



SETTING UP A FLORIDA RENEWABLE PORTFOLIO STANDARD IMPACTS AND OPPORTUNITIES

Florida Renewable Energy Producers Association

Presented by Michael Dobson

ABOUT FREPA

The Florida Renewable Energy Producers Association

represents renewable energy producers interested in project development in Florida. FREPA's main goal is to advocate for policy and fiscal incentives, a favorable regulatory environment, and programs that promote research and spur growth in the use of renewable energy sources in the Sunshine State.



PRESENTATION OUTLINE

- What an RPS is, its expectations and how it benefits the renewable energy development industry
- Renewable energy resources in Florida
- Renewable energy technologies that are more readily available for applicable use specific to Florida's renewable resources
- RPS design features
- Key components to implement a successful RPS in Florida
- Elements for RPS compliance
- Considerations for RPS tracking and monitoring

RPS

A renewable electricity standard—also known as a renewable portfolio standard or RPS—is a cost-effective, market-based policy that requires electric utilities to gradually increase their use of renewable energy resources such as wind, solar, and bioenergy.

Currently, 25 states and the District of Columbia have enacted renewable energy standards - and evidence shows those states are meeting the standards, realizing positive environmental impacts and generating economic growth.

Florida is positioned to be **THE** leader in the Southeast.

RPS EXPECTATIONS

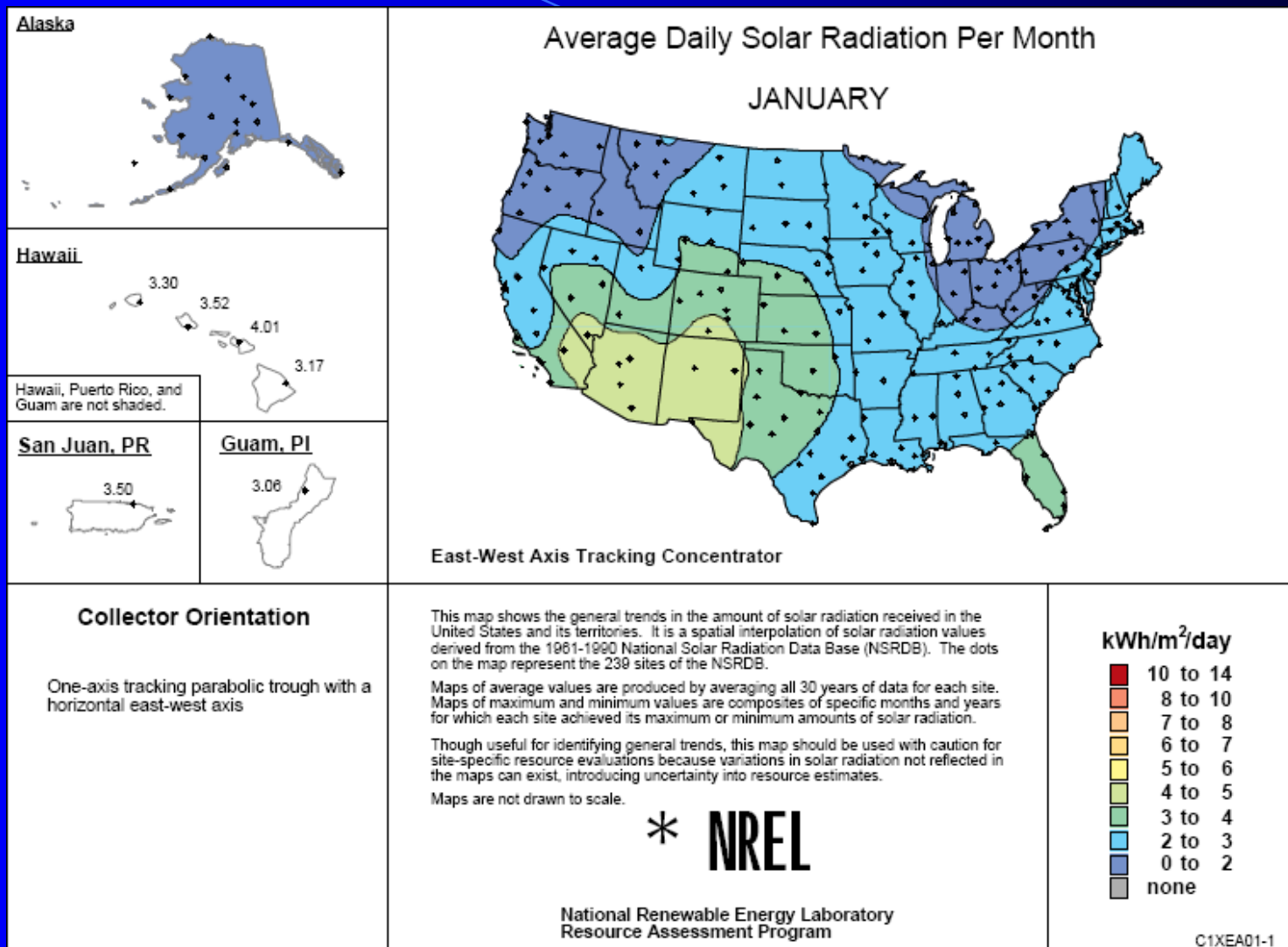
Legislative Goals of RPS Statute:

