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OUTLINE of PRESENTATION

1. WHERE HAVE WE BEEN ? WHAT HAVE WE BEEN DOING ?

From IRP to Interruption of Service

From Competition, Choice and Access to Storm Damage

On your mark, get set.....stop

2. RENEWABLE ENERGY INCENTIVES

Who's Doing What

Observations

Planning – What Are We Doing Now

3. THE CLEAN ENERGY ACT of 2013

Approach

Specifications

Goals

Costs

Outcome

Conclusions

WHERE HAVE WE BEEN ?

In 1991, the Arkansas Public Service Commission incorporated federal compliance requirements into Integrated Resource Plan (IRPs) guidelines for electric utilities' (and electric cooperatives). Under these guidelines, electric utilities and cooperatives were to account for quantitative environmental effects and to address the expected obligations under the federal requirements. Each utility's IRP was to include:

Planned operation levels of all affected facilities; expected emission reduction mandates.

Specific methods for emission reduction such as fuel switching, retrofit of pollution control devices, energy conservation, and purchase of emission allowances.

Arkansas regulators also proposed regional integrated resource planning to address multi-state utility planning and allocation issues.

OPPORTUNITY

Invest in Arkansas' Long Term Energy Future

Provide five, ten and twenty year energy plans.

Allow Utilities to Recover Costs to Invest

Consider Programs Incorporating Some Renewable Energy Such as Solar Water Heating Along With Energy Efficiency & Conservation.

Environmental, Economic & System Accountability

Quantify and Qualify Hidden Costs of Conventional Energy Sources.

Choose From a Host of Planning Options

Promulgate Programs

OUTCOME

Rate of Return ?

No Action

Cost recovery rules ?

No Action

Treatment of benefits/costs from allowance transactions ?

No Action

Action mandating or favoring a particular option ?

No Action

From IRP to Interruption of Service

or

Competition is on the way

By 1995, with the specter of utility de-regulation, we could not afford to invest in a long term plan. To meet federal requirements that we have some kind of plan and the need to address growing peak demand, our IRP became interruption of service contracts. A limited sector of the customer base could enjoy a substantial reduction in their rates if they agreed to shed part or all of their load during times of extreme peak demand.

Our integrated resource plan had become rolling brownouts.

THE PROMISE of DEREGULATION

COMPETION : This would open the market to allow non-utility generators to compete in the generation and sale of electricity. Naturally an expected outcome would be lower costs to the consumer.

ACCESS : This would insure that new generation resources would have access to transmission and distribution infrastructure.

CHOICE : For the first time, consumers would have a choice in their electric energy purchases.

THE PROBLEM of DEREGULATION

Would regulated monopolies become unregulated monopolies?

Functional unbundling of generation, transmission and distribution were complicated.

$160,000,000.00 of ratepayer money was set aside to compensate utilities for the stranded cost they would incur from deregulation.

THE OUTCOME

The problems outweighed the promise. When deregulation in other states witnessed energy being bought and sold up to thirty times on it's way to the end user along with other substantial consequences, including the collapse of Enron, power outages and spikes in costs, Arkansas' Deregulation Act was repealed. The $160m was spent to repair extensive damage caused by a severe ice storm.

On Your Mark...

IN 2001, we passed the most promising piece of legislation supporting renewable energy in Arkansas since 1984, when then legislators Fitch and Bebee sponsored and passed an extension of a solar state income tax deduction. The *Arkansas Renewable Energy Development Act of 2001*, was the legislation that gave us net metering.

Get Set...

While the Act provided a level of choice and access to the electrical grid, net metering alone did not provide the incentive Arkansas would need to move into the new energy economy. It took us almost ten years to reach a paltry fifty net metering installations.

Stop...

Initially bemused by the prospects of renewable energy development in Arkansas, the entrenched monopolies now are beginning to realize the enormous potential contribution from distributed renewable energy generation, and they have been obstructive to any regulatory or statutory effort I have undertaken since 2001.

RENEWABLE ENERGY INCENTIVES

Whose Doing What

RENEWABLE ENERGY INCENTIVES
Whose Doing What

DSIRE™
Database of State Incentives for Renewables & Efficiency

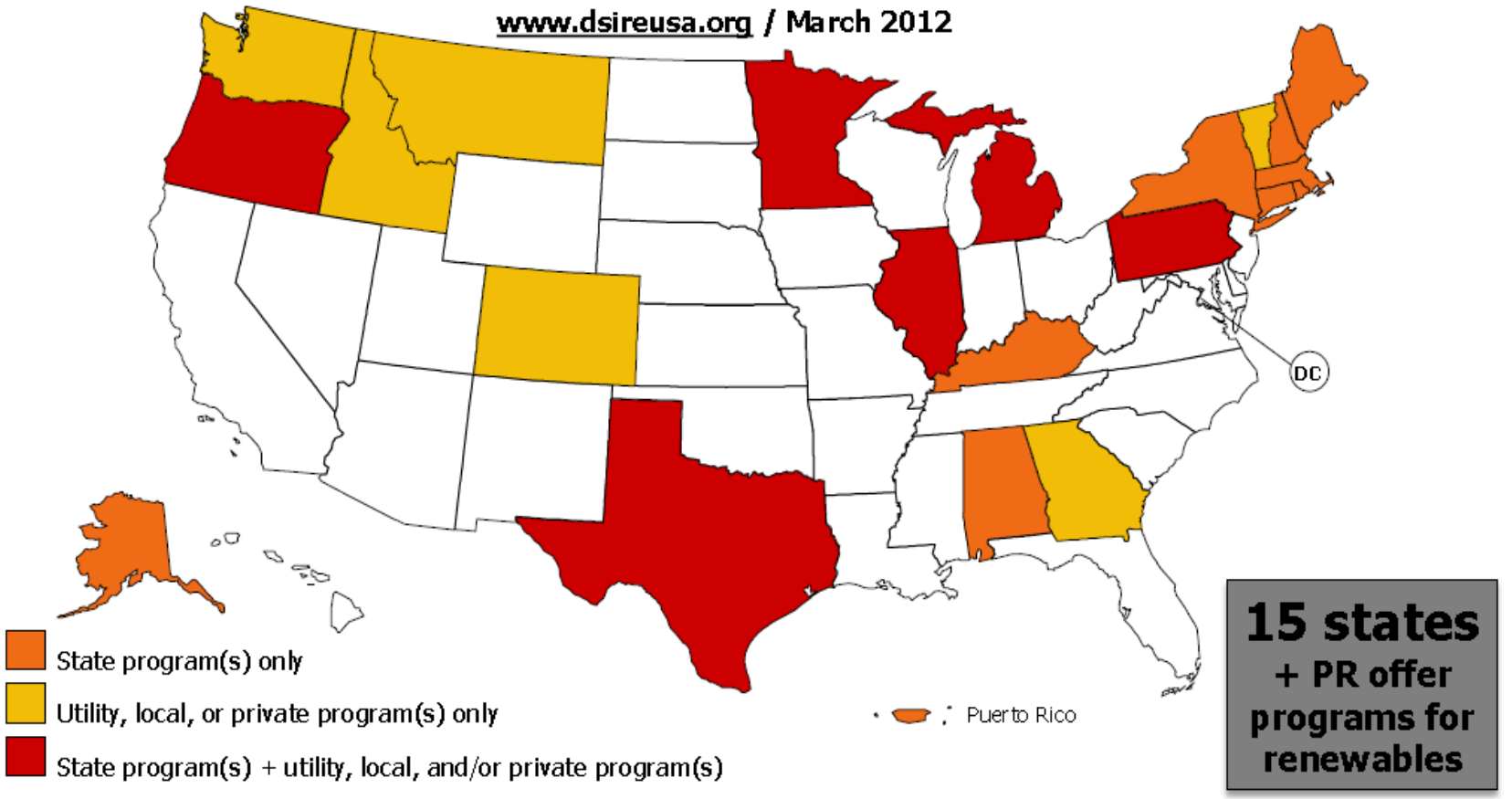
U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

