# **Governors' Wind Energy Coalition**

# Coordinated Competitive Renewable Power Procurement in the Northeast

New England States Committee on Electricity

October 26, 2012

Coordinated Renewable Power Procurement

**Objective**: To consider identifying, through joint or separate but coordinated competitive processes, those resources that have the greatest potential to help meet the region's renewable energy goals at the lowest "all-in" delivered cost to consumers – the cost of generation & transmission combined

## 2009: Governors' Renewable Energy Blueprint



States' Policy Observations: Interest in lowest all-in delivered cost, potential opportunities through coordinated contracting & siting



ISO Technical Analysis: New England has more renewable resources than it needs; could export if developed aggressively

### 2010: Report to the New England Governors Coordinated Renewable Procurement



Assessed New England states' power procurement practices, processes, looked for coordination opportunities

Preliminary information about potential mechanisms to coordinate competitive procurement of renewable resources

Identifies some potential terms & conditions
& possible regulatory approval process
approaches concerning renewable procurement

### Early 2011: Renewable Request for Information

Market inquiry about resources with potential to help meet renewable energy goals at *lowest 'all-in' delivered cost* & for which a coordinated competitive procurement process could facilitate commercial development

#### **Criteria**:

- New resources
- Deliverable to New England loads
- Operational by 2016 &
- Eligible for all 5 New England states' RPS & VT's renewable goals (wind, solar, landfill gas, small hydro & biomass)
- Other: sought information from transmission developers on transmission that could facilitate delivery
- No Cost Information Requested

## **RFI: Renewable Generation Responses**

#### **Highlights**:

• 4,700 MW by 2016

• 90% wind on & off shore

|                  | Within New England |       |        |       |        |    | Outside of |        |
|------------------|--------------------|-------|--------|-------|--------|----|------------|--------|
|                  |                    |       |        |       |        |    | New        |        |
| Technology       | CT                 | MA    | ME     | NH    | RI     | VT | England    | Total  |
| Biomass          | 82.0               | 137.3 | 30.0   |       |        |    |            | 249.3  |
| Landfill gas     |                    | 1.6   |        |       |        |    | 1.6        | 3.2    |
| Small Hydro      |                    |       | 3.0    |       |        |    |            | 3.0    |
| Solar            | 4.0                | 27.0  |        |       |        |    |            | 31.0   |
| Wind - on-shore  |                    | 4.0   | 2519.3 | 351.0 |        |    | 584.5      | 3458.8 |
| Wind - off-shore |                    |       | 30.0   |       | 1000.0 |    |            | 1030.0 |
| Total            | 86.0               | 169.9 | 2582.3 | 351.0 | 1000.0 |    | 586.1      | 4775.2 |

|                  | Year of initial commercial operation |       |       |       |        |       |        |
|------------------|--------------------------------------|-------|-------|-------|--------|-------|--------|
| Technology       | 2011                                 | 2012  | 2013  | 2014  | 2015   | 2016  | Total  |
| Biomass          | 46.4                                 | 0.9   | 77.0  | 30.0  | 55.0   | 40.0  | 249.3  |
| Landfill gas     | 1.6                                  |       | 1.6   |       |        |       | 3.2    |
| Small Hydro      | 3.0                                  |       |       |       |        |       | 3.0    |
| Solar            |                                      | 17.0  |       |       | 14.0   |       | 31.0   |
| Wind - on-shore  | 20.0                                 | 586.3 | 413.5 | 481.0 | 1643.0 | 315.0 | 3458.8 |
| Wind - off-shore |                                      |       |       |       | 1030.0 |       | 1030.0 |
| Total            | 71.0                                 | 604.2 | 492.1 | 511.0 | 2742.0 | 355.0 | 4775.2 |