- Increase the amount of renewable energy generation in Florida
- Promote stable electricity prices through a mix of energy resources
- Protect the public's health by promoting the use of cleaner energy resources
- Improve the quality of Florida's environmental
- Stimulate economic development by building a vibrant renewable energy market in Florida
- Reduce dependence on foreign fuels
- Make us as a country more secure by accomplishing the previous goal

SOME KEY CONSIDERATIONS FOR A SUCCESSFUL RPS PROGRAM IN FLORIDA

- Identify feedstocks and resources that can generate power today.
- Develop incentives geared toward helping developers with the economics of a renewable energy projects.
- Make sure that incentives are long-term and consistent from year to year to secure investor interest into the state.
- Put more focus and investment into proven technologies.
- Promote flexibility from utilities on price (i.e., utilities must work with renewable producers to make projects work),
- Encourage utilities to factor in the lifespan of a project in cost considerations.

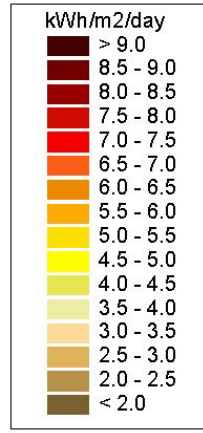
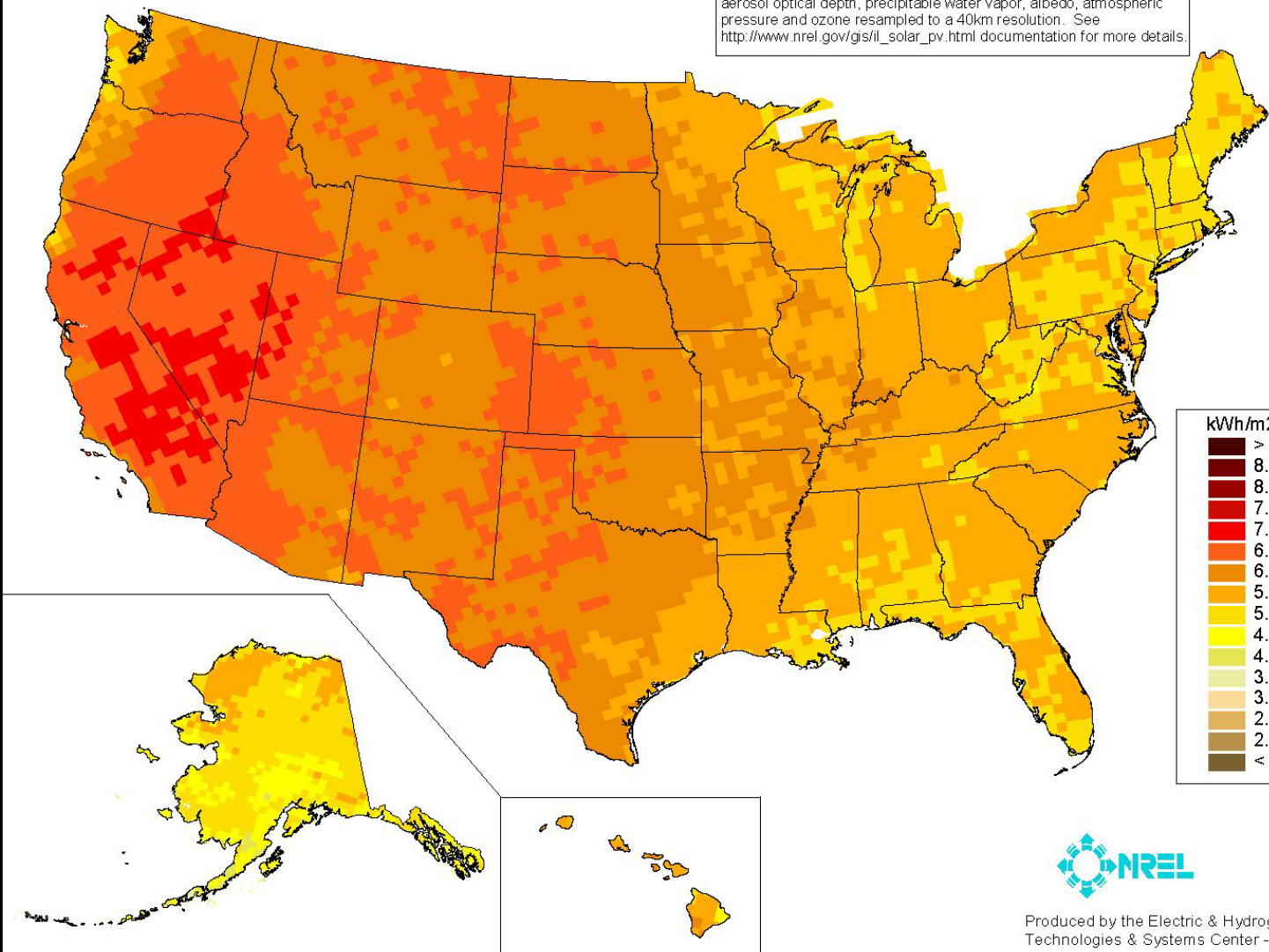
BEST KEPT SECRET RENEWABLE SOURCE "THE SUN"



