Renewable Energy Discussion
Duke Energy: NCFA Annual Meeting

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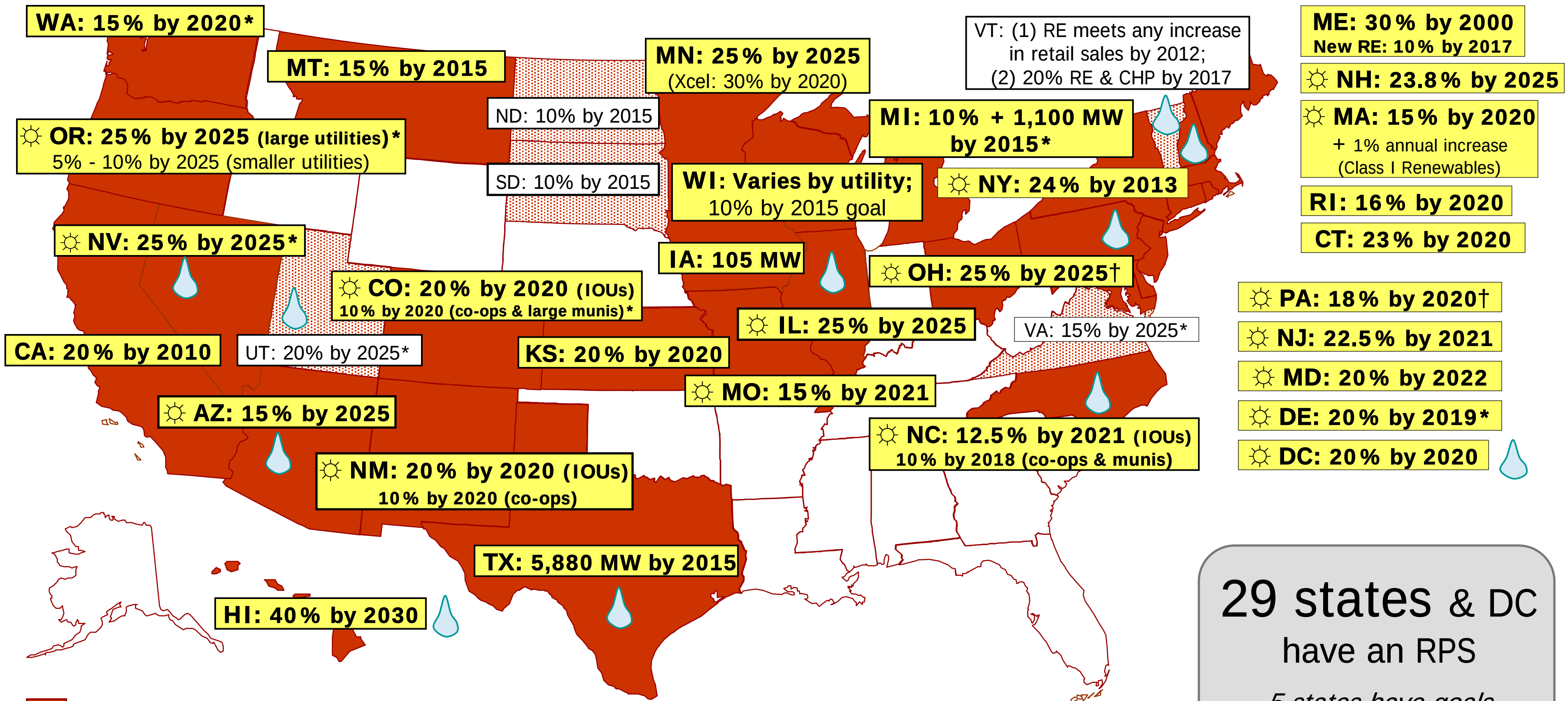
Existing State Renewable Portfolio Standards



29 states & DC
have an RPS
5 states have goals

- State renewable portfolio standard
- State renewable portfolio goal
- Solar water heating eligible
- ☼ Minimum solar or customer-sited requirement
- * Extra credit for solar or customer-sited renewables
- † Includes separate tier of non-renewable alternative resources

