savings:
  - Obligated parties themselves
  - Utility or third party administrator contracts for delivery of energy savings with energy savings providers
  - TX, standard offer program for delivery of savings

# Trading Frameworks

- **Trading of energy savings "certificates" under an EEO**
- **Trading of energy savings as part of a "renewables portfolio standard"**
- EE as a compliance mechanism under the Clean Power Plan
- Voluntary EE as part of voluntary carbon offsets or stand-alone voluntary EE programs
- Trading has been discussed as part of a national EEO – but no national EEO has been established

# What Role for EE Trading?

| State | Connecticut | Michigan | Nevada | North Carolina | Pennsylvania |
|---|---|---|---|---|---|
| Overall RPS target | 27% by 2020 | 40% by 2030 | 25% by 2025 | 12.5% by 2021 | 18% by 2021 |
| % EE allowed in RPS (often combined with other qualifying measures) | 4% of retail load, 2010-2020 | ≤ 10% of target | ≤ 20% of target, dropping to 10% (2020-2024) and then 0% | ≤ 25% of target; ≤ 40% of target after 2021 | 4.2% of retail sales in 2007, rising to 10% in 2021 |
| Is there an EEO? | Yes | Yes | No | No | Yes |
| Certificates under EEO? | No | Yes | n/a | n/a | No |

# The Bottom Line

- Delivery of end-use EE is limited in combined RPS/EE policies by the following factors:
  - Definition of "EE" can include broad measures, including CHP, waste coal, municipal solid waste, and many other measures
  - The level at which EE is capped within the RPS, or level of EE requirement
- EE certificates are not a standard compliance mechanism under EEOs; however, a robust market exists through utilities hiring or bidding out delivery of energy savings
- Only Michigan and North Carolina use certificates to track any significant portion of energy savings in the state. Any evidence of trading is limited.

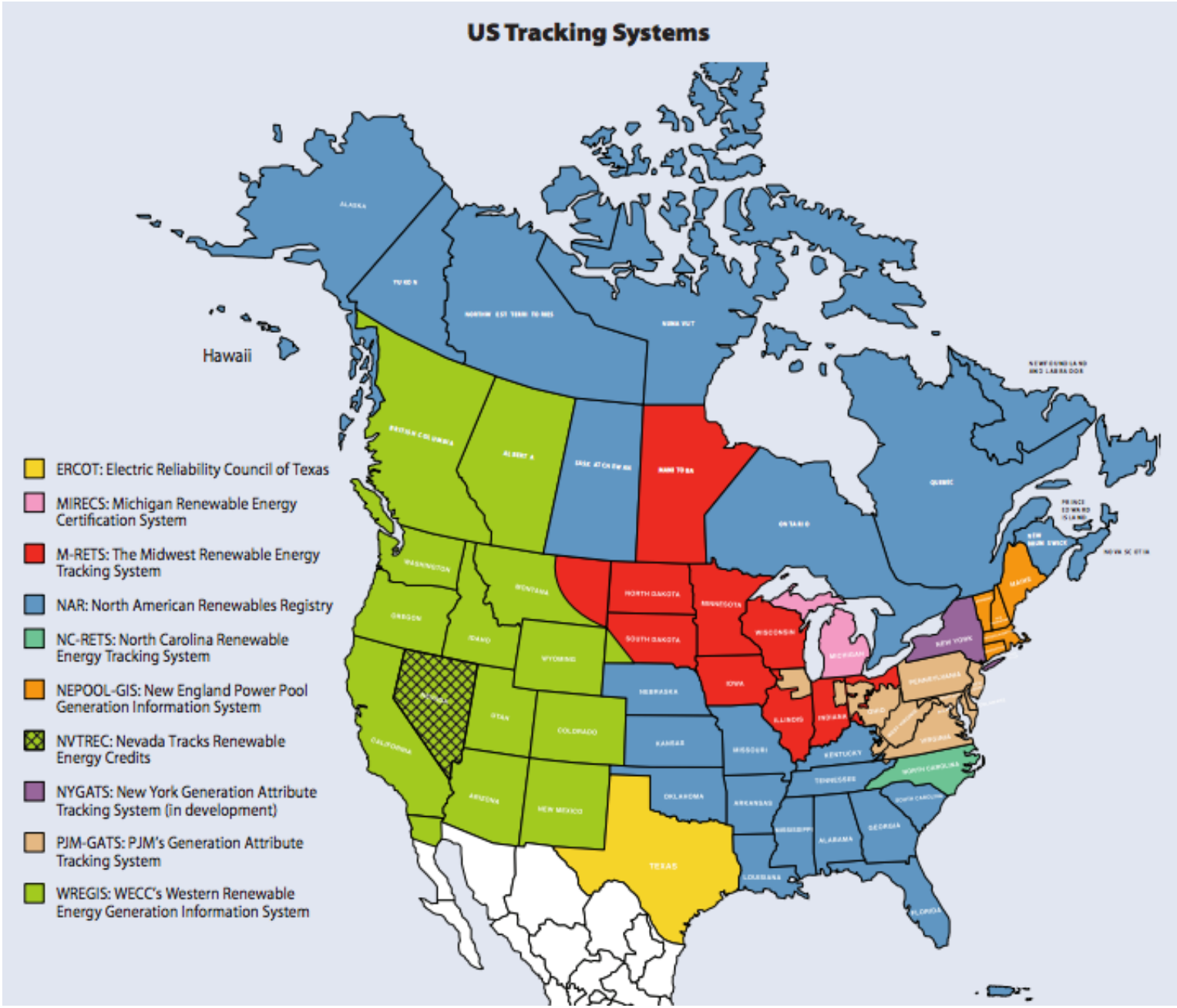
# Design Features Relating to Certificate Creation and Trading

- Who can generate certificates?
  - CT: obligated parties or third party providers
  - MI: obligated parties, 7 utility cooperatives have a combined goal
  - NC: Utilities or "utility aggregators"
- Is trading of energy savings certificates permitted?
  - CT: yes
  - MI: no
  - NC: yes, but only bilaterally; no trading platform (only tracking)

# How Are Costs Determined?

- Through bilateral transactions – negotiated price
- Through activity on exchange platform
- Alterative compliance payments
- CT – EE generally trades at price floor

# North American Tracking Systems



# Challenges to Trading

- Setting up a trading platform – logistics and cost. (in the US, states have piggy-backed on existing platforms set up for RPS)
- M&V – need a standard approach; challenging with geographic/climactic differences
- Ensuring additionality, materiality
- Consumer trust – easily undermined
- And…

# Special Mention of the Interstate Problems

When cross-border trading has been proposed, it has not gone anywhere for 2 reasons…

1. Determining the proper baseline and additionality, since conditions and standards vary state to state
2. Political opposition to paying for savings that will occur in another state. In some states we have this problem even across utility service territories.

# Conclusions

- EE certificate tracking and trading is very limited in the US
- International experience (Italy, Australia – NSW and Victoria) indicates trading increases costs, and traded prices are higher than bilateral
- EEOs drive significant savings in the US; top ranked states for EE do not depend on trading for successful implementation

# Some Concluding Considerations

- What's the goal of EE policy?
  - Cost efficiency vs. high value
  - Local benefits of EE
  - Alignment with IEM goals
  - Alignment with decarbonisation goals
  - Multiple benefits
- Member State vs. EU-level goals
- How do we stimulate greater EE market activity? What can we learn from best practices in Europe and elsewhere?

# About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power sector. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

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