

# STATE LEVEL INCENTIVES FOR BIOGAS-FUEL CELL PROJECTS

*Norma McDonald*  
*Vice Chair, American Biogas Council*  
*North American Sales Manager, Organic Waste Systems, Inc.*



## *Organic Waste Systems*

### **FIGURES**

- \* FOUNDED IN 1988
- \* SALES: \$25-35 MILLION
- \* 75 EMPLOYEES

### **ACTIVITIES**

- \* BIOGAS CONSULTANCY & SUPPORT
- \* BIODEGRADATION TESTING AND WASTE MANAGEMENT CONSULTANCY
- \* DESIGN & CONSTRUCTION OF ANAEROBIC DIGESTION PLANTS FOR ORGANIC WASTE AND RESIDUALS



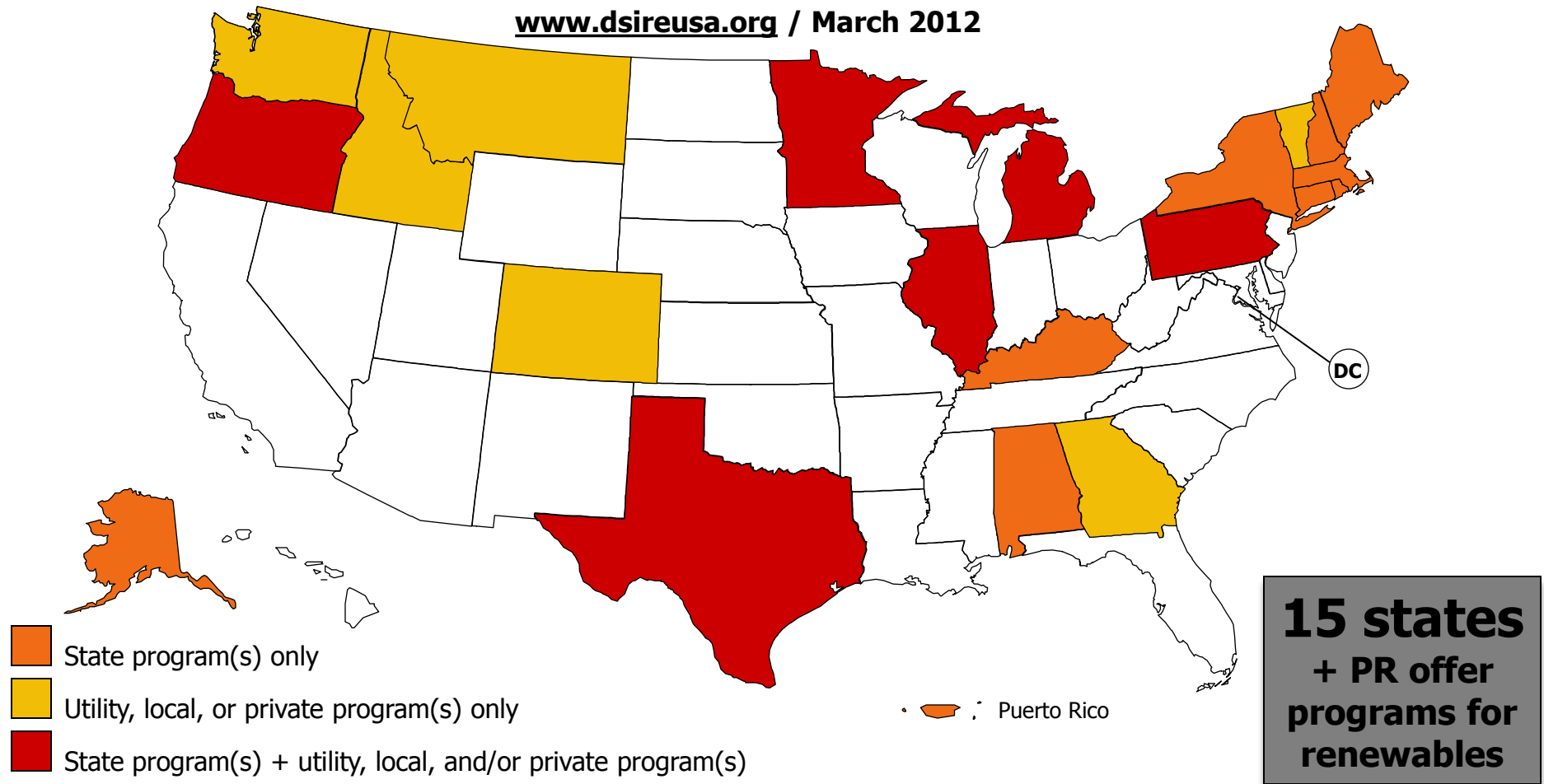
- NO FORMAL STATE CHAPTERS - YET
- MEMBER DRIVEN EFFORTS
- LOCAL “TOUCH” IS ESSENTIAL
- REAPPLY BEST PRACTICES/POLICIES
- PROMOTE/ADVOCATE FOR POLICY PARITY FOR BIOGAS

## DYNAMICS SHAPING STATE INCENTIVES

- BUDGET WOES, ARRA FUNDS NOW RUNNING OUT
- ELECTIONS
- DISILLUSIONMENT, UNSUCCESSFUL PROJECTS
- ECONOMIC DEVELOPMENT
  - NEW/REVIVE MANUFACTURING
  - RETAIN JOBS
  - NEW COMPANIES – *IN-STATE COMPANIES FAVORED EVEN IF NO EXPERIENCE; INCREASED PROJECT RISK?*
- ENERGY COSTS
- SYNERGY WITH STATE BIOMASS RESOURCES
- ENVIRONMENTAL CONCERNS/OBJECTIVES