PV Solar Radiation (Flat Plate, Facing South, Latitude Tilt)

July

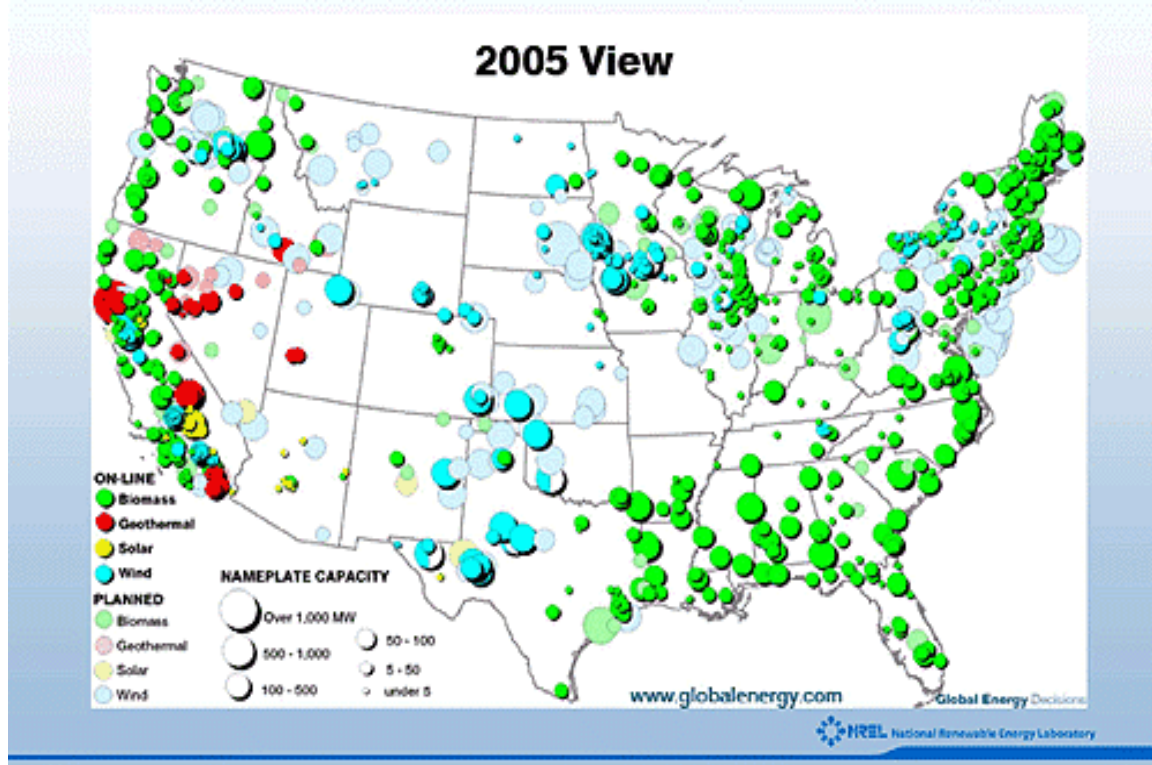
Model estimates of monthly average daily total radiation using inputs derived from satellite and/or surface observations of cloud cover, aerosol optical depth, precipitable water vapor, albedo, atmospheric pressure and ozone resampled to a 40km resolution. See http://www.nrel.gov/gis/il_solar_pv.html documentation for more details.