IREC Interstate Renewable Energy Council

North Carolina Solar Center

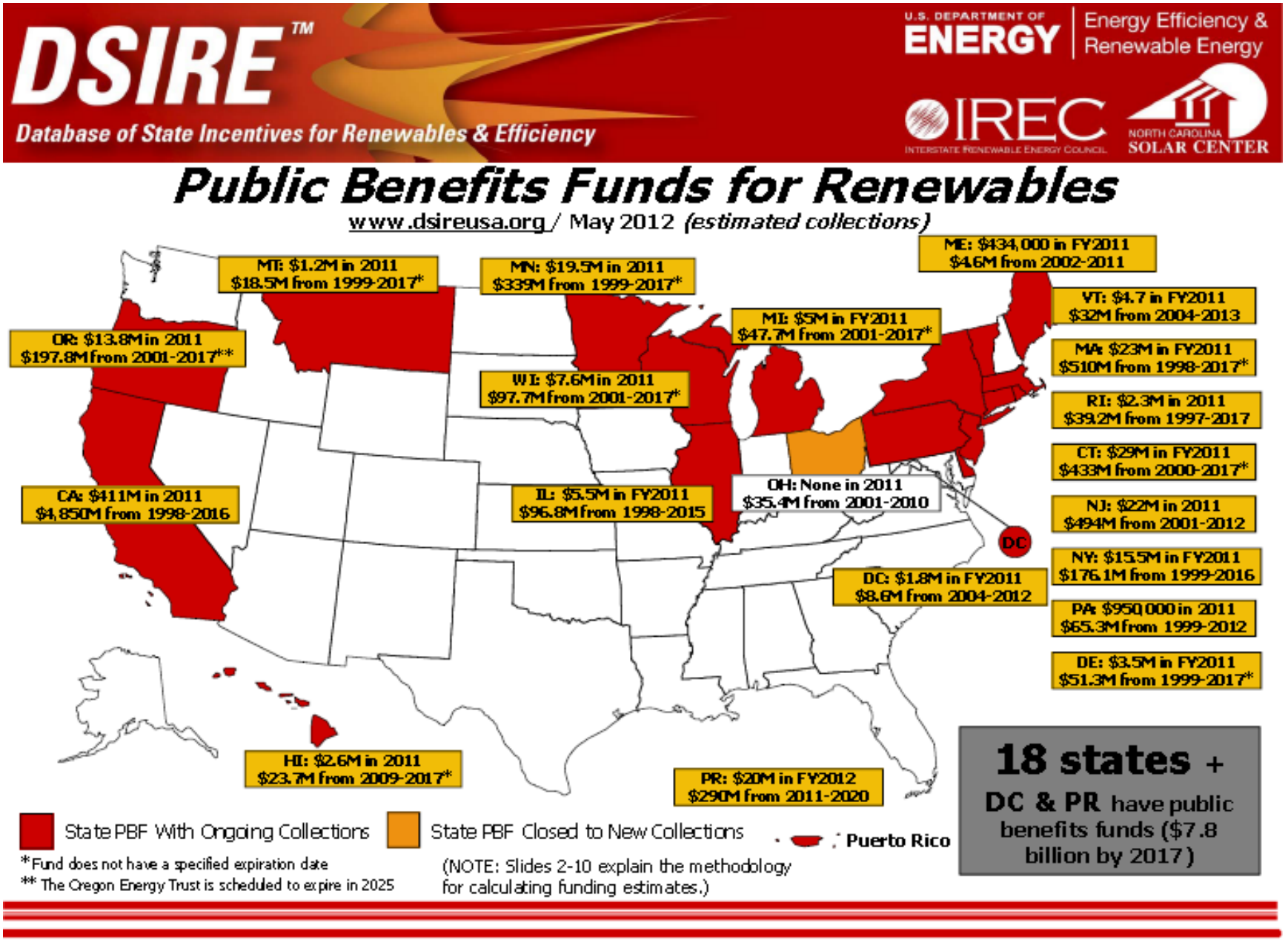
Grant Programs for Renewables

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.

RENEWABLE ENERGY INCENTIVES
Whose Doing What



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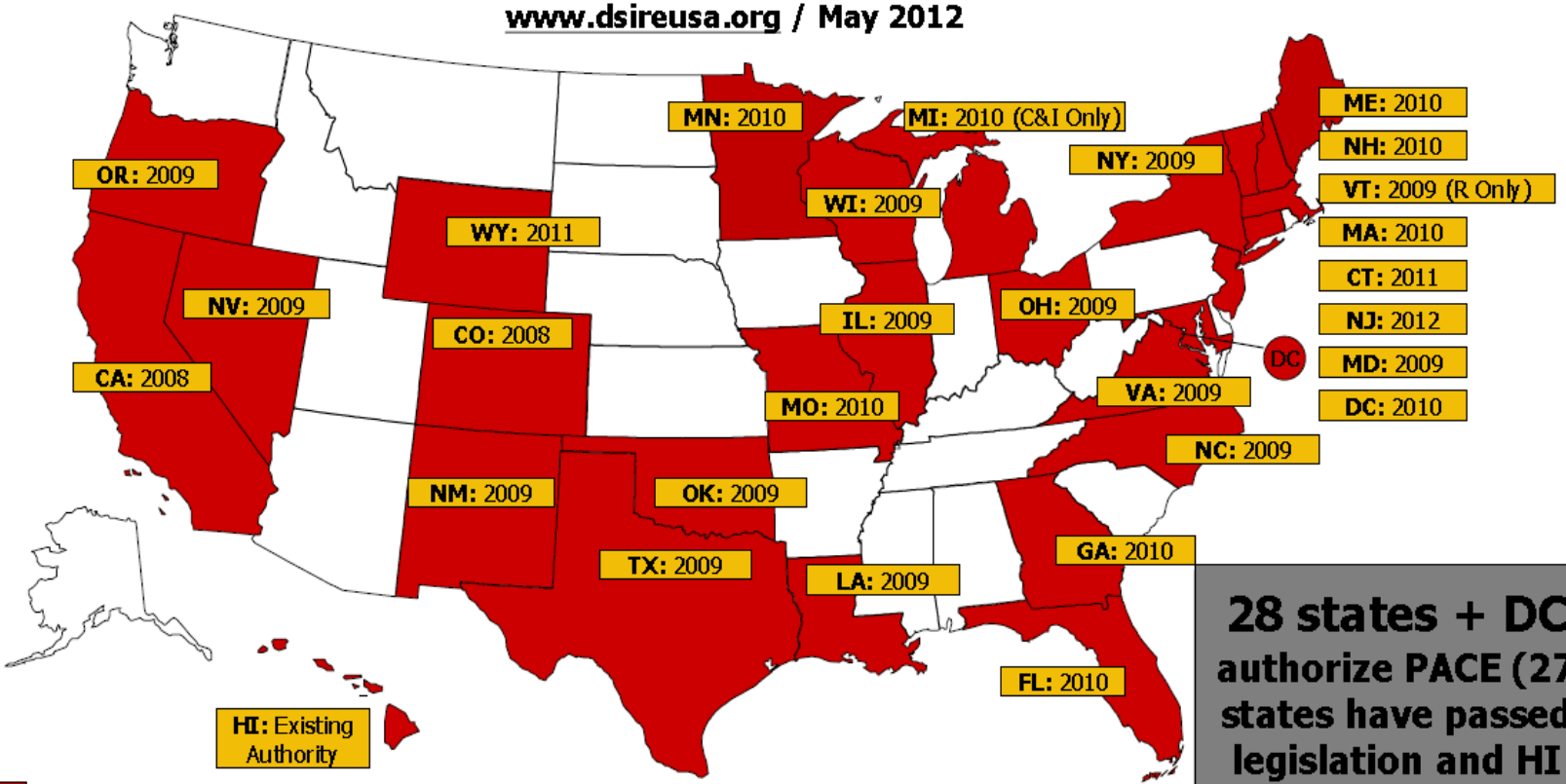
Property Assessed Clean Energy (PACE)