## Grant Programs for Renewables

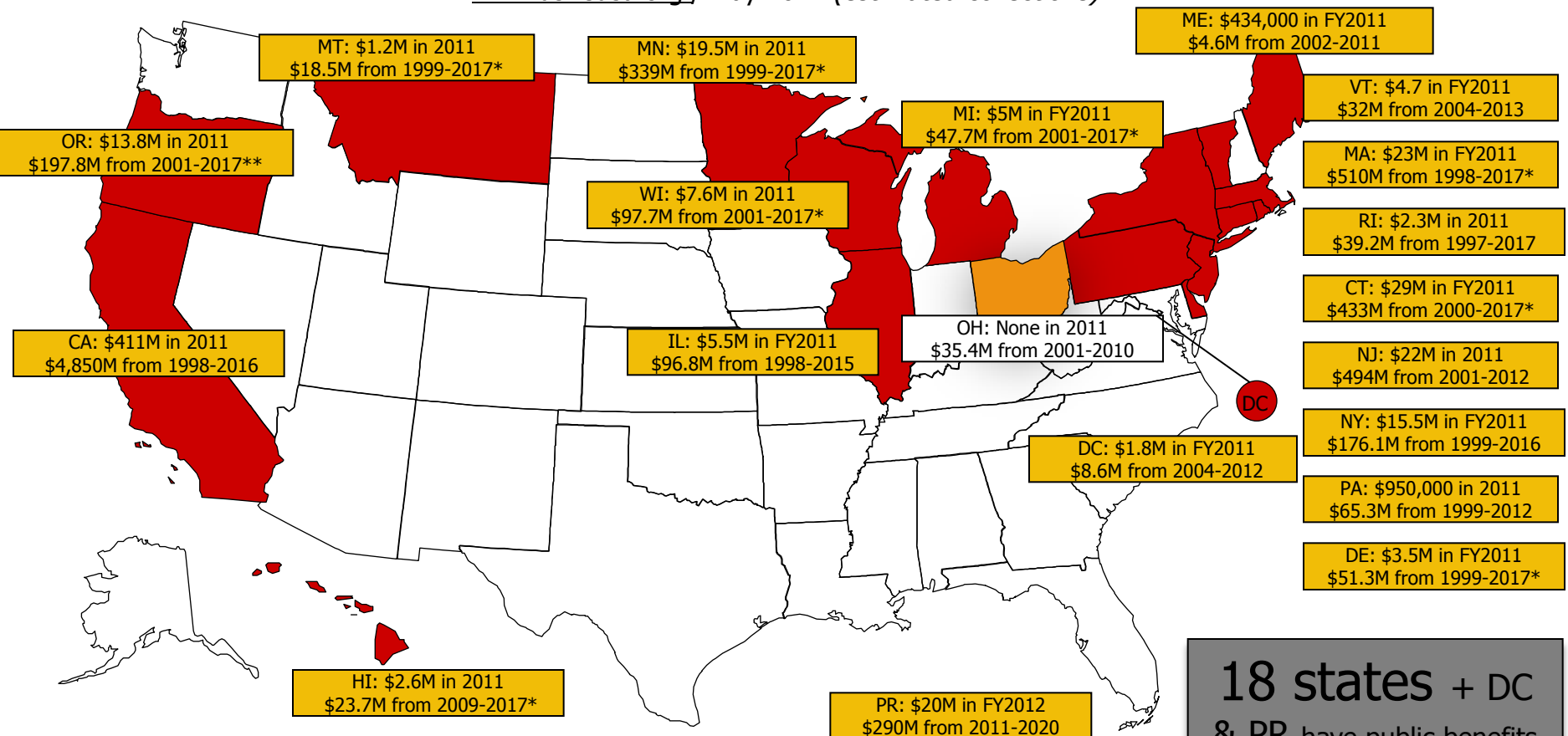
[www.dsireusa.org](http://www.dsireusa.org) / March 2012



Notes: This map only addresses grant programs for end-users. It does not address grants programs that support R&D, nor does it include grants for geothermal heat pumps or other efficiency technologies. The Virgin Islands also offers a grant program for certain renewable energy projects.

## Public Benefits Funds for Renewables

[www.dsireusa.org/](http://www.dsireusa.org/) May 2012 (estimated collections)



**18 states + DC & PR** have public benefits funds (\$7.8 billion by 2017)

■ State PBF With Ongoing Collections 
 ■ State PBF Closed to New Collections 
 ● Puerto Rico

\* Fund does not have a specified expiration date  
 \*\* The Oregon Energy Trust is scheduled to expire in 2025

(NOTE: Slides 2-10 explain the methodology)

## Methodology

The preceding map generally includes only state funds supported by utility ratepayer surcharges, as opposed to funds supported by legislative appropriations. Federal funding, such as funding from the American Recovery and Reinvestment Act of 2009, is not included.

## Sources of Uncertainty

- Some funds support both renewables and energy efficiency without clear guidance on how future funding will be allocated to each area.
- In some states, annual funding is tied to retail sales of electricity and/or natural gas, making future projections somewhat speculative.
- In some states, a portion of the fund may be seized by state officials for purposes other than renewable energy development.
- Future additions to many funds may be forthcoming in the form of alternative compliance payments (ACPs) under state renewable portfolio standard (RPS) policies, or with the auction of carbon emissions allowances as part of the Regional Greenhouse Gas Initiative (RGGI).