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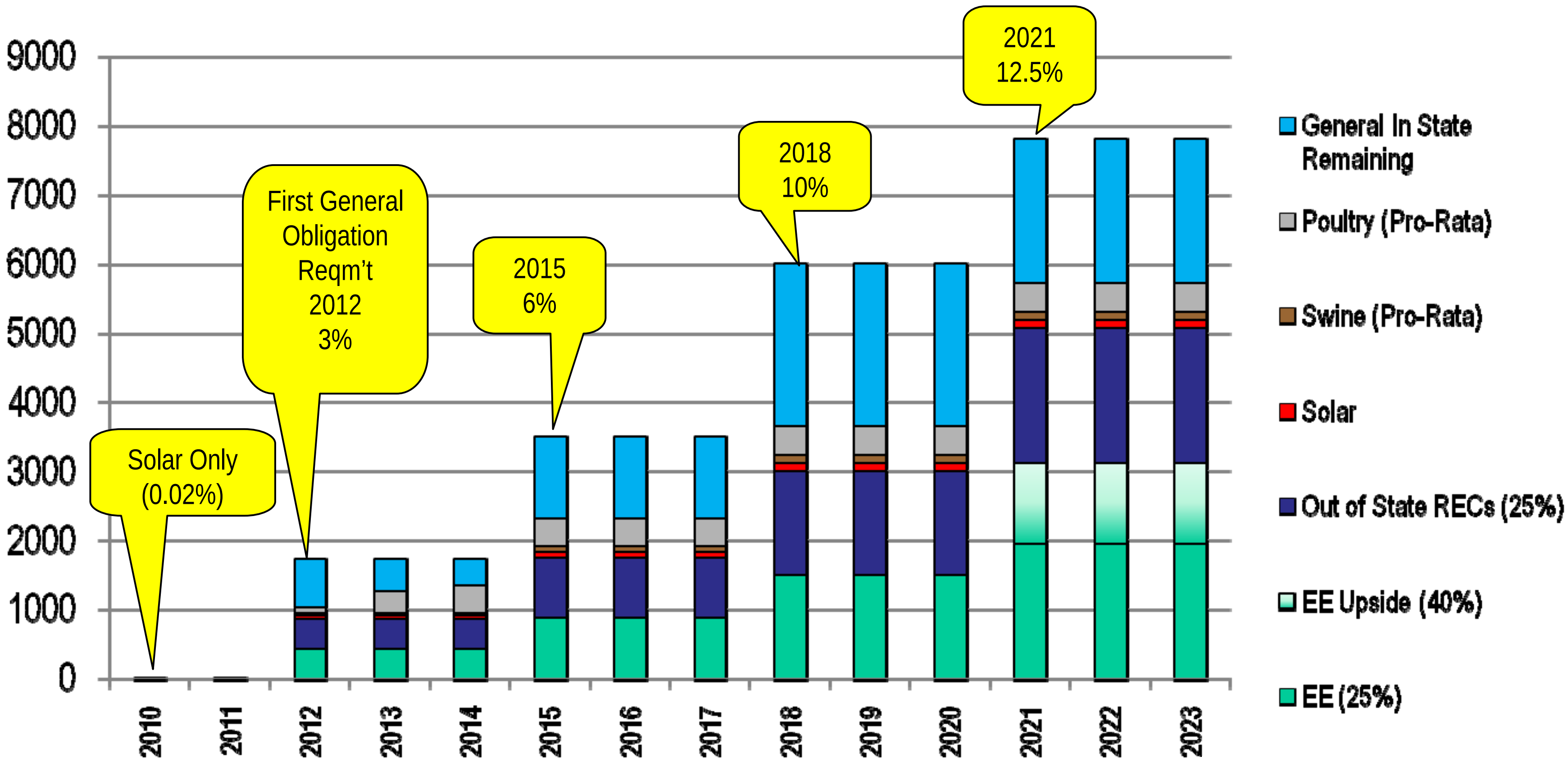
Proposed Federal Legislation:
American Clean Energy and Security Act of 2009 (ACESA)

- US House passed ACESA, aka Waxman-Markey, June 26 2009
  - Renewable energy and energy efficiency mandate
  - 6% by 2012 and grows to 20% by 2020
  - Includes Alternative Compliance Payment (ACP) beginning at $25/REC in 2012
- If a Federal RPS is passed, energy providers will have to meet both State and Federal requirements

Duke Energy's Regulated Renewable Strategy

Strategy	Examples
Ownership / Operation Of Renewables	▪ Biomass Co-Firing & Repowering ▪ Solar Distributed Generation
Power Purchase Agreements	▪ SunEdison solar farm – Davidson County, NC ▪ Methane Power Landfill Gas – Durham, NC
Renewable Energy Certificate (REC) Purchases	▪ Texas Wind RECs ▪ Solar water heating RECs from FLS & Vanir

Duke Energy's NC REPS Requirements (GWHrs)



- Assume that out-of-state RECs and EE will contribute 25% apiece. Beyond 2021 EE is permitted to contribute up to 40% but we may not have that much ("upside").
- Swine and Poultry reflect an assumption of pro-rata obligation. Chart does not reflect recently filed joint motion to delay/modify these requirements

NC REPS Cogeneration Revenue Opportunities

Facilities that use a renewable energy resource to generate energy (electric or thermal) and were…

- …placed in service ***before*** 1/1/07 can register as *Renewable Energy Facilities*
  - RECs from renewable energy facilities may be used only by Electric Membership Cooperatives (EMC) and Municipalities (munis)… but not by Public Utilities

- …placed in service ***after*** January 1, 2007 can register as *New Renewable Energy Facilities*
  - Public utilities (Duke Energy, Progress Energy) can only use RECs from new renewable energy facilities, except for those generated by co-firing

Exception: Facilities that preceded the 1/1/07 date but have had a contract with NC Greenpower can qualify as a *"New"* facility

Ownership Strategy using Brownfield Biomass

- Brownfield utilizes existing infrastructure
  - Co-firing blends small amounts of biomass with coal
  - Repowering is 100% biomass
  - Cost effective and scalable
- First test burns in 2007 at Lee Station
- Additional test burns in 2009 at Lee Station and Buck Station
- Phase 1 assessments and economic modeling for permanent co-firing and repowering projects have been completed
- More detailed Phase 2 evaluations for best sites are starting now

Biomass Test Burn at Buck, Aug-Sep 2009