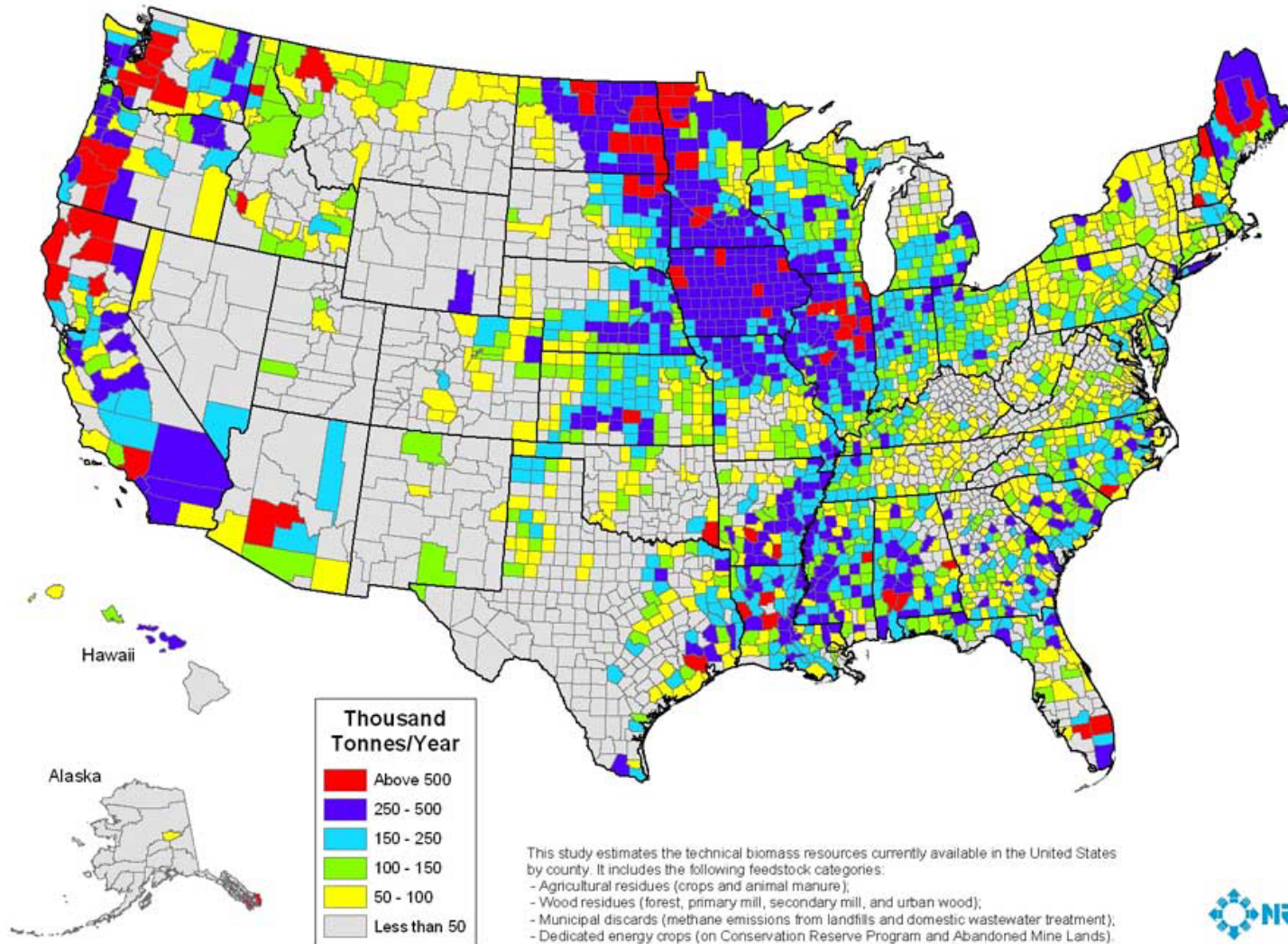
Produced by the Electric & Hydrogen
Technologies & Systems Center - May 2004