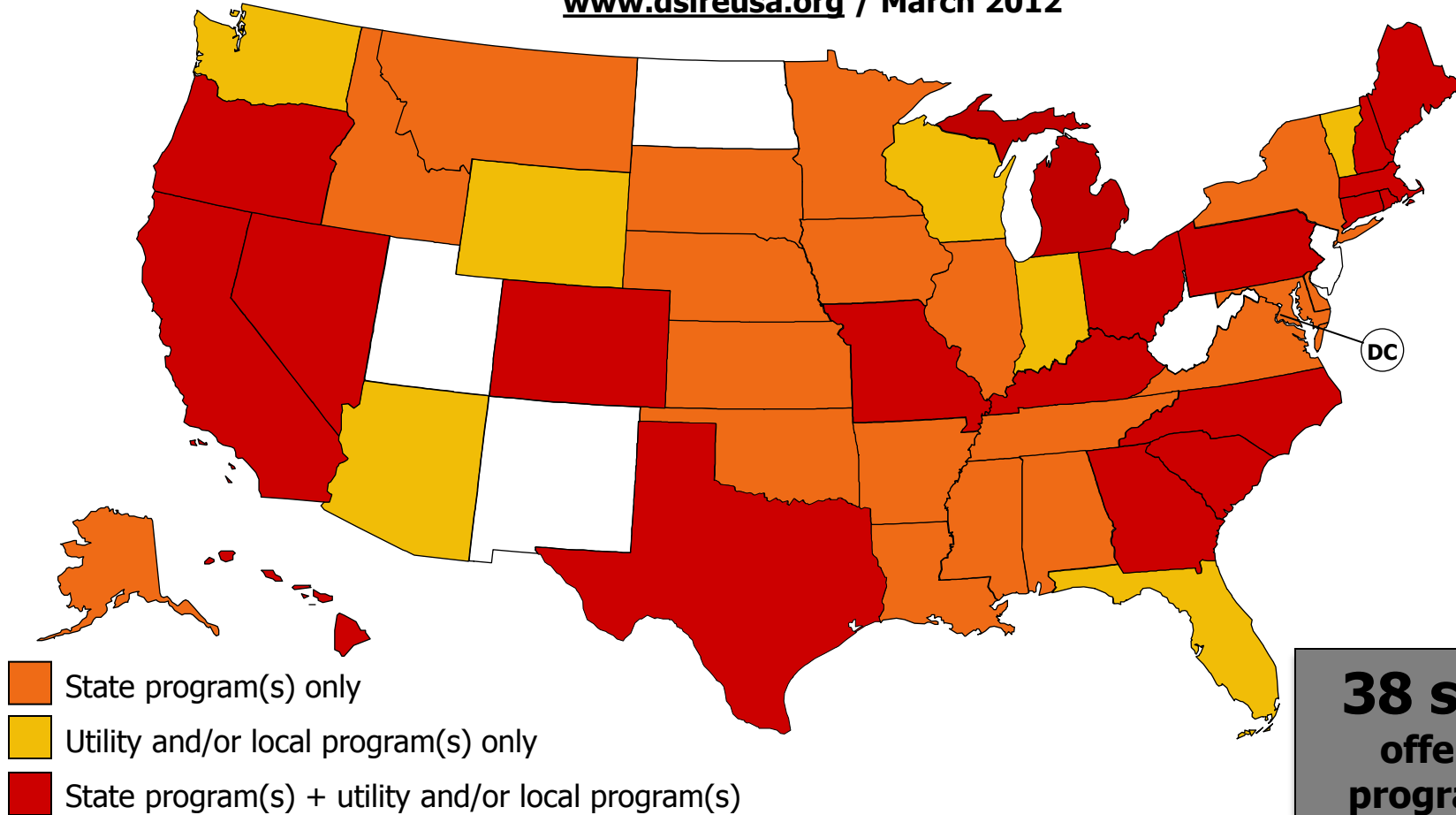


- ALASKA: UP TO \$50 MILLION/YR THRU 2023
- CALIFORNIA: CEC, TYPICALLY \$12-25 MILLION PER YEAR
- KENTUCKY: AMOUNT VARIES, FARMS ONLY
- MASSACHUSETTES: UP TO \$400,000
- MINNESOTA: UP TO \$500,000, \$2.5 MILLION POT
- NEW YORK: NYSERDA GRANTS, AMOUNT VARIES
- OREGON: ENERGY TRUST, GRANT IS % OF ABOVE-MARKET ENERGY COSTS
- PENNSYLVANIA: UP TO \$2 MILLION, \$165 MILLION MULTI-YR BUDGET
- RHODE ISLAND: UP TO \$750,000
- VERMONT: CASE BY CASE
- WISCONSIN: TBD JUNE 2012; NORMALLY >\$10 MILLION/YR



## Loan Programs for Renewables

[www.dsireusa.org](http://www.dsireusa.org) / March 2012



**38 states offer loan programs for renewables**

*Note: This map does not include loan programs for geothermal heat pumps or other energy efficiency technologies. The U.S. Virgin Islands also offers loans for certain renewable energy technologies.*