www.dsireusa.org / May 2012

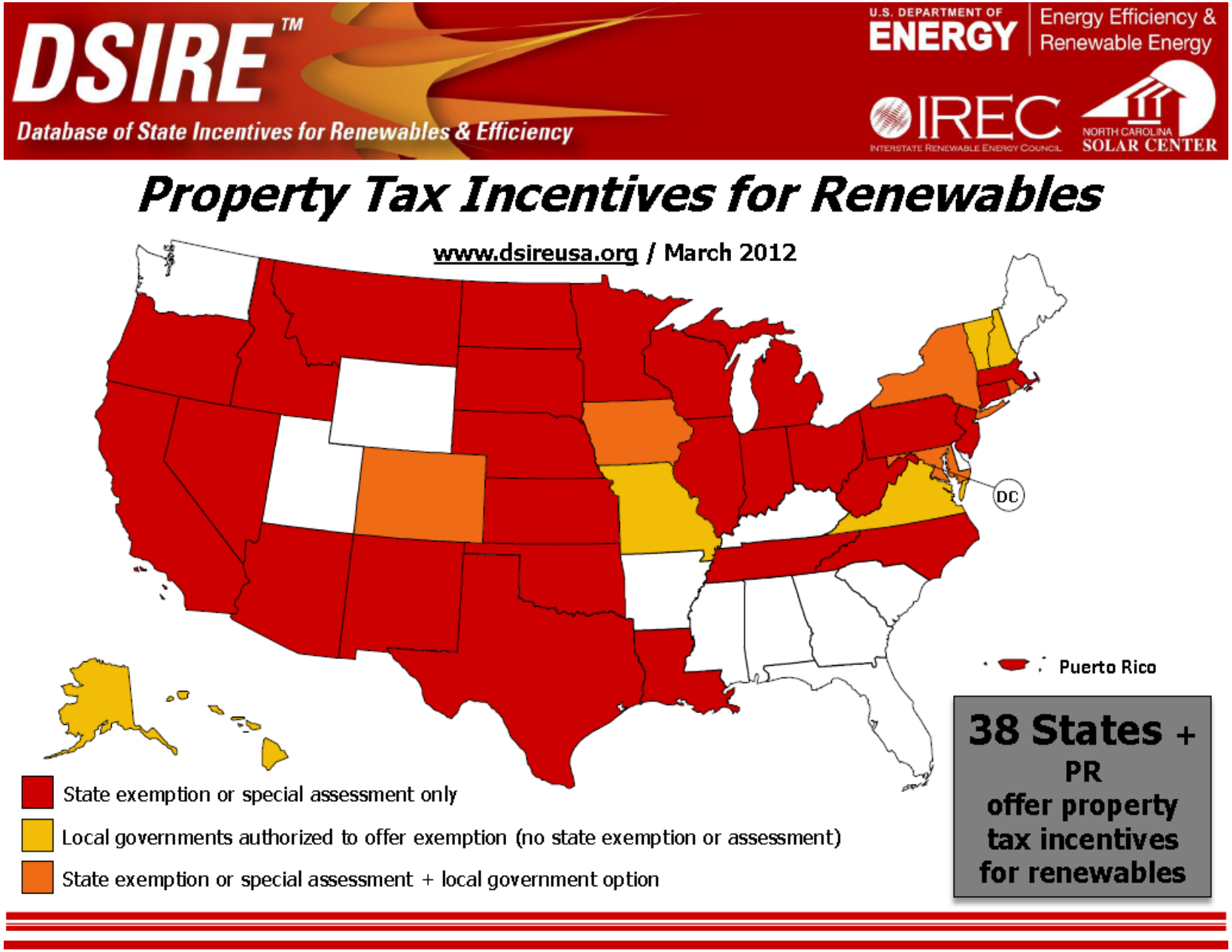


PACE financing authorized by the state*

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

*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.

RENEWABLE ENERGY INCENTIVES
Whose Doing What



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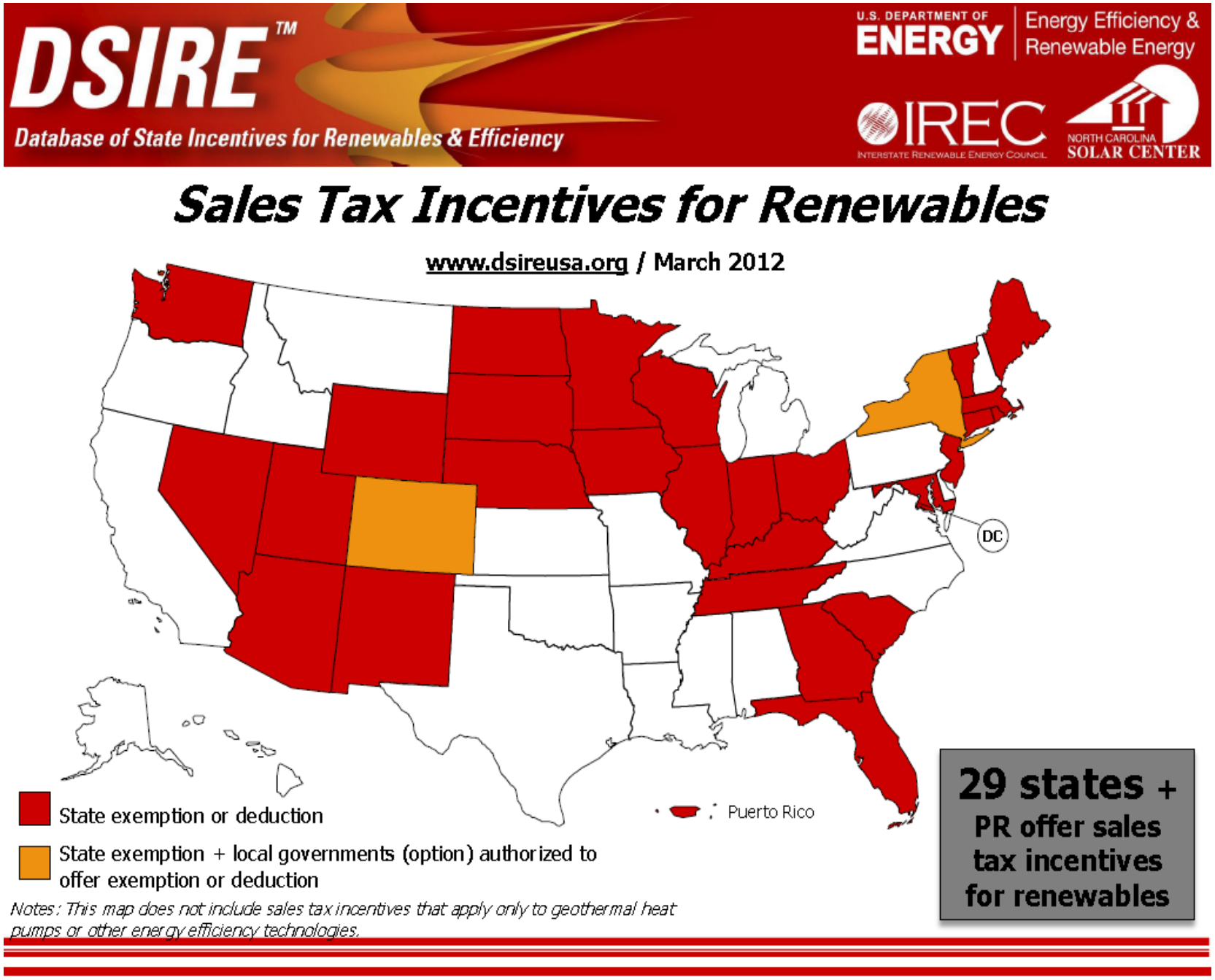

