Maine NTA Processes and Policy

Vermont System Planning Committee, NTA Workshop

October 11, 2013

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Maine Public Utilities Commission

Maine Power Reliability Project (MPRP) NTA

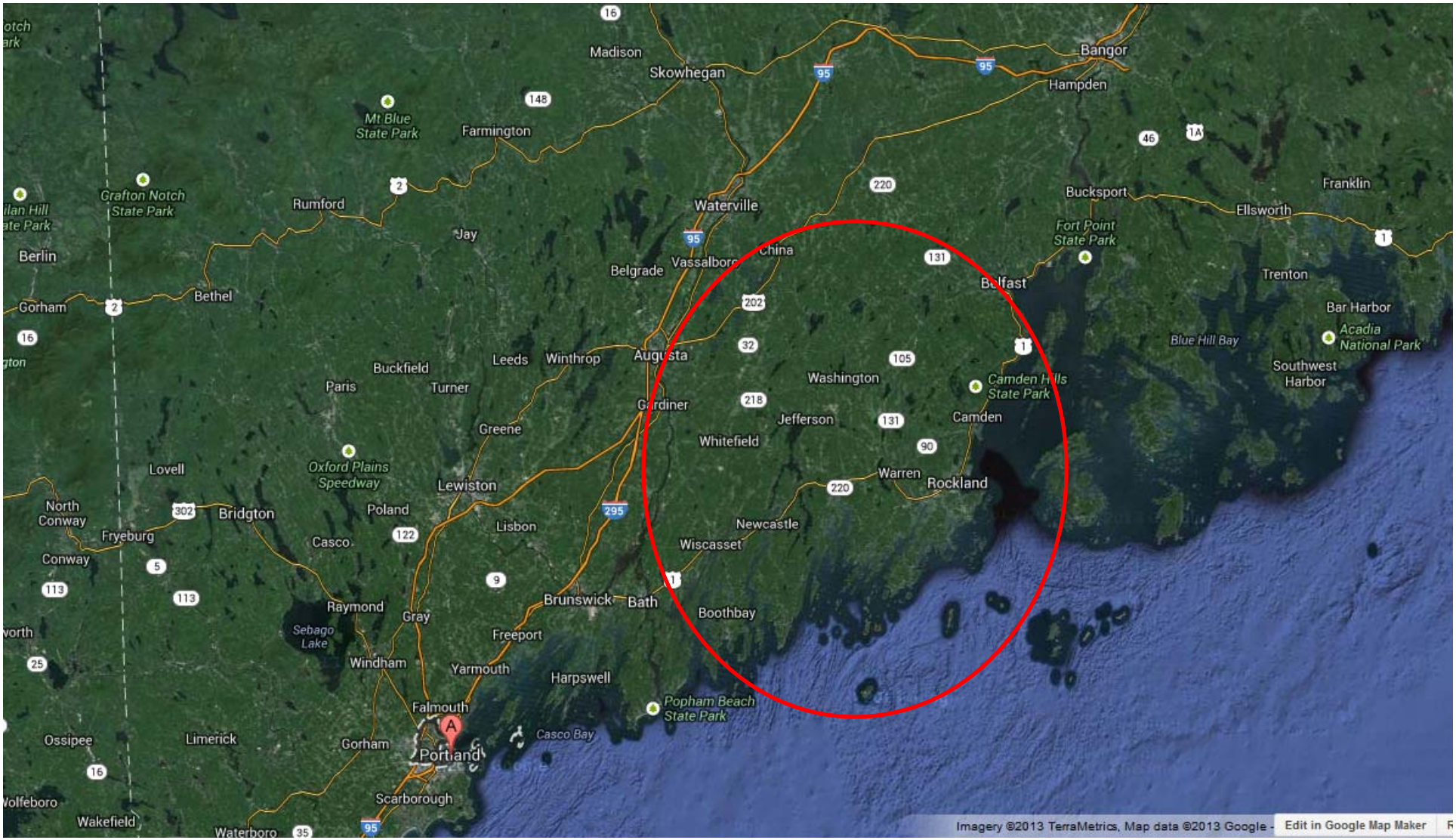
- GridSolar proposed up to 800 MW of solar to offset need for MPRP (100 MW in 1st 5 years)

- Stipulation (May 2010)
  - CMP to enter into contract with GridSolar to develop Smart Grid / NTA Pilot
  - Mid-Coast and Portland Loop locations

Smart Grid Coordinator NOI

- An Act To Create a Smart Grid Policy in the State, Chapter 539, LD 1535 (March 2010)
- Notice of Investigation, Docket #2010-267
  - Need and role of a “smart grid coordinator”
  - NRRI Study
    - Suggests NTA coordination may be a specific role fulfillable by smart grid coordinator
  - Suspended pending outcome of Boothbay Pilot