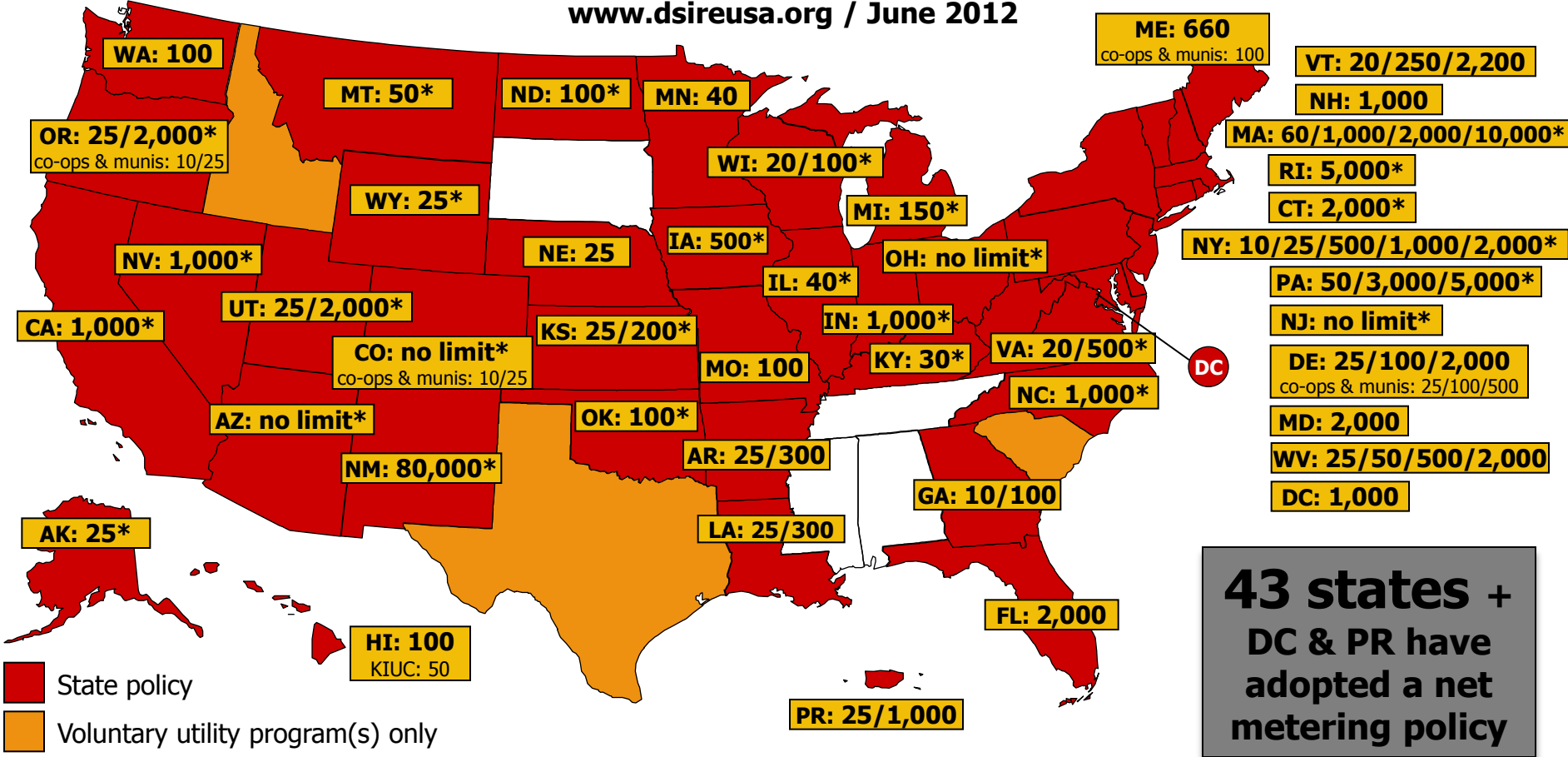
- BEST IN CLASS PROGRAMS: PENNSYLVANIA, OREGON, NEW YORK
- SOURCES: STATE ENERGY OFFICES, ECONOMIC DEVELOPMENT COMMISSIONS, PUBLIC BENEFIT FUNDS

## **FINANCING CHALLENGES**

- CONVENTIONAL LENDERS MAY REQUIRE 100%+ COLLATERAL, PERSONAL GUARANTEES, BONDING – ***EVEN WITH LOAN GUARANTEES***
- PROJECTS OFTEN TOO SMALL, LOW MARGIN TO ATTRACT UTILITIES, VENTURE CAPITAL OR JUSTIFY COMPLEX TAX-EQUITY INVESTMENT APPROACHES
- VERY FEW TECHNOLOGY PROVIDERS OR EQUIPMENT MANUFACTURERS PROVIDE FINANCING OPTION