IMMEDIATE OPPORTUNITIES IN FLORIDA/THE HERE AND NOW

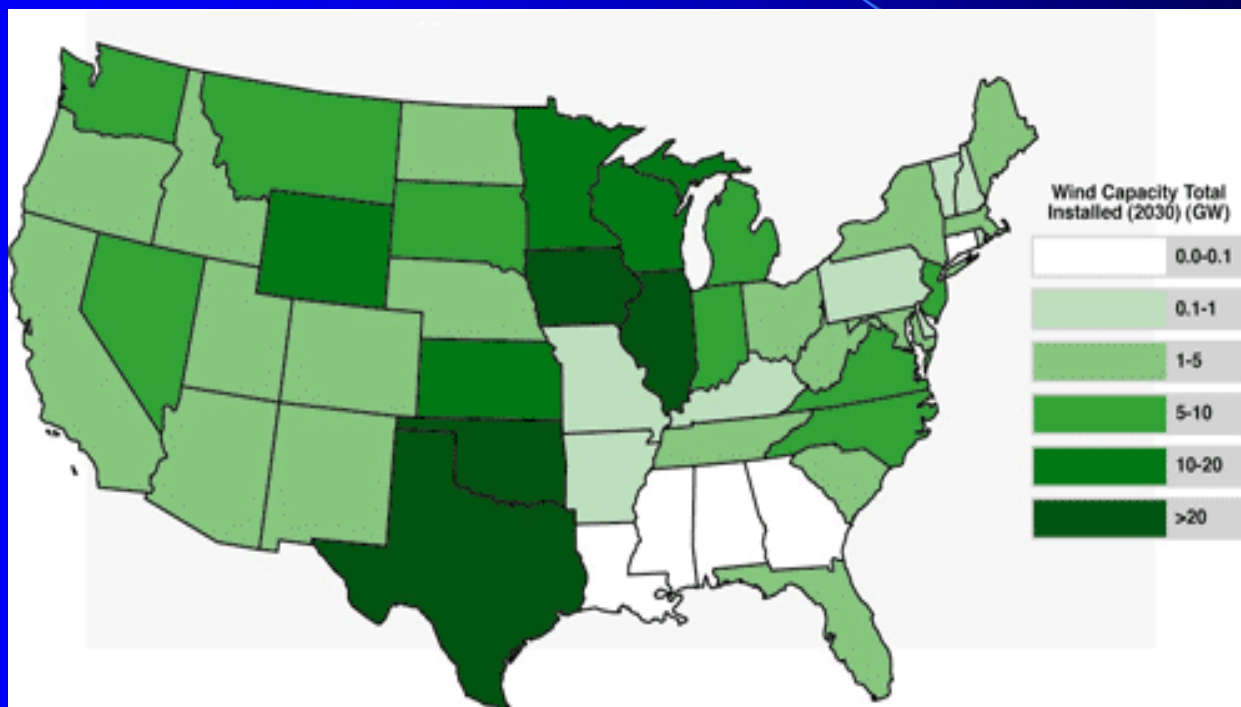
Renewable Generation, 2005



Biomass Resources Available in the United States



FLORIDA'S WIND QUESTION



The WinDS model can examine where wind power will be developed under various scenarios. In this example, which shows one scenario for achieving 20% wind power by 2030, much of the wind power capacity is concentrated in the U.S. heartland.

Source: NREL

Florida Renewable Energy opportunities Today

“These should be the focus of an RPS”

- Solar PV
- Solar thermal
- Wind (????)
- Biomass
- Landfill gas
- Digester gas

Florida Energy opportunities Today

- Nuclear (process is clean, technology is proven, takes a long time to site and build... has problem with discarding waste)
- Very important part of our energy future
- Need to find ways to get them online quicker and site them
- Not a renewable
- Would not be consistent for RPS consideration

