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# Competitive Acquisition of Renewable Energy & Renewable Energy Certificates

John Nelson, Chief, Electricity Division  
Defense Energy Support Center



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# EPA Act 05 Requirements

- Section 203. Federal Purchase Requirements
  - Renewable Energy Goals
    - Not less than 3% FY07-FY09
    - Not less than 5% FY10-FY12
    - Not less than 7.5% FY13-
  - Acceptable Resources
    - Solar, Wind, Biomass, Landfill Gas, geothermal, municipal solid waste, new hydroelectric generation



# EPA Act 05

- Ability to double count RECs associated with-
  - Generation on Federal Installations
  - On Indian Lands
  - On other Federal Land
- However – must be generated and used
- Policy/Guidelines still being developed



# Executive Order 13423

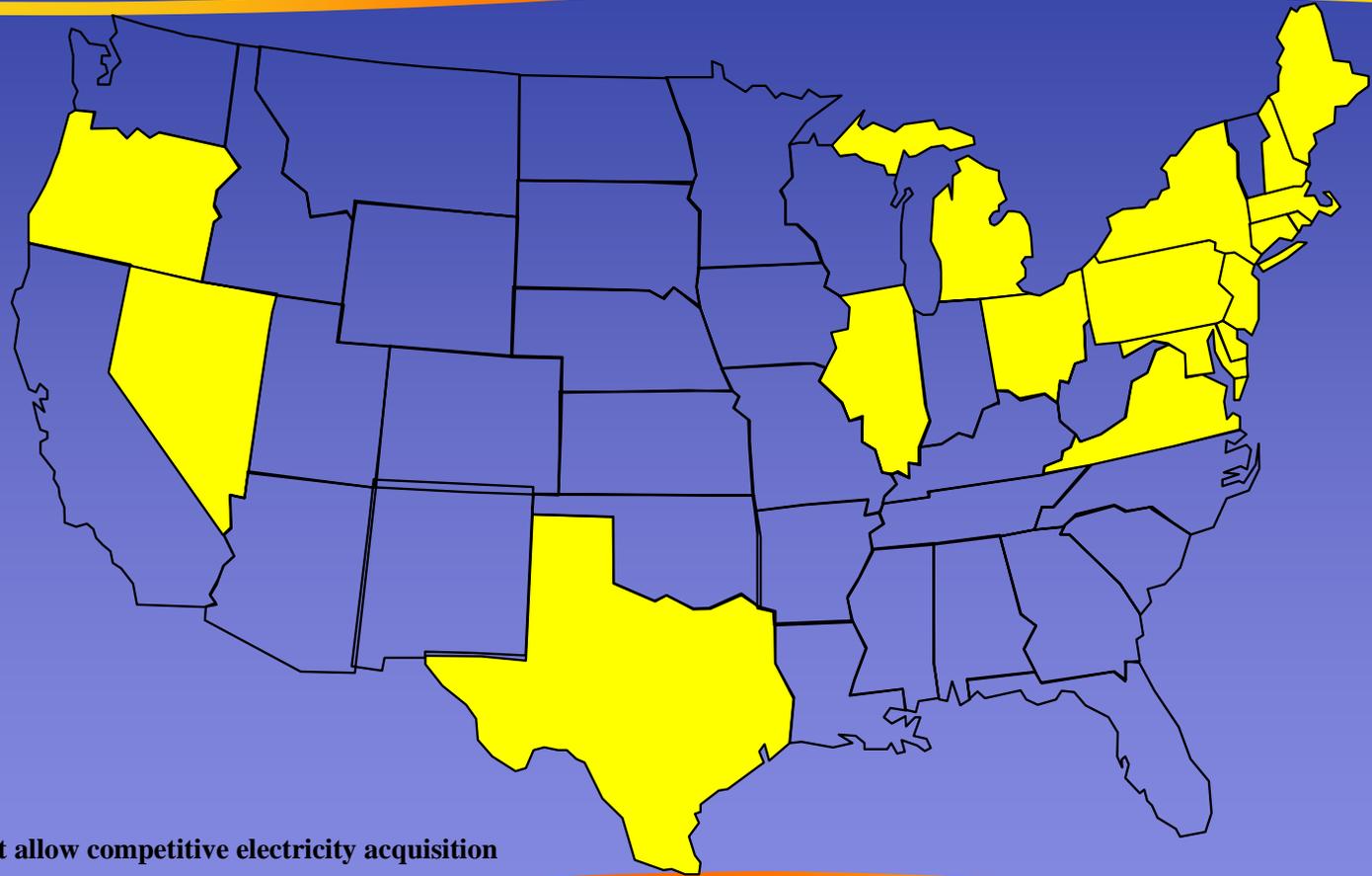
- Section 2
  - At least  $\frac{1}{2}$  of statutorily required renewable energy comes from new renewable resources
    - New = 01 January 1999
- To the extent feasible, the agency implements renewable energy generation projects on agency property for agency use



