

Clean Energy States Alliance
RPS Webinar
June 28, 2017

When Renewable Portfolio Standards Max Out

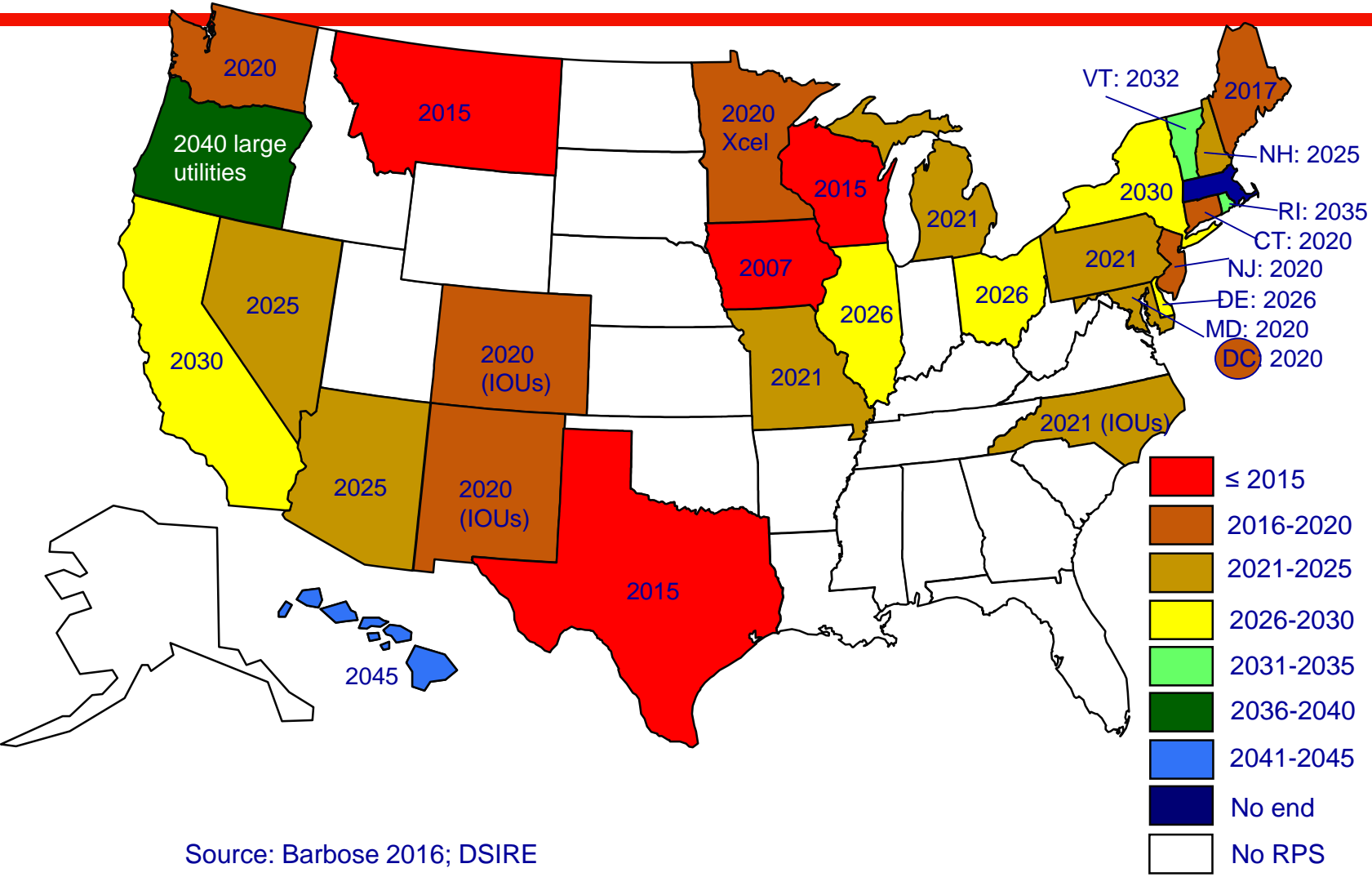