## Net Metering

www.dsireusa.org / June 2012



**43 states + DC & PR have adopted a net metering policy**

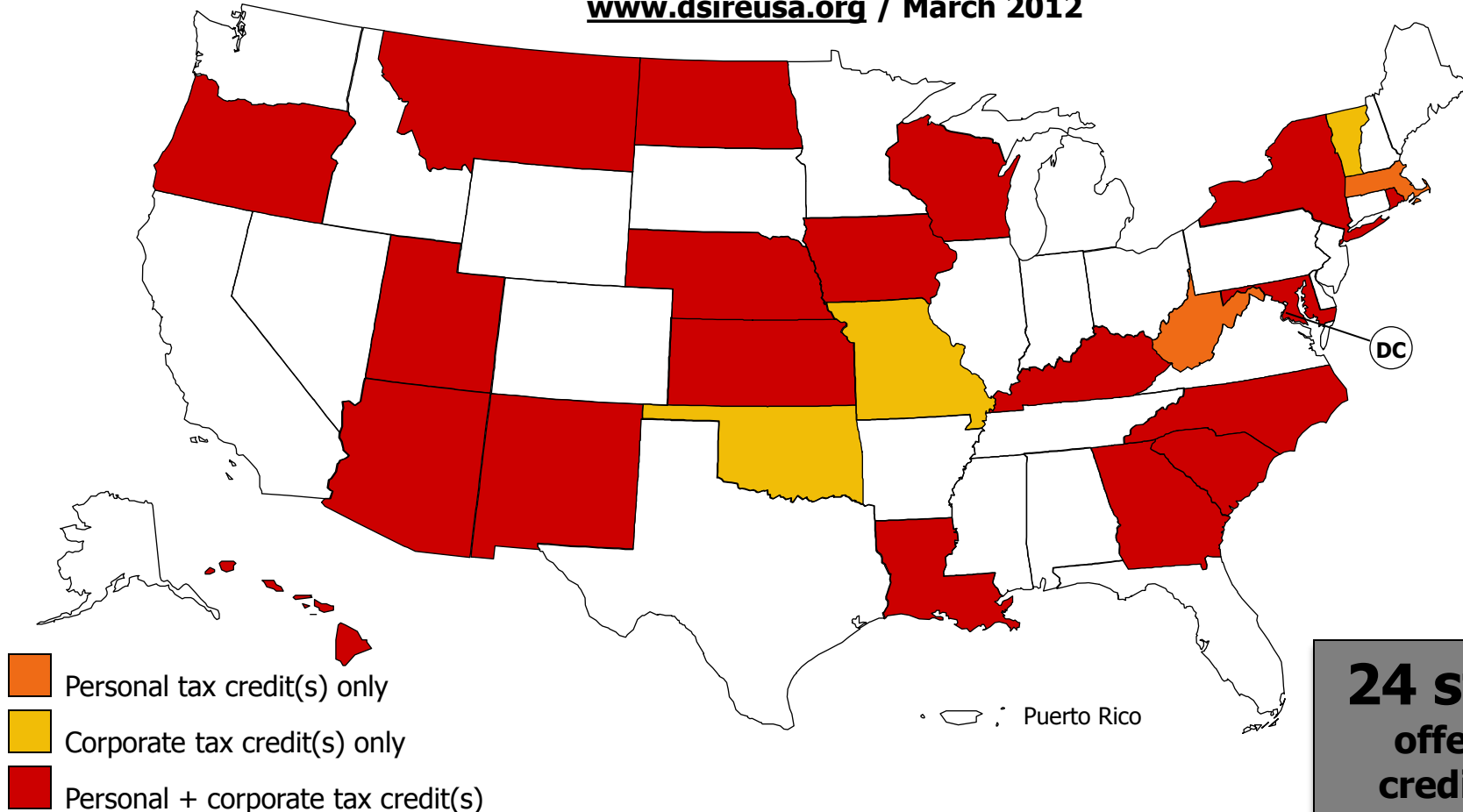
\* State policy applies to certain utility types only (e.g., investor-owned utilities)

Note: Numbers indicate individual system capacity limit in kW. Some limits vary by customer type, technology and/or application. Other limits might also apply. This map generally does not address statutory changes until administrative rules have been adopted to implement such changes.

- NEED FOR STUDY OF STATES WITH HIGH OR NO-LIMIT NET METERING – GOOD OR BAD RESULTS?
- IN MANY STATES, BIOGAS PROJECTS RECEIVE LESS FAVORABLE TREATMENT UNDER NET METERING RULES COMPARED TO SOLAR