# Means to Achieve the Goals

- Competitive Green Power Purchase
- Utility Green Power Purchase
- Facilitated Projects
- Renewable Energy Certificates (RECs)

# States with Competition



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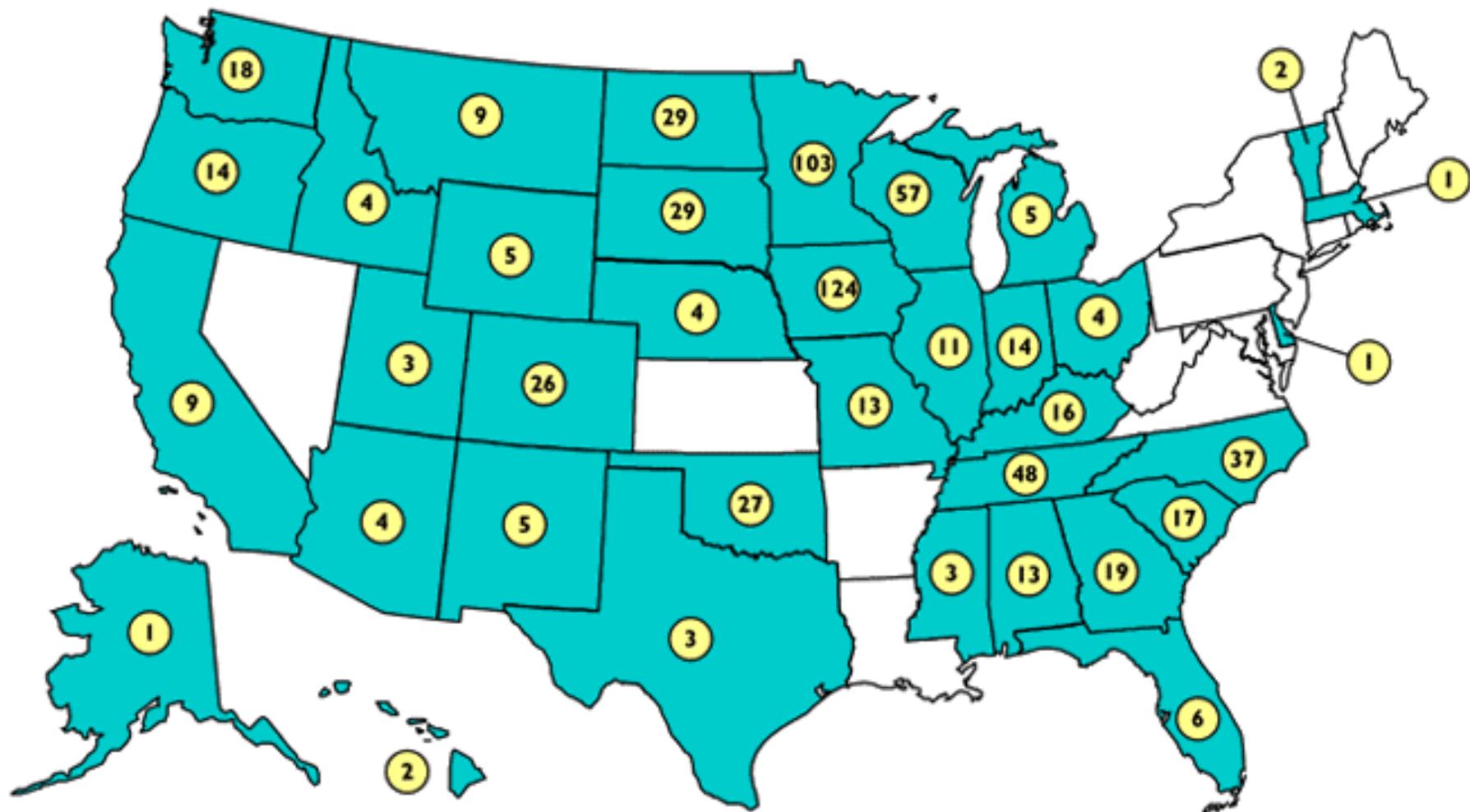
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# Competitive Green Power Purchases