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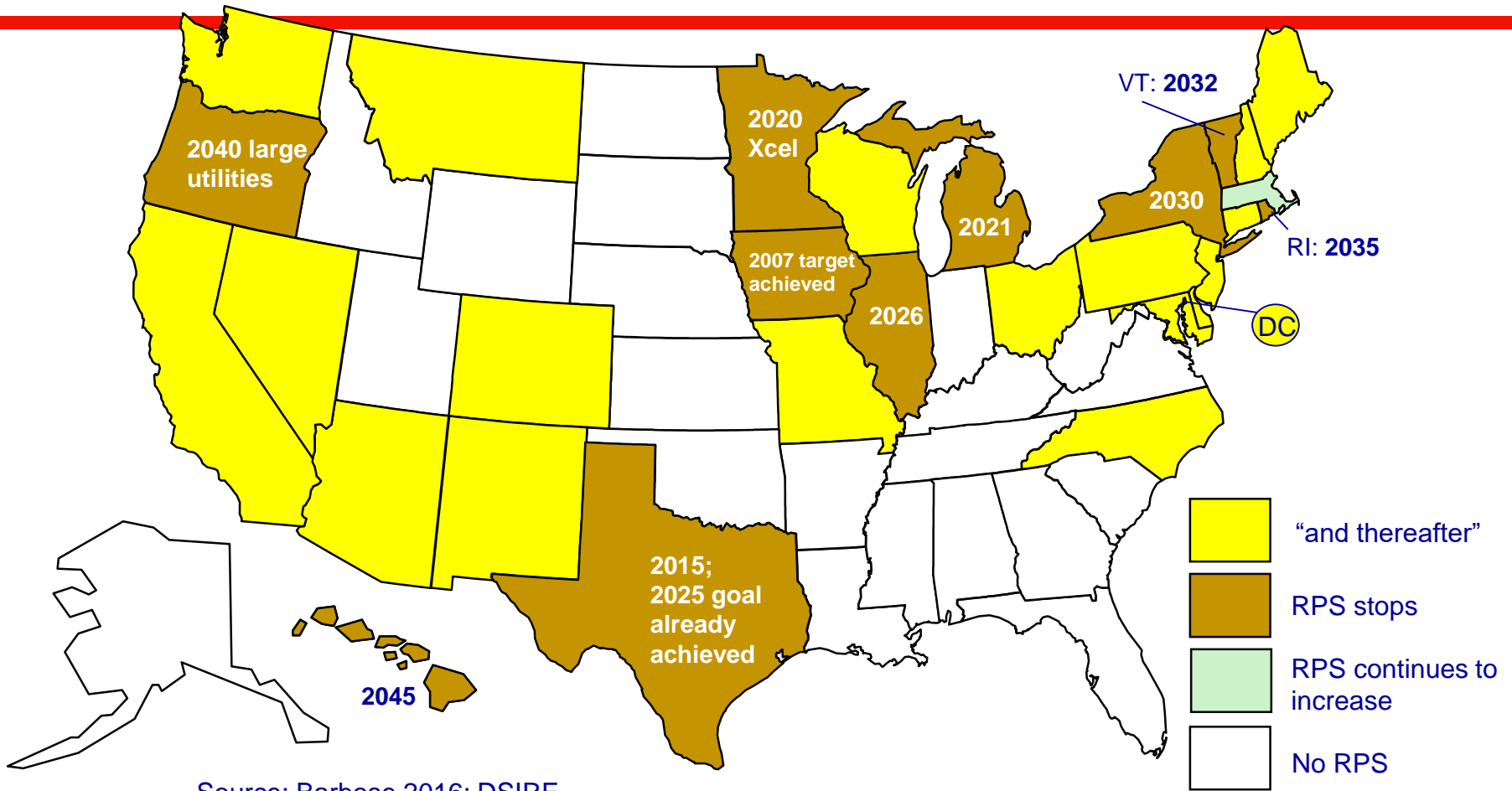
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When Do RPSs Max Out?