• 50+% Maine onshore wind

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6

## **RFI: Transmission Responses**

## **Highlights:**

#### • 1 off-shore

#### • 1 NY-VT upgrade

• 5 Maine to load, generally consistent with generator submissions

| Project<br>Number | Description   | Miles of New<br>Transmission | Technology                                      | Capacity<br>(MWs)  |
|-------------------|---|------------------------------|---|--|
| 1                 | Off-shore transmission<br>system to deliver energy<br>from off-shore wind<br>turbines to loads in<br>southern New England | Not specified                | Not specified                                   | Up to 4000 MW,<br>in 1000 MW<br>increments                                       |
| 2                 | Interconnection between<br>upstate NY and northern<br>VT  | Not specified                | 230 or 345 kV<br>interconnection<br>points      | 600  |
| 3                 | Connection from Maine<br>Public Service Company<br>transmission system to<br>CMP transmission system                      | ~26                          | 345 kV AC<br>line within<br>Maine               | 200+ (at least<br>200 MW of wind<br>projects have<br>been identified)            |
| 4                 | HVDC link between<br>northern Maine and<br>downtown Boston  | ~300                         | HVDC<br>overhead line<br>and submarine<br>cable | 800  |
| 5                 | Transmission upgrades in<br>western Maine   | Not specified                | 115 and/or 345<br>kV AC lines                   | Up to 1100   |
| 6                 | HVDC link between<br>central Maine and<br>northern Massachusetts  | 230                          | HVDC<br>underground<br>line                     | 1100 (with<br>potential for<br>some additional<br>increase on<br>existing lines) |
| 7                 | AC transmission upgrades<br>between Maine and<br>southern New England   | Unknown                      | Unknown   | 1000-2000  |



July 2011: Governors' Resolution Expressed Continued Interest in Exploring Coordinated Competitive Procurement

NESCOE undertook analysis to provide *directionally indicative* cost analysis in relation to new on- & off-shore wind resources to help inform policymakers' decisions about the potential for coordinated competitive renewable power procurement

## **Renewable Supply Curve Analysis**

➢Assessed amount of wind resources developable in New England (2016 & 2020) & New York (2020)

Estimated generation cost for various wind resources in New England & New York

Estimated indicative transmission costs to integrate wind into regional power supply

#### **Resource Focus - Maine & NH Wind**

• Corresponds to predominant resource responding to NESCOE's 2011 renewable RFI & resources in ISO-NE's 2009 New England Governors' Study

• Does not indicate preference for wind relative to other renewable resources available to help New England meet clean energy objectives

## The Transmission Factor

If *no* additional transmission was required to integrate wind

Including estimated transmission costs shifts to off-shore & imports

- In 2016, 72% of incremental regional needs for renewables would be met by on-shore wind in Maine. Imports would supply 8%.
- In 2020, 47% of incremental regional needs for renewables would be met by on-shore wind in Maine. Imports would supply 20%.

- In 2016, 44% of incremental regional needs for renewables would be met by off-shore wind & imports. Maine onshore wind would meet 36%.
- In 2020, 45% of incremental regional needs for renewables would be met by off-shore wind & imports. Maine onshore wind would meet 32%.

# July 2012 New England Governors' Resolution

### Governors:

- Directed NESCOE to implement a Work Plan for competitive coordinated procurement of renewable power
- Identified goal of issuing solicitation for procurement by end of December 2013

## NESCOE:

- ✓ Issued *Draft Work Plan* for comment on August 10, 2012
- ✓ Will release *Final Work Plan* within a few weeks



# Draft Work Plan

### ✓ Identifies:

- 1. Steps toward states ultimately conducting regulatory proceedings to consider long-term contracts & a timeframe associated with each step
- 2. Open issues that need to be addressed in advance of solicitation
- 3. Illustrative schedule & milestones
- ✓ Contemplates a **Procurement Team** populated by:
  - 1. (non-PUC decision-maker) state representatives of all 6 states
  - 2. NESCOE
  - 3. Electric distribution company representatives in some jurisdictions
- Recommends creation of State Legal Subteam to support Procurement Team

# Other Work Plan Elements

### ✓ Details of solicitation are *To Be Determined*:

- ✓ Resource eligibility
- Bid & evaluation criteria
- Long-term contract terms & conditions

### ✓ All states participate in process - issue RFP & evaluate bids

- No state commits to procure renewable resources until regulatory authorities consider any proposed contracts
- Each state will decide whether contracts advanced to regulatory authorities are cost-effective & make sense for its consumers

# Some Next Steps

- ✓ States consider stakeholder comments & finalize *Work Plan*
- Convene initial meeting of Procurement Team & Legal Subteam
- Consider threshold commercial questions, such as resource eligibility & evaluation criteria that will form basis of RFP

Stakeholder input opportunities along the way

### More information about coordinated procurement at <u>www.nescoe.com</u> <u>http://www.nescoe.com/2013\_Solicitation.html</u>

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15