## Tax Credits for Renewables

[www.dsireusa.org](http://www.dsireusa.org) / March 2012

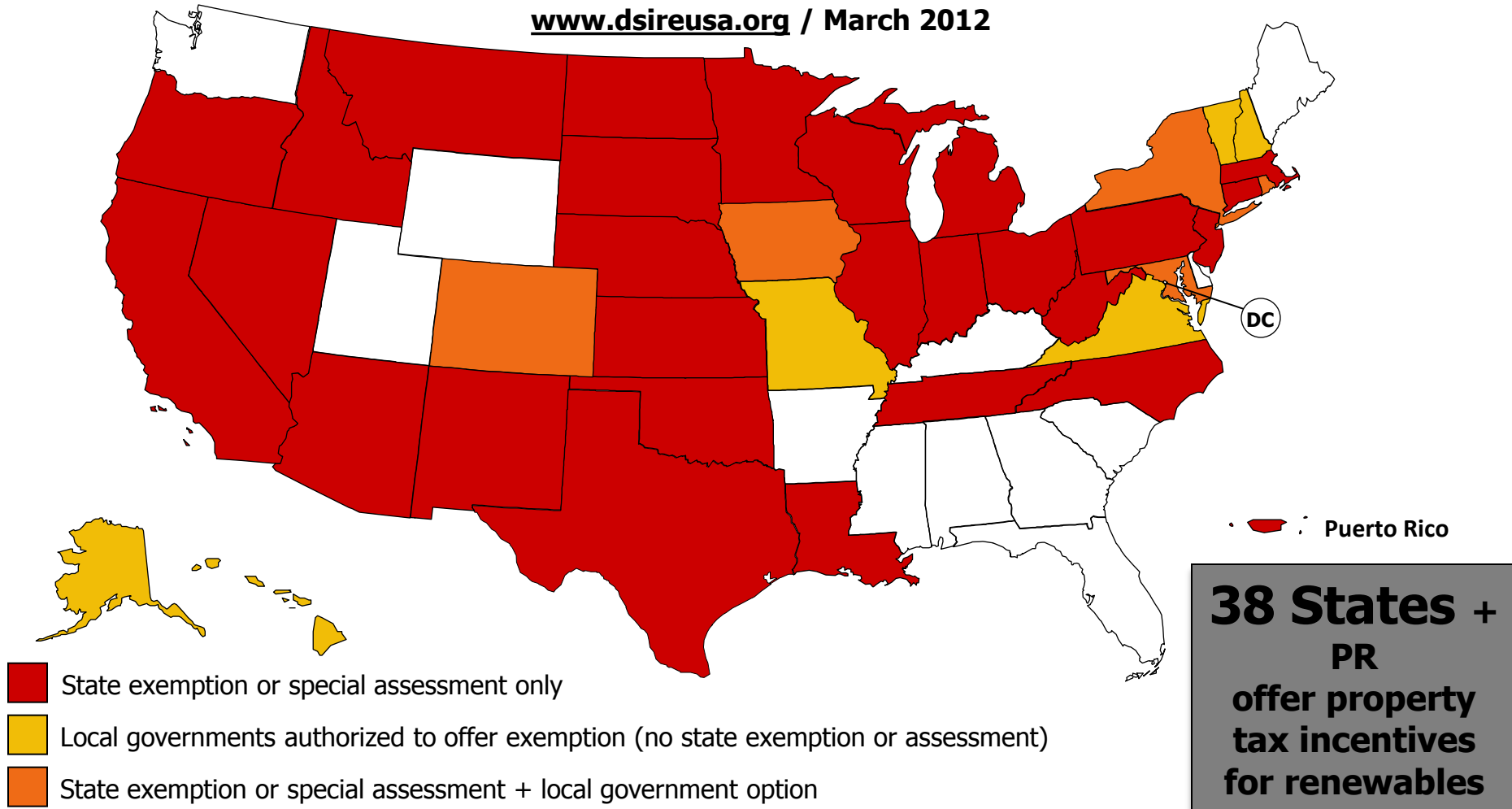


**24 states  
offer tax  
credits for  
renewables**

Notes: This map does not include corporate or personal tax deductions or exemptions; or tax incentives for geothermal heat pumps.

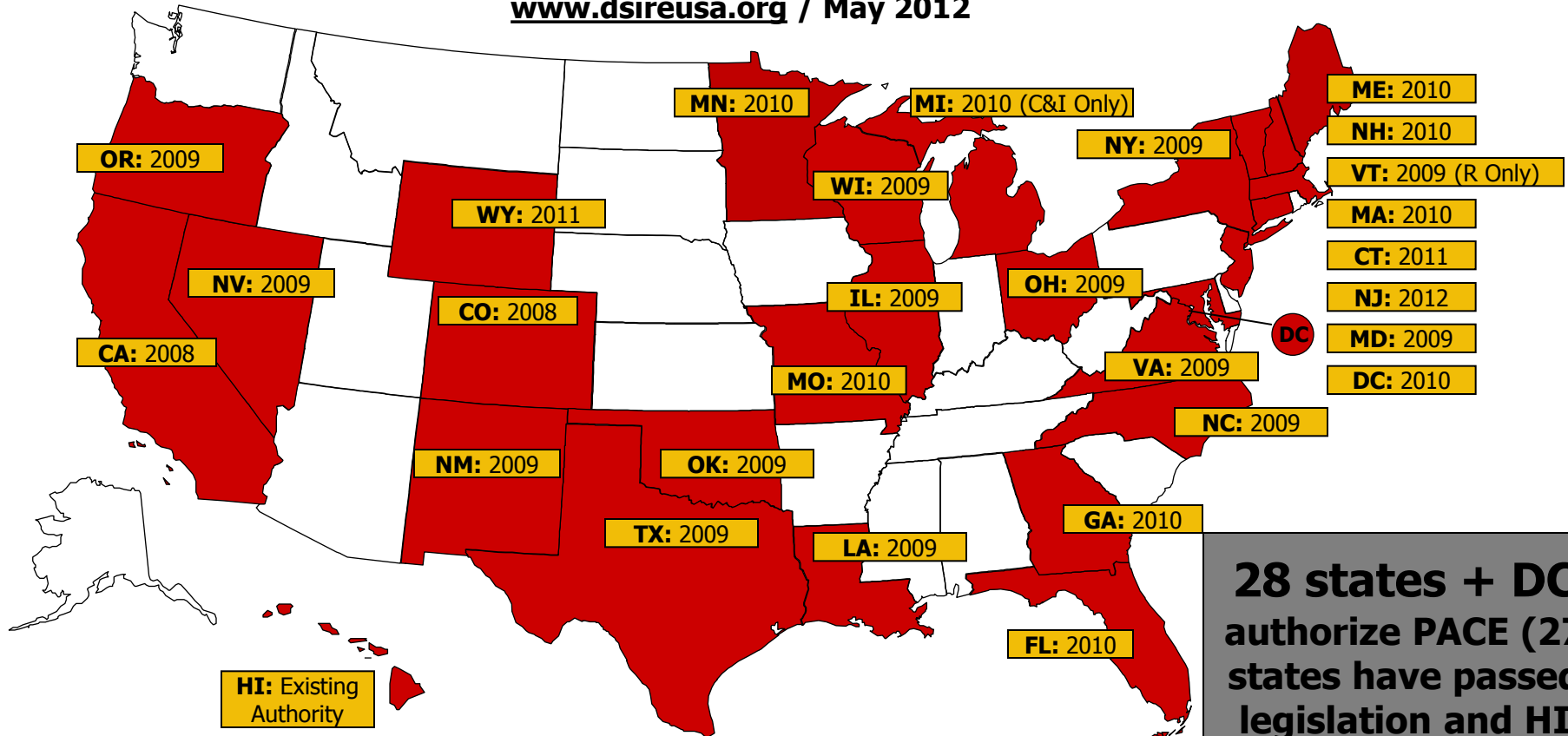
## Property Tax Incentives for Renewables