Source: Barbose 2016; DSIRE

What Happens When RPS Reaches Maximum Target?

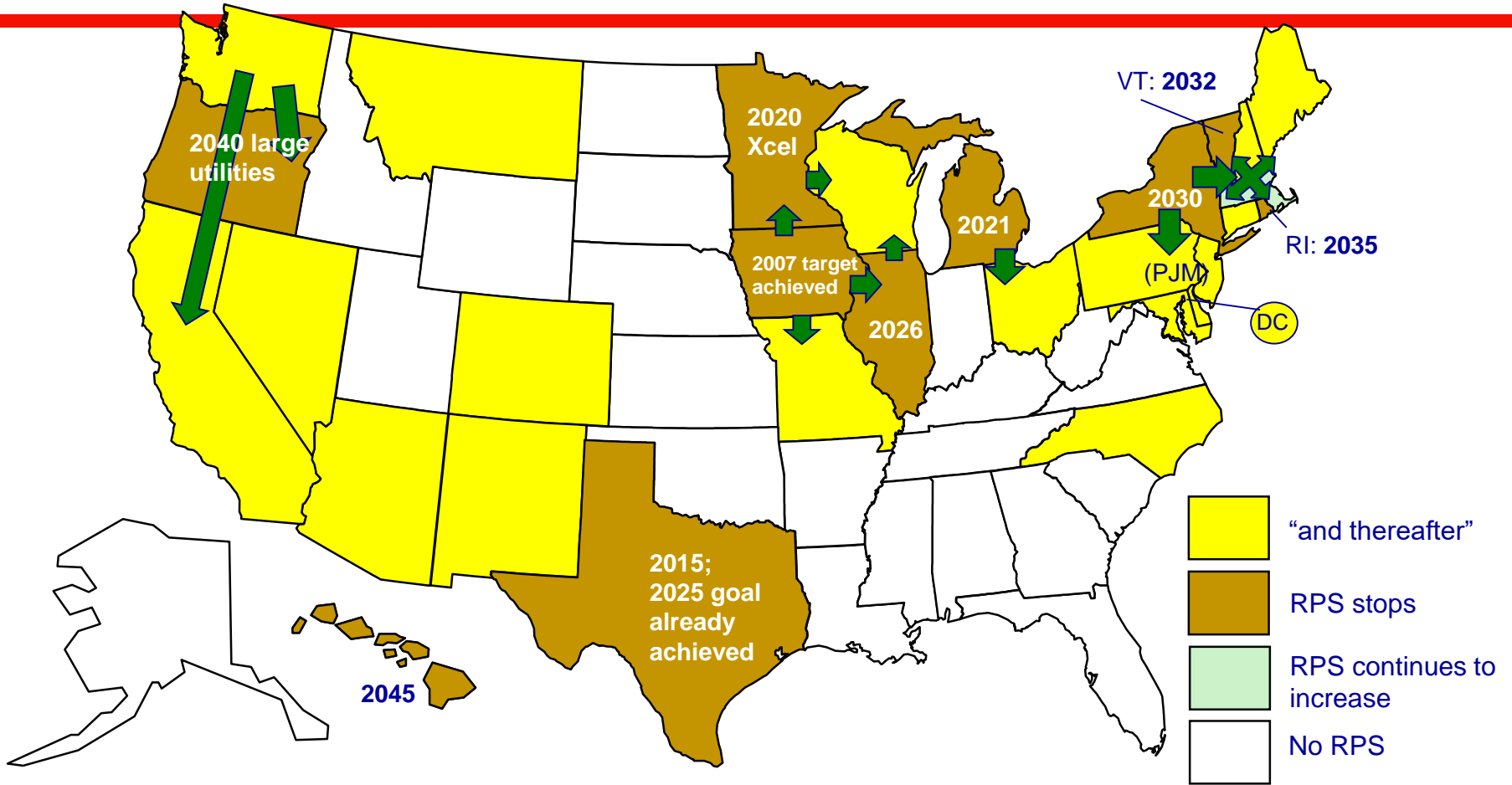


Source: Barbose 2016; DSIRE

Effect on Neighboring States

- RPS ends: Where's the market?
- RPS continues flat: Where's the demand?
- RPS continues to grow: Where's the generation?
- States interact in a larger market

Potential Markets for RECs



Costs, Benefits & Impacts

- NREL and LBNL joint study:
 - ▶ A Prospective Analysis of the Costs, Benefits, and Impacts of U.S. Renewable Portfolio Standards (2016) at <http://www.nrel.gov/docs/fy17osti/67455.pdf>
- Source of information about costs, benefits and impacts of three scenarios that are applicable to the question we're addressing today:
 - ▶ No RPS growth beyond 2014
 - ▶ Existing state RPS policies as of 2016
 - ▶ High renewable energy (all states adopt an RPS with expanded targets)

Options for States Maxing Out

- Job done
 - ▶ Ex: IA, TX
- Extend RPS compliance or expand RPS coverage
 - ▶ Ex: IL
- Increase RPS targets
 - ▶ Ex: DC, HI, MD, MI, NY, OR, RI, VT

Job Done: Implications

- In-state implications
 - ▶ No further cost of compliance
 - ▶ No further cost of administration
 - ▶ Effect on electricity prices will be mixed
 - ▶ Investment in renewable development may shift to other states
 - ▶ RECs may be sold out of state, reducing claims for in-state renewable energy use
 - ▶ Forgone air emission and water use reductions
 - ▶ Forgone renewable energy job opportunities

Job Done: Implications

- Neighboring state implications
 - ▶ Available RECs may increase relative to supply, leading to more competition and lower REC prices
 - ▶ May lower need for investment in neighboring states

Extend or Expand RPS: Implications

- In-state implications
