When Do RPSs Max Out?

Source: Barbose 2016; DSIRE
What Happens When RPS Reaches Maximum Target?

RPS stops
RPS continues to increase

RI: 2035
VT: 2032
DC: 2040 large utilities
2015; 2025 goal already achieved
2045
2020 Xcel
2021
2026
2007 target achieved
2030

Source: Barbose 2016; DSIRE

“and thereafter”
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

- 2040 large utilities
- 2015; 2025 goal already achieved
- 2020 Xcel
- 2007 target achieved
- 2021
- 2026
- 2030
- 2032
- 2035
- "and thereafter"

RPS stops
RPS continues to increase
No RPS
NREL and LBNL joint study:

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**