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Whose Doing What

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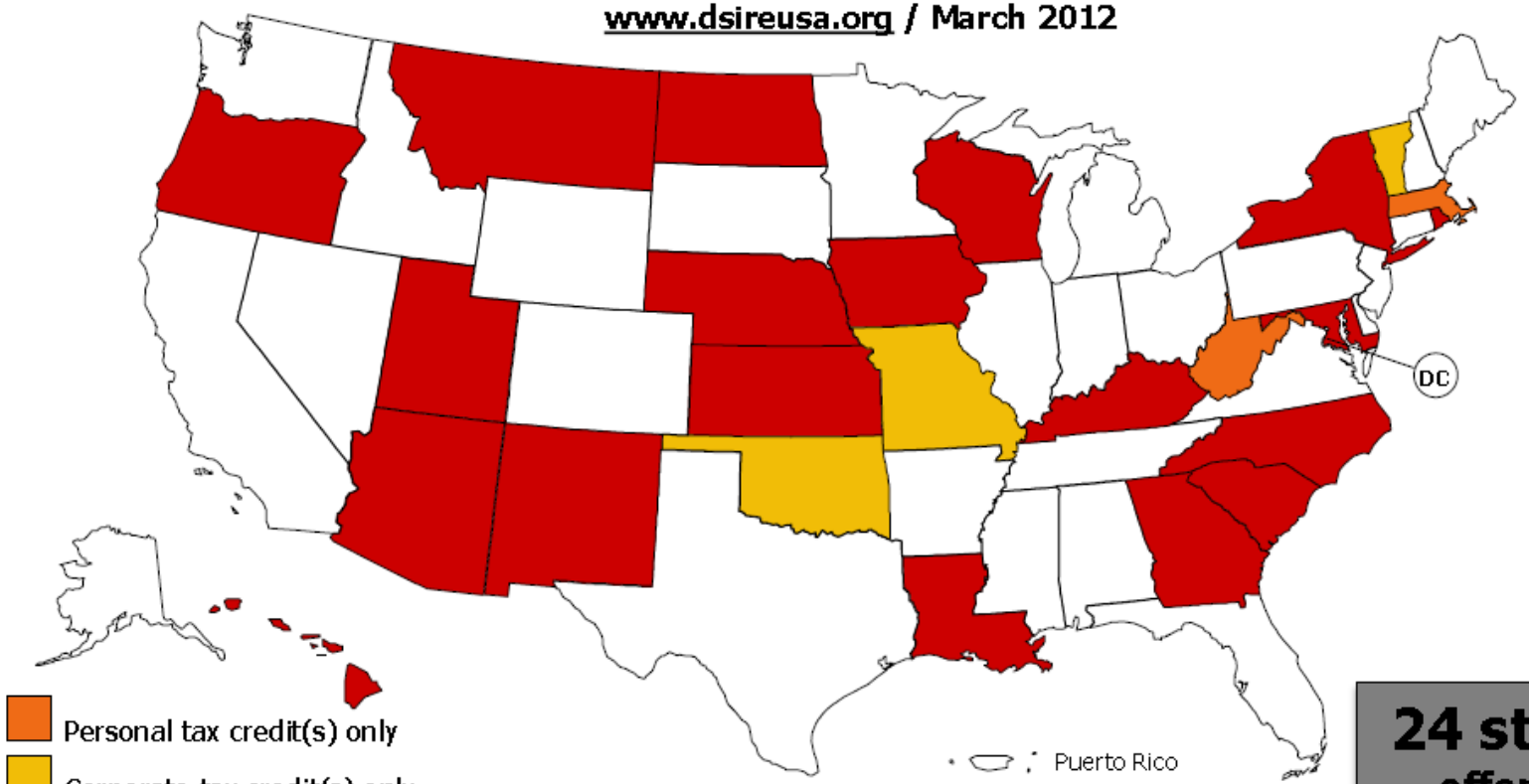
Tax Credits for Renewables