[www.dsireusa.org](http://www.dsireusa.org) / March 2012



## Property Assessed Clean Energy (PACE)

[www.dsireusa.org](http://www.dsireusa.org) / May 2012



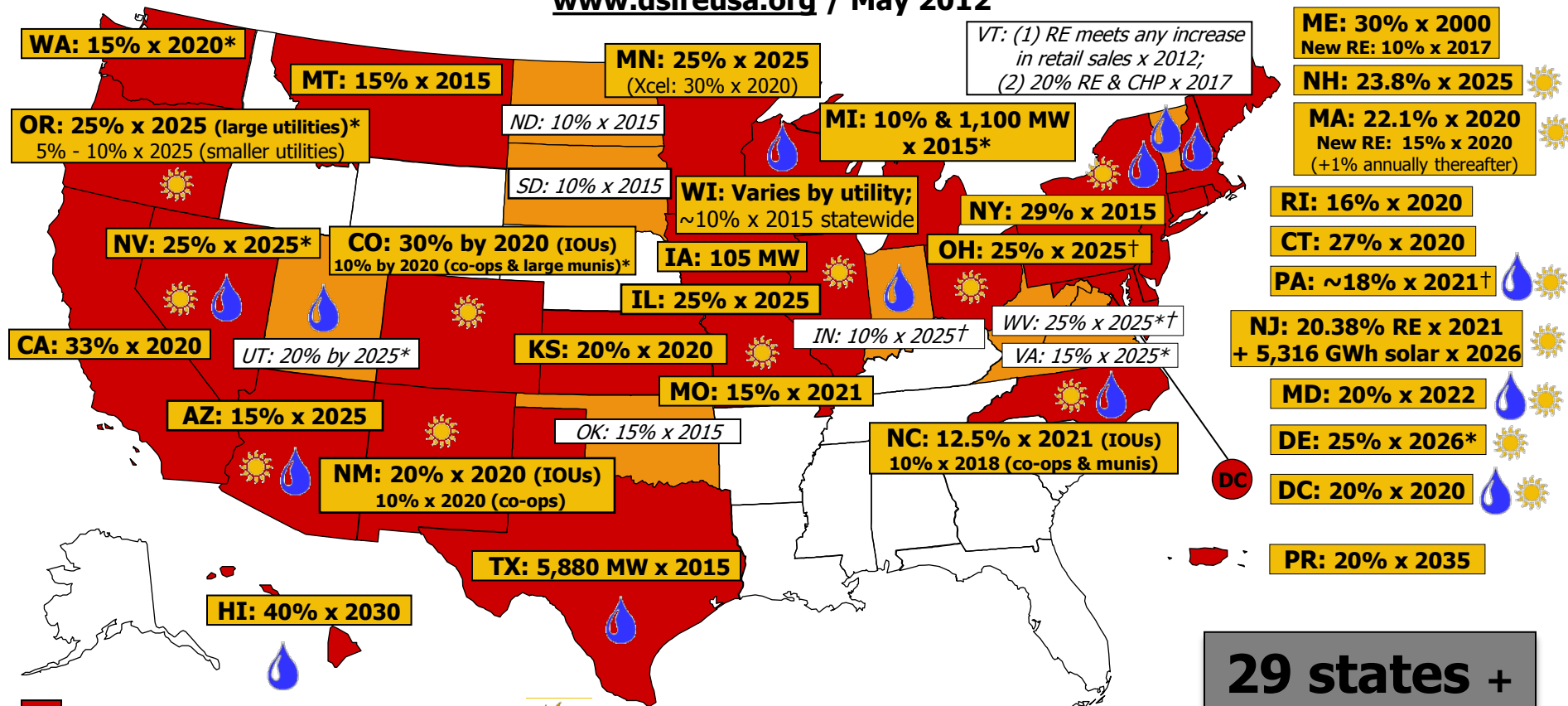
■ PACE financing authorized by the state\*

\*The Federal Housing Financing Agency (FHFA) issued a [statement](#) in July 2010 concerning the senior lien status associated with most PACE programs. In response to the FHFA statement, most local PACE programs have been suspended until further clarification is provided.

**28 states + DC authorize PACE (27 states have passed legislation and HI permits it based on existing law)**

## RPS Policies

[www.dsireusa.org](http://www.dsireusa.org) / May 2012



- Renewable portfolio standard
- Renewable portfolio goal
- 💧 Solar water heating eligible
- ☀️ Minimum solar or customer-sited requirement
- ✳️ Extra credit for solar or customer-sited renewables
- † Includes non-renewable alternative resources