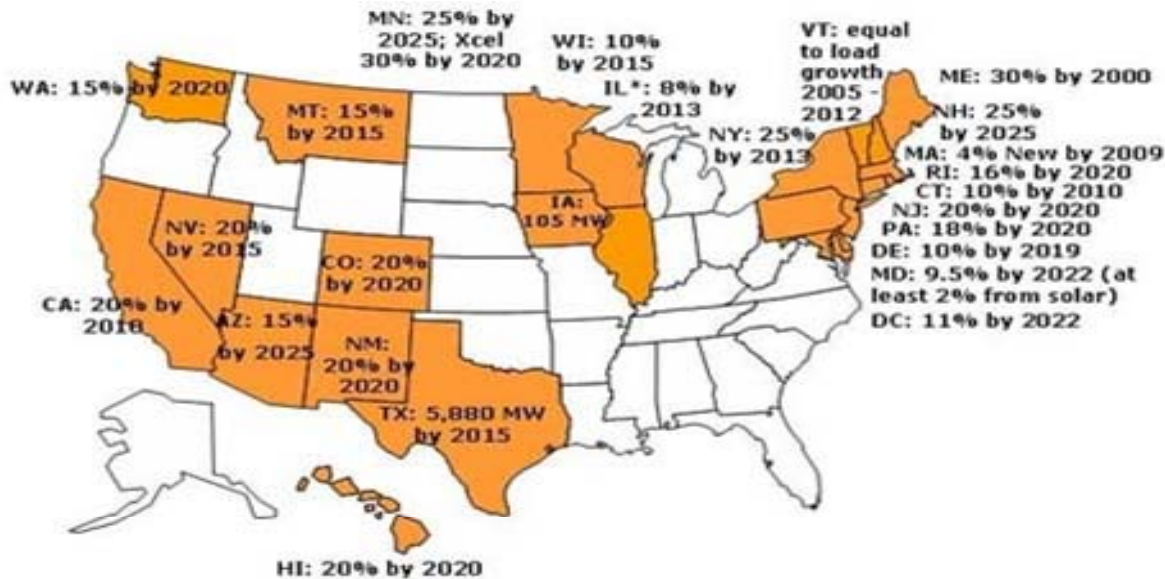
Emerging Technologies

(some at gateway to commercial viability and some are not ready to make an immediate contribution to our energy supply or generation ...more R&D needed)

- Cellulosic ethanol (small scale production in process and growing.. great breakthroughs..a biofuel... could perhaps be used to power a generator)
- Ocean/wave energy... RPS eligible... more R & D needed
- Coal Gasification (clean coal.. working out the kinks)