www.dsireusa.org / March 2012



Personal tax credit(s) only

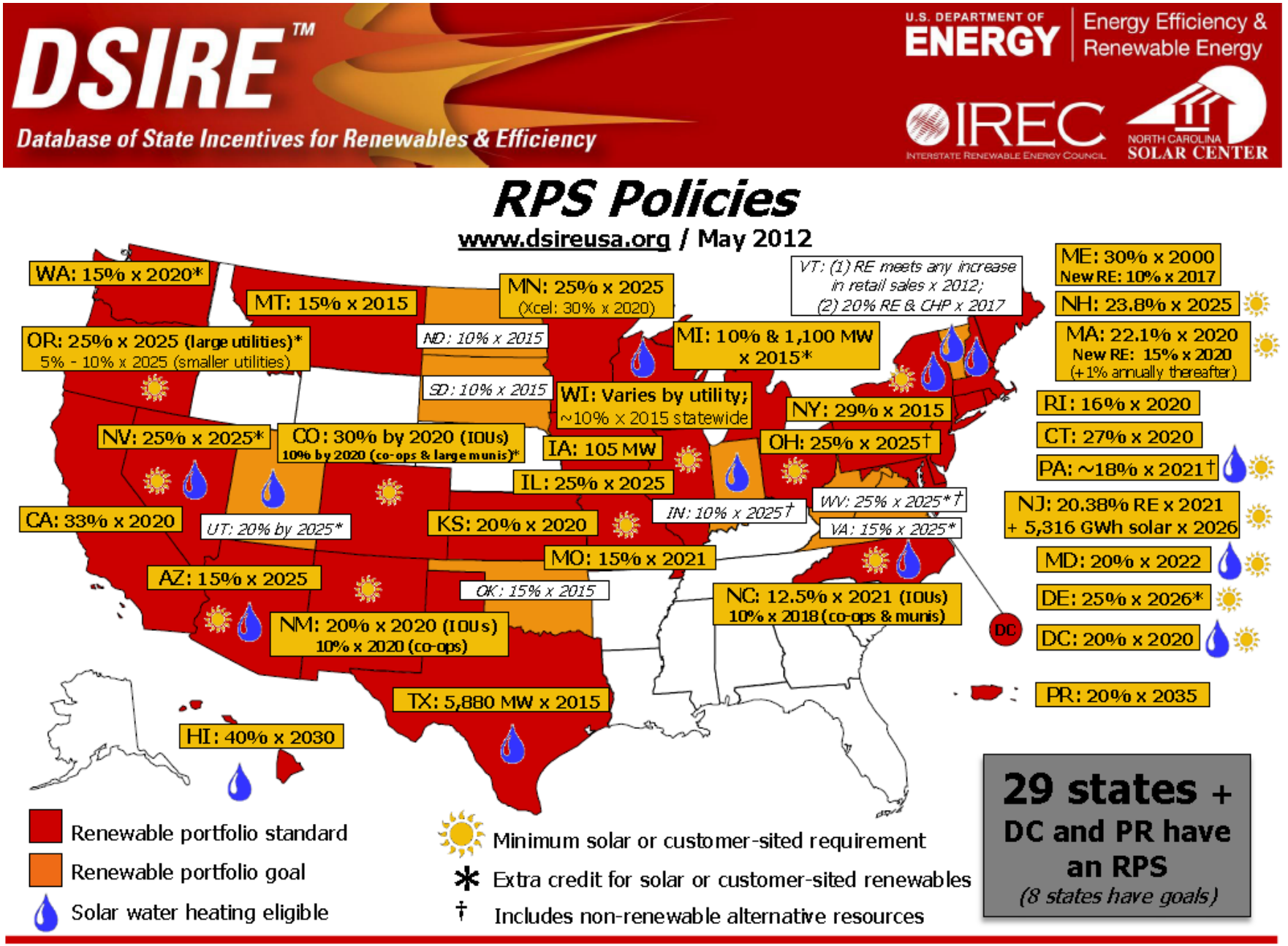
Corporate tax credit(s) only

Personal + corporate tax credit(s)

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

24 states offer tax credits for renewables

RENEWABLE ENERGY INCENTIVES
Whose Doing What



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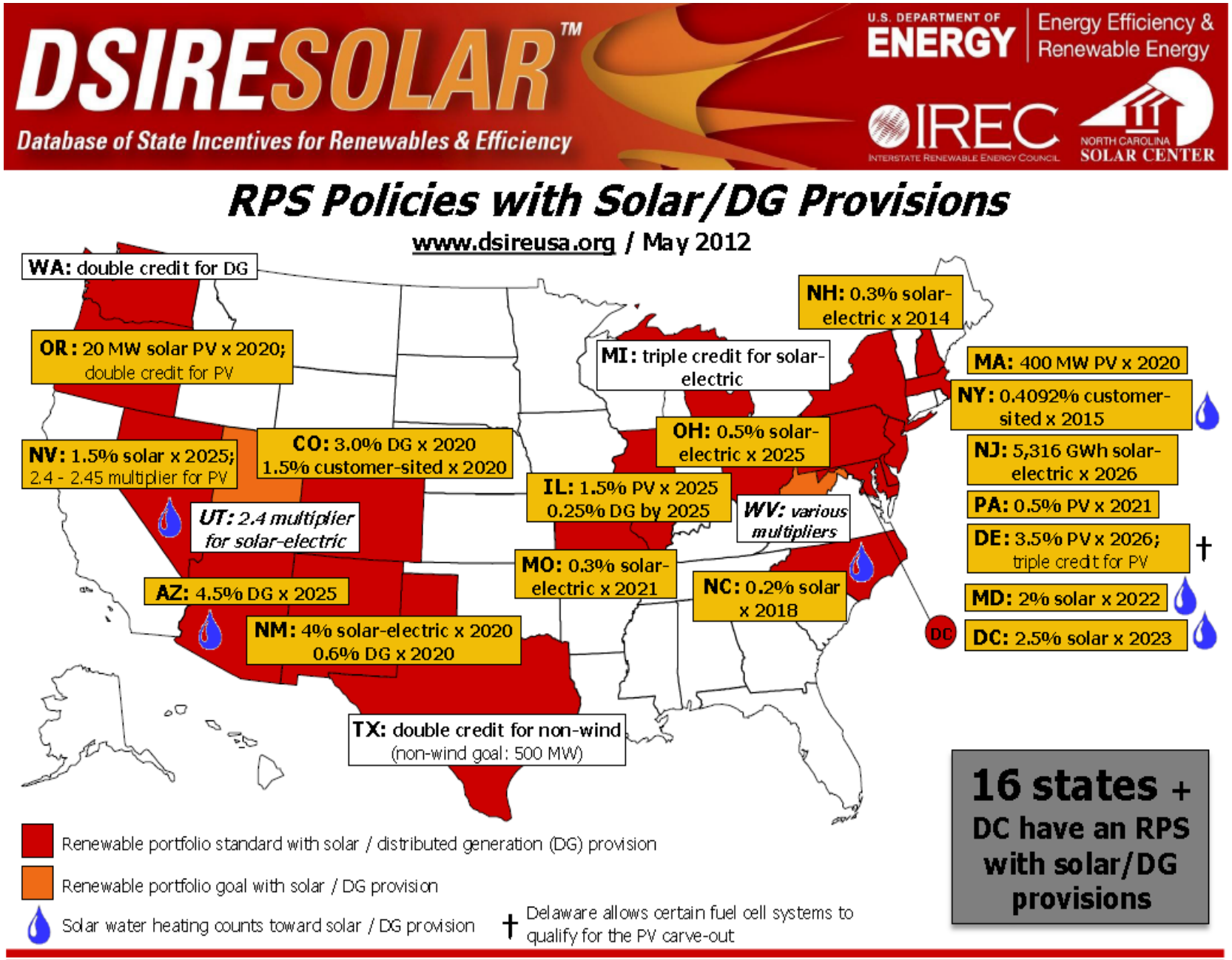