- Only in deregulated states
- Request a % green
  - More costly than separate electron & REC procurements
    - Usually different suppliers
  - Often reduces the number of offerors
  - Easier for many customers to justify
  - Potential for long term contracts
- Reality – Competitive Green Power Purchase =  
Grid power + RECs

# Utility Green Pricing Activities



- States with Green Pricing Programs
- Ⓝ Indicates Number of Utilities/Companies Offering Green Power Products



# Utility Green Power Options

- Chances are they are not where you need them
- Cost issues
  - Always a premium (\$)
  - Range of premiums \$0.002 to \$0.176/kWh
  - Not much room to negotiate price
- Must take or leave what is offered
  - No guarantee of meeting Federal acceptability
- Reality – Utility Green Power Option =  
Grid power + RECs



# Facilitated Projects

- In the long run this is the future
  - Build the most feasible projects on-site
    - Energy security
    - The real green power (not a REC, not rebundled)
  - Significant up front costs
  - Don't happen over night
  - RECs will probably count twice



# Issues with Facilitated Projects

- Who builds the project/Who's money?
- How to contract for the power
  - FAR 41 or 12
  - Term 5 yr, 10 yr, 20 yr, indefinite?
- How will the RECs be handled
- Who provides remaining power requirement
  - Quantity issues
  - Price issues
- More questions than answers



# Renewable Energy Certificates

- Finally referenced?
- They are not for everyone
- Universal
- Technology specific



# Current Approach

- Solicit competitive system power
  - Offerors operate predominately in this market
  - Prices offered are lowest available
- Solicit for RECs
  - Offerors operate predominately in this market
  - Prices offered are lowest available



# REC Pros and Cons

- Soliciting RECs after award for power provides the facility quantity options
- RECs can be purchased and used nationwide
- Quickest, cheapest, easiest way to meet goals



# REC Pros and Cons (cont'd)

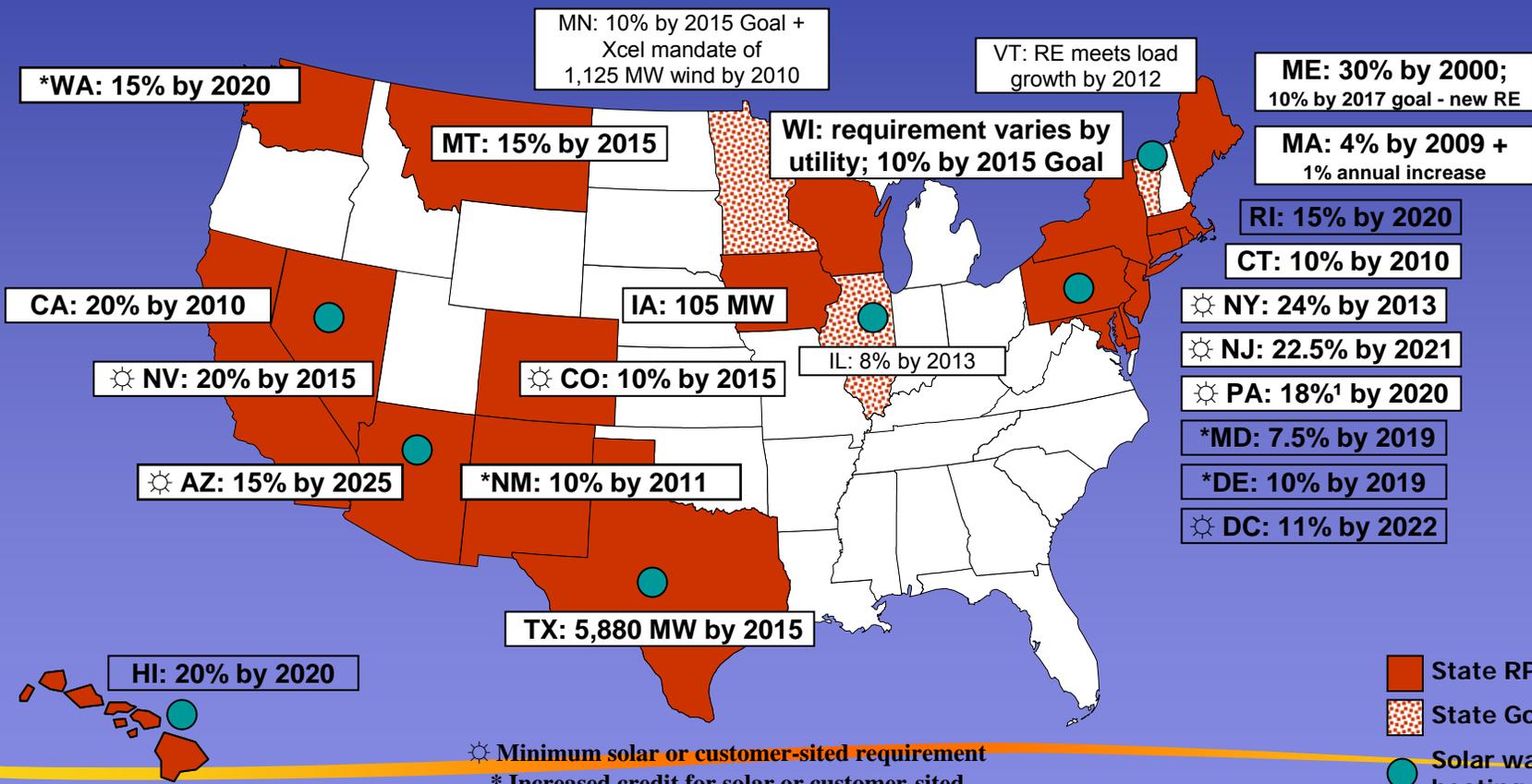
- RECs expire – you met your goal – you have nothing else to show for the \$ you spent
- Demand for RECs is increasing, so is the price
- Someone may decide that as of tomorrow you can no longer buy RECs