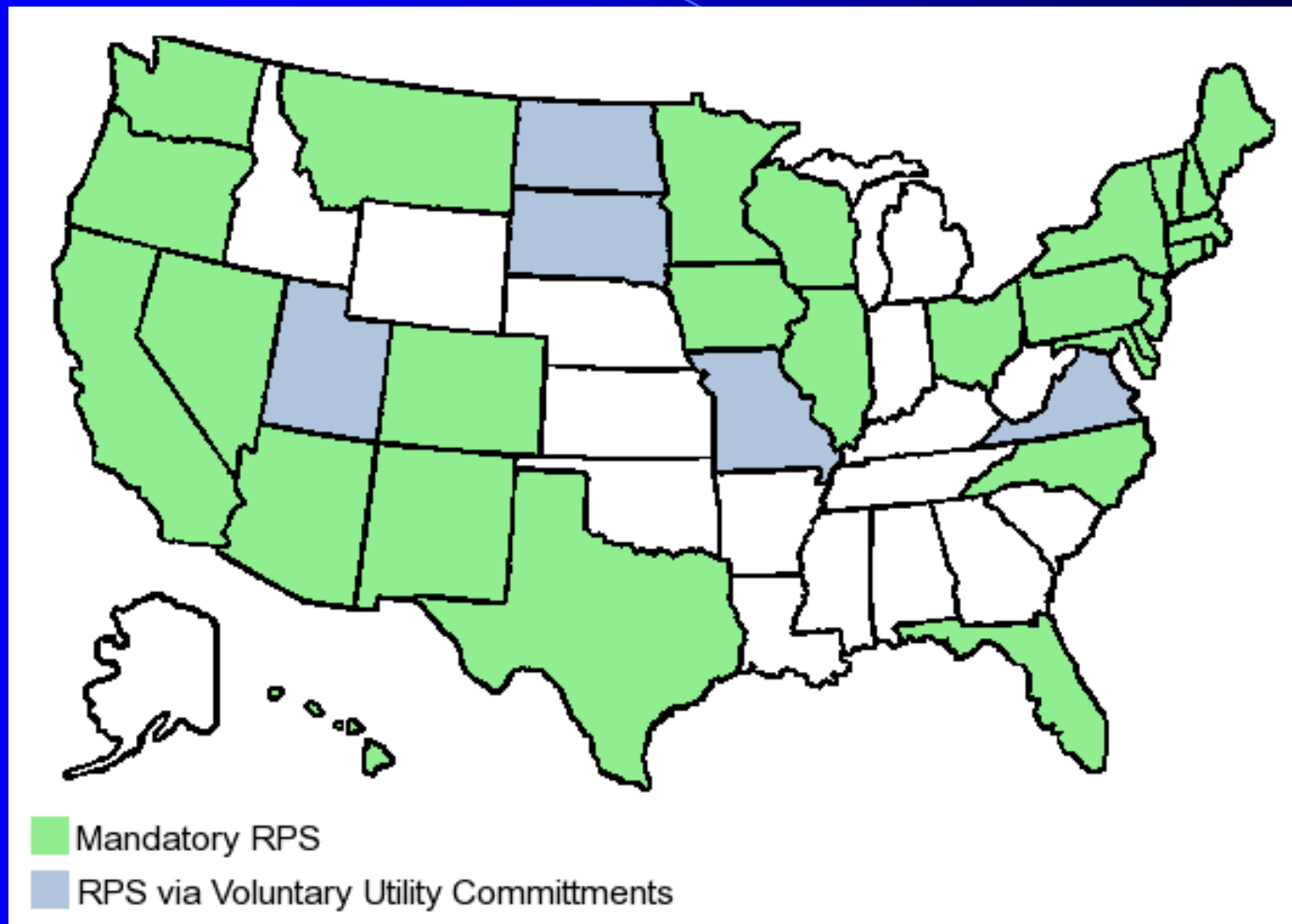
Renewable Portfolio Standards

2007



* IL implements its RPS through voluntary utility commitments

Renewable Portfolio Standards (RPS) 2008



Source: Pew Center on Global and Climate Change

RPS FIRST STEPS

Defining "renewables." The definition must be limited to those resources and technologies that are environmentally sound, that represent a small fraction of the current resource base, and that need market support. Such a definition would include wind, solar, biomass and geothermal resources.

2. Setting the level of the standard and its rate of increase over time. The level of the standard must begin at, or very near, current levels of renewables (as defined) and rise from that point. We suggest 20% by 2020.

3. Sunset date. However, as an option, the RPS could be "self-sunsetting" -- meaning that the RPS policy sunsets when the price of Credits falls to zero, signifying that renewables are fully competitive and integrated into the market. A self-sunset date indicates that the RPS is intended to be a long-term policy.

KEY RPS DETAILS

- **Specify the Mandate**

For example: energy-based targets starting in 2010 that increase to 3.5% by 2011 and increase incrementally to reach 20 % by 2020)

- **Assign Responsibility**

(responsibility of electric retailers, PSC and other entities)

- **Enforce Performance**

(I.e. automatic penalties)

- **Track Compliance**

(monitor compliance and use tradable RECs in compliance)

- **Manage the Details**

(identify which renewable resource is eligible, identify clear compliance flexibility, etc.)

KEY RPS DESIGN REQUIREMENTS

- Moving forward, Florida will need strong political support and regulatory commitment which will be unwavering in the future
- Will need clear and well-thought-out renewable energy rules
- The design must have consistent long-term targets that will ensure new renewable energy supply
- The standards must be achievable given various challenges and practical constraints such as siting and etc
- Enforcement must be credible and automatic. It is also key that penalties exceed the cost of compliance
- The design requirements must be applied to the utilities that are financially in a position to enter into long-term contracts

RPS DESIGN REQUIREMENTS

- Suggest that there be a period of review established for the PSC to review the RPS program and make recommendations on whether the RPS targets should be adjusted or to recommend system changes
- Suggest that each regulated utility subject to the RPS file an annual report regarding its compliance in the previous year, while outlining renewable resource plans for the next 1 year along with a forecasted resource plan for the next 5 years.

RPS DESIGN REQUIREMENTS

Some key procurement methods within an RPS
(for obligated retail providers to satisfy RPS targets):

- Long-term contracts
- Short-term contracts.... but prefer focus on longterm contracts
- Contracts could allow for energy delivery at any point in Florida
- The PSC could approve contracts that may be “repackaged” from larger contracts

States with RECs in RPS Compliance

“Florida joins the ranks”

Unbundled RECs in State RPS Compliance



BENEFITS OF REC's IN RPS COMPLIANCE

- Encourages renewable development

- ◆ By policy, RECs may not be geographically restricted, so it enables development of most cost-effective resources (to be debated)
- ◆ The REC revenue stream is enticing to developers and will therefore spur the industry in Florida especially given the RPS

- Increases market efficiency

- ◆ More players, more competition, more liquidity
- ◆ Contracting flexibility

- Facilitates compliance

- ◆ Utilities that are otherwise finding it difficult to make long-term energy commitments can find a way to do it. It helps the deal pencil better.
- ◆ RECs reduce long term contracting risk for utilities that may have fluctuating or uncertain future energy loads