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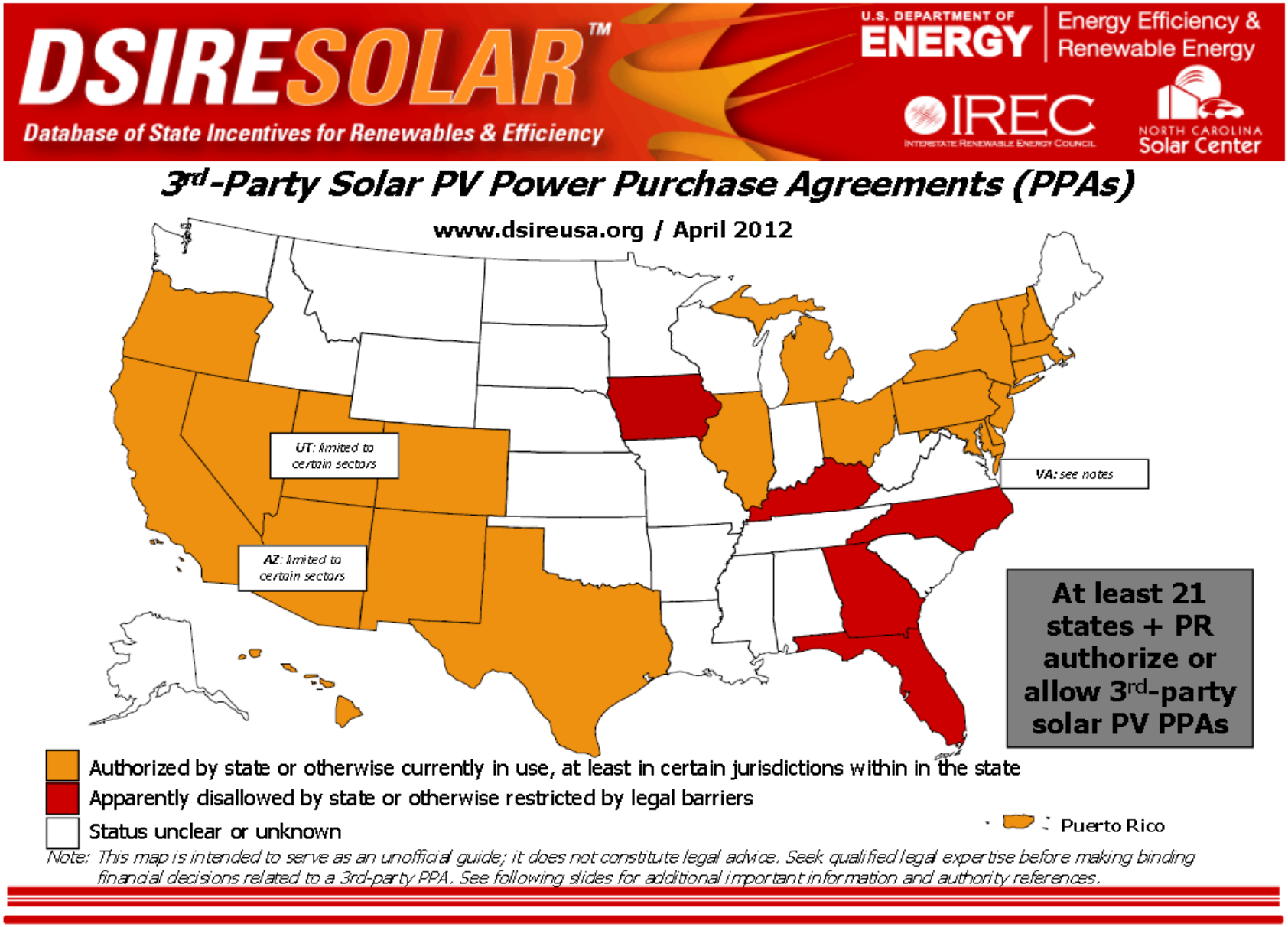
Whose Doing What



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Rebate Programs for Renewables

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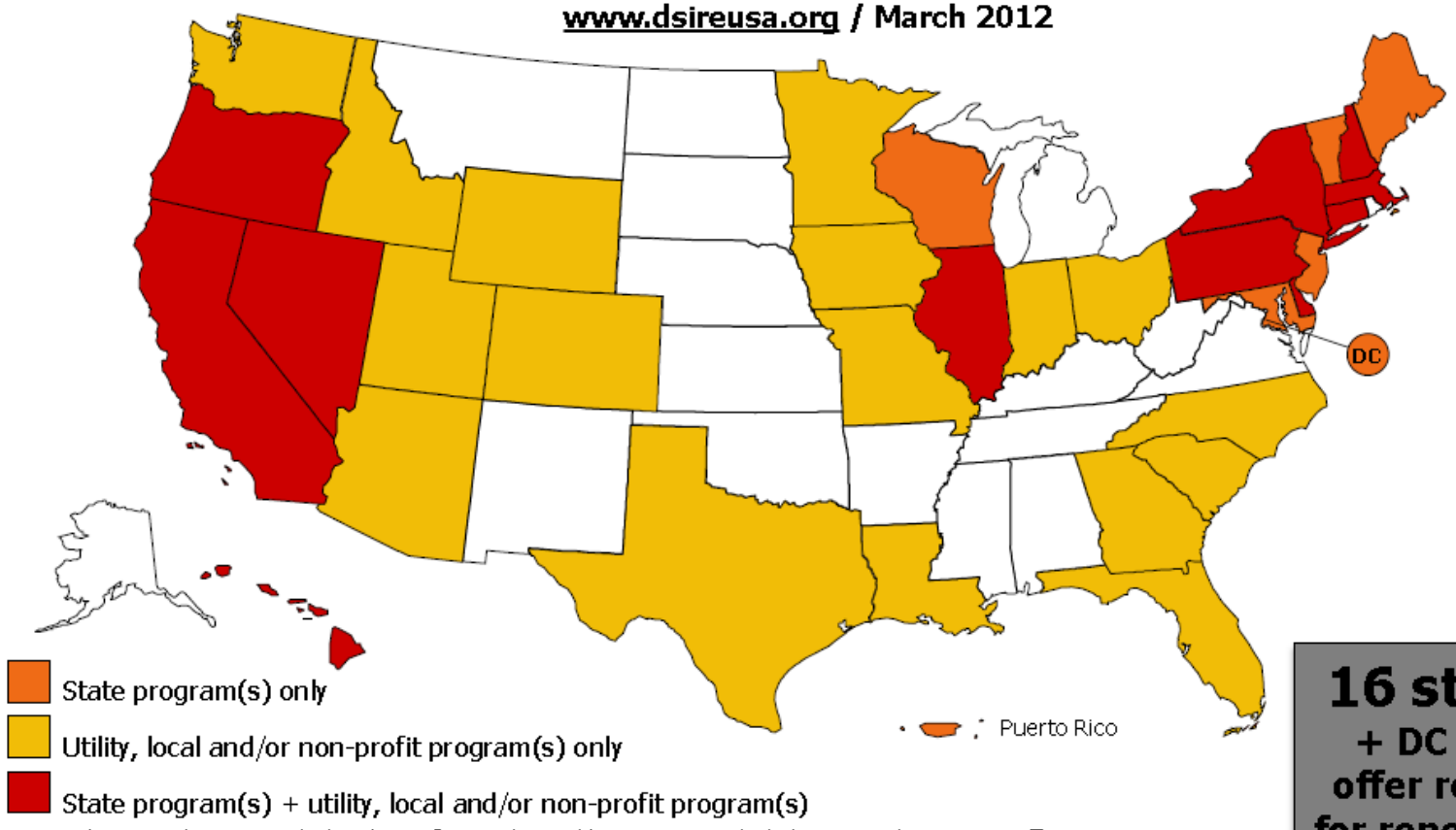

State program(s) only

Utility, local and/or non-profit program(s) only

State program(s) + utility, local and/or non-profit program(s)

Notes: This map does not include rebates for geothermal heat pumps , daylighting or other energy efficiency technologies. The Virgin Islands also offers rebates for certain renewable energy technologies.