**29 states + DC and PR have an RPS**  
(8 states have goals)

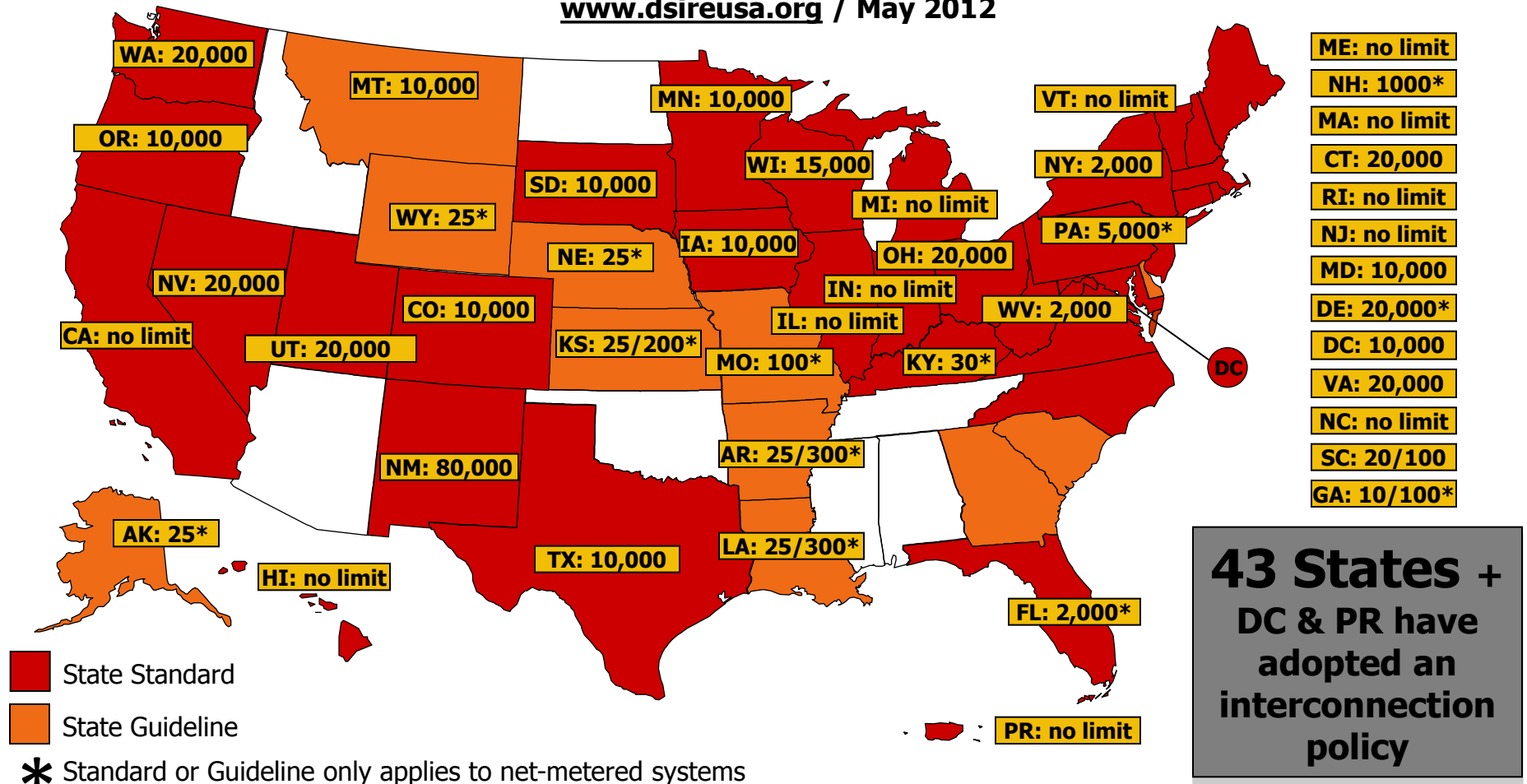


## RPS – GOOD NEWS, BAD NEWS

- MANY STATES ALREADY MEETING/EXCEEDING RPS TARGETS
- ONCE MET, PPA AND REC RATES PLUMMET
- VERY FEW CARVE OUTS FOR BIOGAS; WIND/SOLAR SET ASIDES CROWD OUT BIOGAS PROJECTS IN MANY STATES
- ONLY A FEW STATES CONSIDERING INCREASING TARGETS
- TARGET ENFORCEMENT?? COST OF NON-COMPLIANCE UNCLEAR
- NON-RENEWABLE ALTERNATIVE “CLEANER” TECHNOLOGIES MAKING IN-ROADS

## Interconnection Policies

[www.dsireusa.org](http://www.dsireusa.org) / May 2012



*Notes: Numbers indicate system capacity limit in kW. Some state limits vary by customer type (e.g., residential/non-residential). "No limit" means that there is no stated maximum size for individual systems. Other limits may apply. Generally, state interconnection standards apply only to investor-owned utilities.*

## INTERCONNECTION ISSUES

- MANY RULES WRITTEN MAINLY FOR EITHER LARGE, TRANSMISSION SCALE OR SMALL RESIDENTIAL PROJECTS; BIOGAS PROJECTS OF 0.5-2 MW SOMETIMES AN AFTERTHOUGHT
- SOME STATES ALLOW RESTRICTIVE INTERCONNECTION AGREEMENTS – FORCED TO SELL ALL AT LOW RATES, BUY BACK AT RETAIL *AND GIVE UP RECs*; LIMITS ON OR NON-ALLOWANCE OF *WHEELING TO 3<sup>RD</sup> PARTIES*
- COSTS NORMALLY 10%+ OF PROJECT COST, UNREGULATED, AND ASSETS BELONG TO UTILITY

---

## State Spotlight: California (RPS, Biomethane, CEC)

- March 16: CEC proposed wholesale moratorium on biomethane projects
- Biomethane no longer would qualify for RPS; biogas to electricity unaffected
- Reason: CEC wants to stop new non-CA biomethane projects from developing and selling the gas to CA utilities (cheaper than CA biomethane)
- Pros and Cons—but mostly Cons (economic, confusing, negative signal to renewables industry and investors)
- ABC took a strong position against the proposed moratorium citing stoppage of important CA economic activity and the process (legislature should handle, not CEC)
- 65 public comments filed
- Hearing today at 12pm CT: <http://www.energy.ca.gov/webcast/>
- <http://www.energy.ca.gov/portfolio/documents/#03282012>

---

## State Spotlight: Connecticut, Setting an Example

- Public Act No. 11-217
- An Act Concerning the Recycling of Organic Materials by Certain Food Wholesalers, Manufacturers, Supermarkets and Conference Centers.
- Passed late 2011
- Targets commercial operations generating **more than 104 tons** of organic waste per year
- Less than 6 months after CT's 2<sup>nd</sup> organics recycling facility establishes service, waste generators **must source separate**
- For waste generators that have a recycling facility **within 20 miles**, their **organics must also be recycled** within those 20 miles.