 - ▶ Continues support to eligible facilities
 - ▶ Some older facilities may be profitable without further RPS income, which could lead to unnecessary increases in the cost of electricity
 - ▶ Maintains interest in renewable energy investment in-state
 - ▶ Shift to cleaner generation may continue
 - ▶ Continued moderate environmental benefits and economic impacts
 - ▶ No loss to neighboring states
 - ▶ Continued cost of compliance
 - ▶ Continued cost of administration

Extend or Expand RPS: Implications

- Neighboring state implications
 - ▶ Maintaining RPS targets (flat) will not change REC market dynamics
 - ▶ Expanding coverage will create more demand for RECs
 - ▶ Neighboring states could lose RECs to expanding state; this could increase REC prices in neighboring states

Increase Targets: Implications

- In-state implications
 - ▶ Motivation for renewable energy continues
 - ▶ Shift to cleaner generation will continue
 - ▶ Job growth and increased tax revenue will continue
 - ▶ Environmental benefits will grow
 - ▶ Continued cost of compliance and administration
 - ▶ Mixed pressures on electricity prices

Increase Targets: Implications

- Neighboring state implications
 - ▶ May draw RECs away from neighboring states, or make more REC supply available
 - ▶ May increase—or lower—REC prices in neighboring states
 - ▶ Depends on overall supply and demand

Conclusions

- In-state impacts
 - ▶ Compliance and administrative costs
 - ▶ Electric rates (can go either direction)
 - ▶ Investment and economic impacts
 - ▶ Environmental benefits
- Neighboring state impacts
 - ▶ REC supply and prices
 - ▶ Investment and economic impacts
 - ▶ Environmental benefits
- Pay attention to neighboring state RPS actions because you will be affected