16 states + DC & PR offer rebates for renewables

RENEWABLE ENERGY INCENTIVES
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Loan Programs for Renewables

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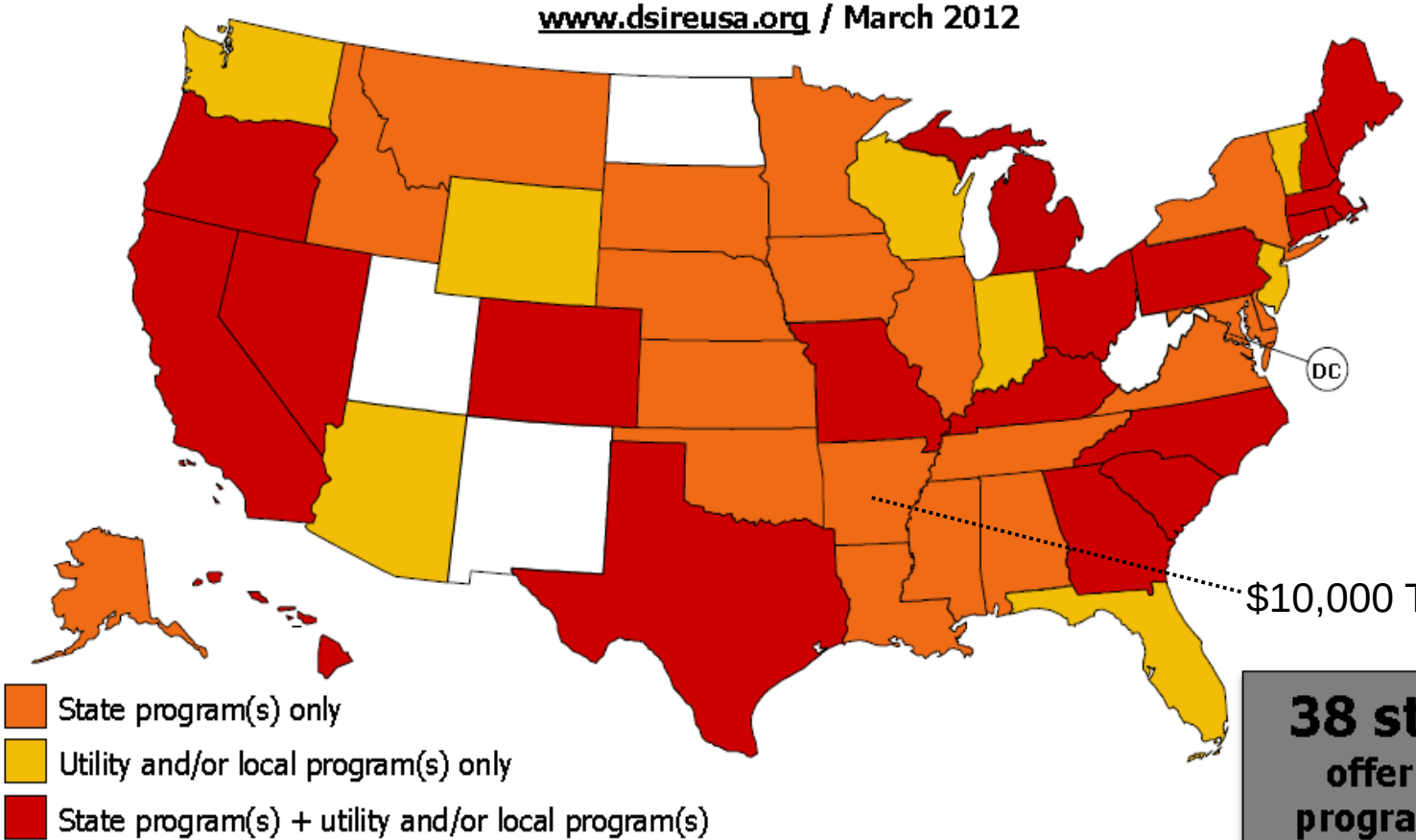
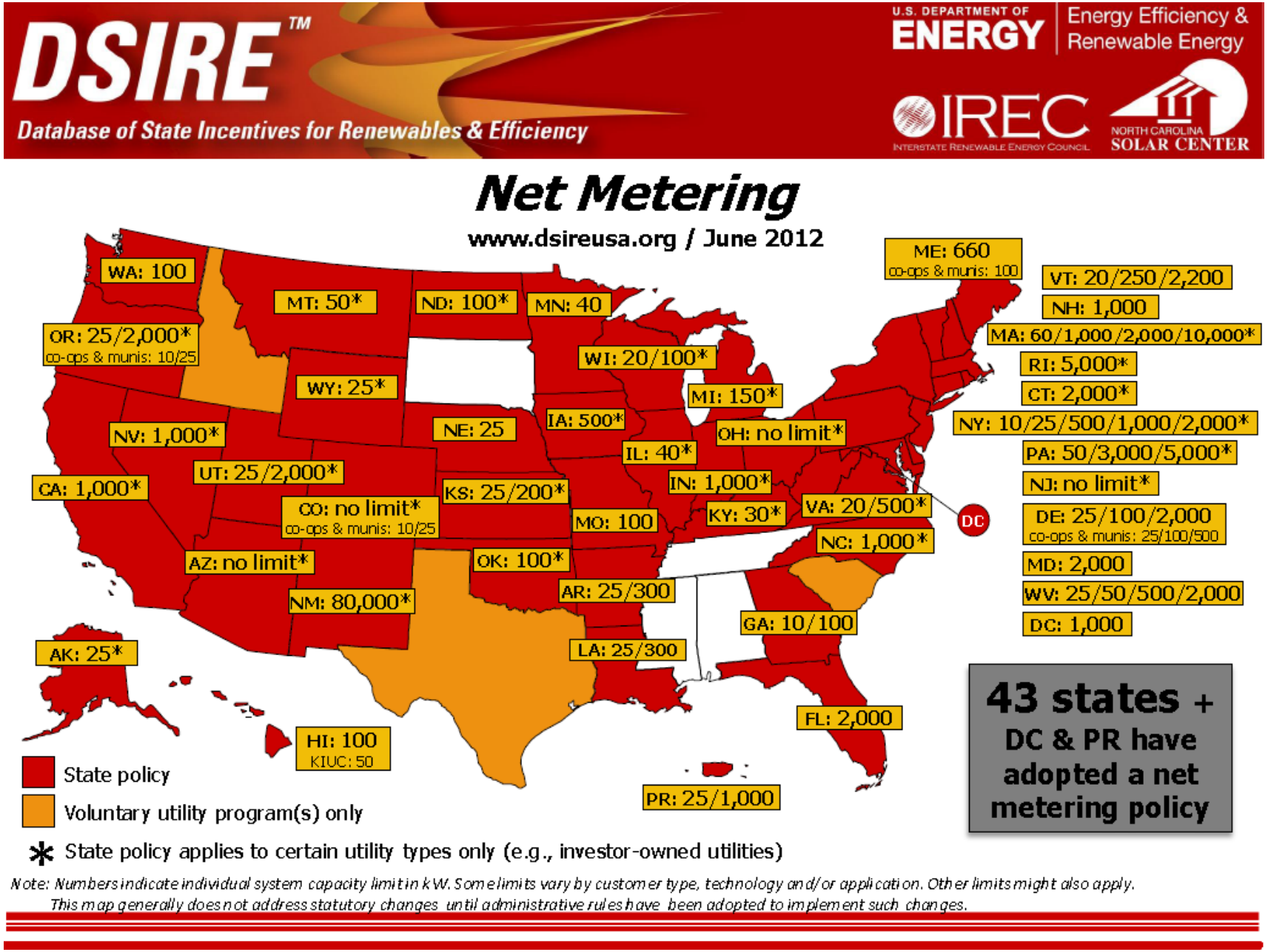


$10,000 Total Program Budget

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.