- Lowers compliance costs

- ◆ Due to the increased market efficiency and additional renewable development, costs of renewable procurement will decrease with RECs

TRACKING CERTIFICATES/RPS COMPLIANCE

Two options for RPS compliance:

- A possible web-based tracking system which will support multiple users. Also gives those participating in the market the ability to manage their own accounts
 - The webbased system is flexible, transparent and more cost-effective.
- Florida could use a manual system using a database that may be generally accessed only by a system administrator, or whoever is responsible for examining required documentation submitted utilities that are obligated to comply
 - Could work satisfactorily if it serves only one state, and if only a few utilities are obligated to comply with few market participants

BASE RPS RECOMMENDATIONS

Recommendations:

20% RPS by 2020

Renewable energy should be generated by independent developers.. Less cost on rate payors and spurs a new industry

Renewables currently available : Solar, biomass, methane gas through a variety of means... waste and etc

REC's should be administered by regulators

REC price should be set by regulators

OTHER RPS CONSIDERATIONS

Recommend a strong geographic eligibility feature i.e. renewable energy must be developed in the state of Florida. It provides more Florida jobs, more income, and more investment dollars into Florida for projects

The PSC should shy away from counting “Green pricing” or voluntary renewable energy programs utilities may offer for their customers to purchase toward the RPS. By allowing this to count toward the RPS, we will not encourage independent renewable development projects

CREATING THE MARKET

- A Florida Renewables Portfolio Standard (RPS) should be a flexible, market-driven policy that can ensure that the public benefits of wind (if available) solar, biomass, perhaps waste to energy and landfill gases continue to be recognized as electricity markets become more competitive.
- The RPS will rely almost entirely on the private market for its implementation... not government. The infrastructure for private market implementation will result in competition, efficiency and innovation that will deliver renewable energy at the lowest possible cost.

CREATING THE MARKET

*Note:although not specific in the current law:

Should consider tying RPS with a requirement that utilities must engage in long term PPA contracts with renewable energy developers to provide renewable energy

Should examine cost benefits of a mandatory requirement that renewable energy be provided by independent developers only prohibiting utilities from direct rate based renewable development and production

- * important element for investor interest

- * Should work to reduce regulatory uncertainty for the prospect of renewable energy development

MARKET DRIVERS

- Longterm renewable energy procurement contracts
- Well documented resource supply that would past muster of third party financiers
- Tax incentives that support large scale renewable energy production
- Ability to site projects
- Predictable permitting and perhaps streamlining of permitting process

STATE GOVERNMENT ROLE

- Government involvement would be limited to certifying Credits, monitoring compliance, and imposing penalties. The Credit certification process would apply to renewable producers who wish to certify their renewables output.
- Monitoring compliance would require each generator to demonstrate ownership of a sufficient number of Credits relative to electricity sales. For generators that are not in full compliance with the RPS at the end of the year, the administrative agency would assess an automatic penalty for each Credit that the generator fails to produce as required.

Example of a Non Compliance Penalty

Commentary: we do not believe that there should be any argument as to whether or not there is a compliance penalty because without it, the RPS will not provide the market stability that is needed to spur investor confidence long term

A) Option A: 5.5 cent kwh penalty

B) Option B tiered per year .. Alternative Compliance Payment (APC):

2.5 kWh first year of non compliance

5.5 kWh second year of non-compliance

9.0 kWh third and subsequent years non compliance penalty

NON COMPLIANCE PENALTIES

Suggest that penalties recovered from non compliance be placed in “Florida Clean Energy” fund to support future renewable energy projects for private companies

Meaning:

A “Clean Energy Fund” would be a great idea for Florida moving forward

_ would be a trigger to help with cost recovery for renewables

RPS-WHAT'S IN IT FOR FLORIDA?

- We become good stewards of our planet by reducing emissions.
- We create a new industry in Florida.
- We generate an alternative to conventional energy sources.
- We contribute to national and economic security.

RPS ECONOMIC IMPACT IN THE STATE FLORIDA

Job Creation

3,500 new jobs in Florida.

Economic Development

\$ 1.2 billion in new capital investment

\$ 1.4 billion in income to farmers and rural landowners,

\$ 10 million in new local tax revenue

Consumer Savings

\$ 110 million in lower electricity and natural gas bills by 2020

\$ 820 million by 2030

SOURCE: Union of Concerned Scientists

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