# Renewables Portfolio Standards

DSIRE: [www.dsireusa.org](http://www.dsireusa.org)

January 2007



☀ Minimum solar or customer-sited requirement

\* Increased credit for solar or customer-sited

<sup>1</sup>PA: 8% Tier I, 10% Tier II (includes non-renewable sources)

- State RPS
- State Goal
- Solar water heating eligible



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# RPS Changes

- MN - 25% by 2025
  - Xcel 30% by 2020, w/25% wind
  - Solar, wind, hydro (100 MW<), hydrogen, landfill gas, anaerobic systems, municipal solid waste
- NM –20% by 2020
  - Low or zero emissions technology, solar, wind, geothermal, hydro on-line > July 1, 2007, fuel cells, agriculture and animal waste, landfill gas and anaerobic systems



# RPS Changes (Cont'd)

- VA – voluntary RPS – Goal I 4% by 2010, Goal II 7% by 2016, Goal III 12% by 2022
- MD – 9.5% Tier I by 2022 with .005% solar by 2008 and 2.0% by 2022
- CT – 27% by 2020 – extensive definitions and explanations.
- AZ – maintains 15% by 2025 but increases goals in early years
- DE – Doubled RPS (to 20% by 2019) added solar requirement of 2.005% by 2019





# RPS Changes (Cont'd)

- OR – 5% by 2011, 15% by 2015, 20% by 2020 and 25% by 2025. 100% new since 01/01/95 or upgrades to older facilities since 1995
  - Eligible resources wind, solar, wave, tidal, ocean thermal, geothermal, biomass byproducts (but energy from burning is not acceptable), hydro from upgrades after 01/01/95, low impact hydro, hydrogen from renewable resources



# RPS Changes (Cont'd)

- NH – 4.0% in 2008 and 23.8% by 2025
  - Class I (new 01/01/06) wind, geothermal, hydrogen, ocean thermal, wave current or tidal, methane, eligible biomass, incremental hydro biomass, methane,
  - Class II new solar technologies,
  - Class III existing biomass 25 MW or less,
  - Class IV existing small hydro 5 MW or less



# Recent REC Purchases

- NASA Kennedy Space Center, Billings Area  
Indian Health Service – Landfill 9M kWh  
\$0.0023/kWh – Source of supply IN, MI, NC  
Delivery May 2007, met NEW under EO  
13423
- Commerce – Awarded 12 Sep 06 – no special  
requirements – one time delivery NLT 30 Sep  
06 Municipal Solid Waste – 100,000 MWh  
awarded at \$0.30/MWh



# Points of Contact

Kevin Ahern  
Director, DESC Installation Energy  
PH: (703) 767-8572  
Email: Kevin.Ahern@dla.mil

Pam Griffith  
Deputy Director, DESC Installation Energy  
PH: (703) 767-8328  
Email: Pamela.J.Griffith@dla.mil

John Nelson  
Division Chief, Electricity  
PH: (703) 767-8523  
Email: John.Nelson@dla.mil

Andrea Kincaid  
Contracting Officer (Renewables)  
PH: (703) 767-8669  
Email: andrea.kincaid@dla.mil



# Questions?