RENEWABLE ENERGY INCENTIVES
Whose Doing What



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Whose Doing What

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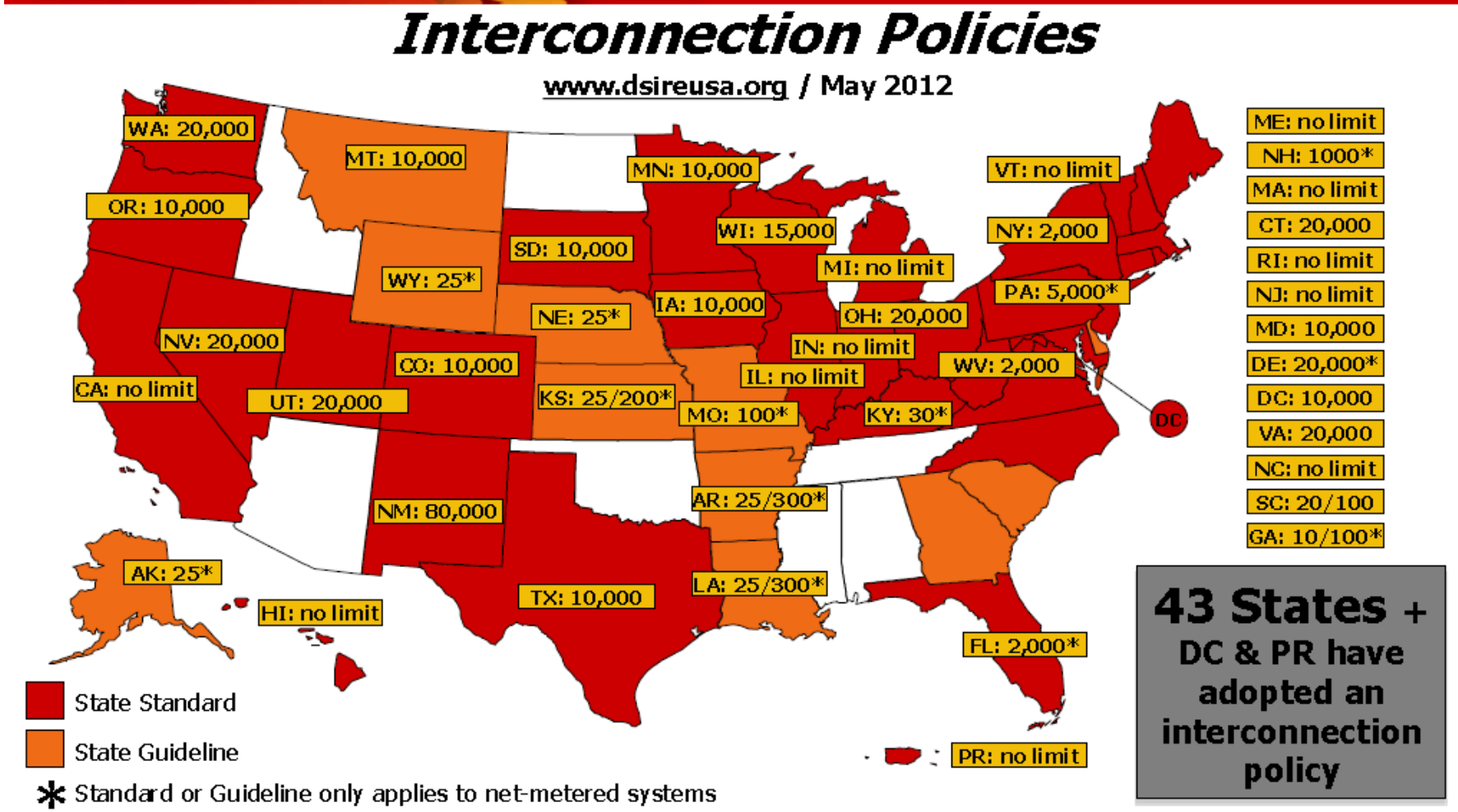

Notes: Numbers indicate system capacity limit in kW. Some state limits vary by customer type (e.g., residential/non-residential). "No limit" means that there is no stated maximum size for individual systems. Other limits may apply. Generally, state interconnection standards apply only to investor-owned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

OBSERVATIONS

OUT OF THIRTEEN POSSIBLE INCENTIVE PROGRAMS, ARKANSAS HAS CHOSEN THREE.

- An ineffective Loan Program
- Net Metering That Scores a “D” on a National Scale
- An Interconnection Agreement That Includes Language Which has Prevented Governmental and Institutional Net Metering Facilities from Turning Their Systems On.

PLANNING, WHAT ARE WE DOING NOW

Vacation – One Month to a Year

Build a New Home – One to Five Years

Retirement & Secure Future – A lifetime

THE C.L.E.A.N. ENERGY ACT of 2013
CLEAN LOCAL ENERGY ACCESS NOW

APPROACH

Currently, most power purchase agreements are based on the avoided costs of conventional generation with perhaps some consideration for peak shaving or other market attributes. Looking forward, the avoided cost of generation from conventional resources will vary with the projected cost of natural gas-fired generation, the cost of out-of-state purchases, the cost of generation from existing, or perhaps new nuclear generation, and existing power plant upgrades to meet environmental mitigation requirements.

THE C.L.E.A.N. ENERGY ACT of 2013

CLEAN LOCAL ENERGY ACCESS NOW

SPECIFICATIONS

THE C.L.E.A.N. ENERGY ACT of 2013

CLEAN LOCAL ENERGY ACCESS NOW

SPECIFICATIONS

The Clean Energy Act stipulates that agreements and power purchase rates develop avoided costs for various renewable energy generation resources. The promulgation of the program will consider the renewable generation technology, the size and capacity of the renewable electric generation facility, the dispatch-ability of the renewable electric generation facility and even the location of a renewable energy generation facility. Rates developed will consider electric system benefits, public policy benefits, and environmental attributes.

THE C.L.E.A.N. ENERGY ACT of 2013

CLEAN LOCAL ENERGY ACCESS NOW

GOALS

The 600mW renewable energy requirement stipulated in the Act will amount to a small but respectable start. Fully subscribed, the program will achieve some 4.5% of Arkansas' electrical energy requirements.

There is no deadline in which to meet the 600mW and it is modest in light of the average 25% goals & mandates by 2020 that thirty seven other states are currently committed to.

THE C.L.E.A.N. ENERGY ACT of 2013
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COSTS

By requiring the program to be in the public interest, rates paid for renewable energy purchases will also consider ratepayer impacts and other economic implications as the policy moves forward through time. Adding renewable energy generation will benefit ratepayers by hedging against inflation of conventional fuel prices, minimizing price volatility effects, reducing conventional energy generation purchases, avoiding transmission and distribution line losses, avoiding capacity purchases, avoiding transmission and distribution investments along with associated operation and maintenance. In some cases, this merit-order effect alone pays for the apparent increase in costs due to the addition of new renewable generation.

THE C.L.E.A.N. ENERGY ACT of 2013

CLEAN LOCAL ENERGY ACCESS NOW

OUTCOME

Renewable energy will be developed in an effective and efficient manner.

Renewable energy generation will be taking place in Arkansas.

Thousands of instate jobs will be created.

Federal tax credit dollars will stay in Arkansas.

Sales tax and income tax dollars will be generated.

Ratepayers will have choice & they will benefit in the long run.

All forms of renewable energy will benefit from this Act.

Arkansas' natural environment will improve.

THE C.L.E.A.N. ENERGY ACT of 2013
CLEAN LOCAL ENERGY ACCESS NOW

CONCLUSION

The Arkansas Clean Energy Act, when passed this upcoming session, will enable the APSC and Parties to establish rules, procedures, interconnection agreements and power purchase contracts.

Passage of this C.L.E.A.N. Act will encourage the development and use of renewable energy resources to generate electricity in Arkansas.

Passage of the C.L.E.A.N. Act will protect the integrity and reliability of utility electric systems.

Passage of the C.L.E.A.N. Act will allow utilities to participate in generating electricity from renewable energy resources and to recover their cost for administrating the program.

Passage of the C.L.E.A.N. Act will protect the health, safety, and welfare of the public as well as the public interest.