Maine Mid-Coast



Mid-Coast Pilot

- Docket #2011-138
- Reduced to Boothbay Region
  - (Camden-Rockland to be revisited after local transmission planning standards case)
  - Boothbay NTA Pilot
    - Hybrid transmission / NTA solution
    - 2 MW NTA, 2013-2016
    - Resource category minimum (250 kW) targets
      - Energy efficiency, demand response, renewable distributed generation (at least 50% solar PV), and non-renewable (zero carbon preference) distributed generation
- GridSolar RFP I
  - 1.98 MW identified, but could not execute contracts with all bidders
- GridSolar RFP II
  - Results pending
- Measurement and Verification Plan (Testing)

Boothbay Pilot Timeline

- 4/30/12 - Approval of Boothbay Pilot stipulation
- 10/1/12 – RFP I issued by GridSolar
- 10/26/12 – Responses due to RFP I
- Winter 2012-2013 – GridSolar recommendation of resources and MPUC review
- 5/28/13 – Approval of GridSolar implementation plan and recommended resources (contracts executed)
- 5/30/13 – RFP II issued by GridSolar
- 7/31/13 – Responses due to RFP II
- Fall 2013 – GridSolar recommendation of resources and MPUC review

Boothbay RFP I Results

"Operational" NTA Resource

Seller	Type	kW (AC)	Capacity Rating	Operational Date	Capacity Price	Cost/Month
Brown Bro's Inc.	Passive (PV Solar)	23.10	22.76	July 29, 2013	$20.00	$455.20
Efficiency Maine Trust	Passive (Small Business Conservation)	221.00	166.46	July 1, 2013	$27.08	$4,507.74
Efficiency Maine Trust	Conservation (Commercial)	66.32	66.32	July 1, 2013	$15.32	$1,016.02
Heliotropic Technologies	Passive (PV Solar)	2.68	2.48	July 13, 2013	$50.40	$124.84
Heliotropic Technologies	Passive (PV Solar)	1.80	1.68	July 29, 2013	$50.40	$84.42
Heliotropic Technologies	Passive (PV Solar)	3.56	3.34	August 27, 2013	$50.40	$168.18
Flagship Inn, LLC	Passive (PV Solar)	10.71	8.94	July 1, 2013	$66.85	$597.64
Flagship Inn, LLC	Passive (PV Solar)	11.97	10.93	July 1, 2013	$66.85	$730.67
Total		**341.14**	**282.90**			**$7,684.71**

"Developing" NTA Resource

Seller	Type	kW (AC)	Capacity Rating	Est. Operational Date	Capacity Price	Cost/Month
Lafayette Boothbay Harbor	Passive (PV Solar)	34.19	31.42	January 1, 2014	$50.00	$1,571.00
Lafayette Boothbay	Passive (PV Solar)	15.86	14.58	January 1, 2014	$50.00	$729.00
ReVision Energy (Town of Boothbay)	Passive (PV Solar)	22.30	20.02	January 1, 2014	$50.00	$1,001.00
ReVision Energy (Town of Boothbay)	Passive (PV Solar)	32.30	28.97	October 1, 2013	$50.00	$1,448.50
ReVision Energy (Town of Boothbay)	Passive (PV Solar)	30.80	28.62	October 1, 2013	$50.00	$1,431.00
GridSolar/MWM	Active (Backup Generator)	500.00	500.00	October 15, 2013	$0*	$0.00
Total		**635.45**	**623.61**			**$6,180.50**

"Outstanding" NTA Resource

Developer	Type	kW (AC)	Capacity Rating	Est. Operational Date	Capacity Price	Cost/Month
Heliotropic Technologies	Passive (PV Solar)	50.00	50.00	NA	$50.40	$2,520.00
Total		**50.00**	**50.00**			**$2,520.00**

	kW (AC)	Capacity Rating	Cost
Complete Total:	**1026.59**	**956.51**	**$16,385.21**

*While under GridSolar control, this NTA Resource will recover its actual costs of installation and on-going operating expenses. This NTA Resource has been bid into RFPII by MWM, Inc. at a monthly price of $17.42 per kW

Measurement & Verification Plan

- How the Capacity Rating for each type of Non-Transmission Alternative ("NTA") Resource is initially determined, periodically measured and verified, and adjusted
- Periodic audits (testing) of NTA resources
  - To understand impact on load levels in the region
- Reporting requirements to MPUC on Pilot status, operations, and testing

Boothbay Pilot Cost Savings

- Hybrid Solution
  - Low-cost transmission upgrades
    - Rebuild 115 kV Newcastle Substation to a 4-breaker ring bus ($2,800,000 with expected load-share ratio for Maine being approximately $224,000);
    - Install a second 2.7 MVAR capacitor bank at Boothbay Harbor 34.5 kV bus ($500,000);
    - Install 2.4 MVAR of power factor correction at Boothbay Harbor 12 kV level ($300,000); and
    - Modify relay settings on Section 25 at Mason ($50,000).
  - 2 MW of NTA resources
    - Avoided cost of ~$3 million / year in transmission revenue requirements (for a $18 million 34.5 kV line rebuild)
    - GridSolar estimates $20 million savings over 10 year planning horizon based upon RFP I responses (if Pilot extended beyond initial 3 year phase)

NTA process going forward

- MPRP Stipulation
  - Greater Mid-Coast Region (Camden-Rockland)
  - Portland Loop
- New CPCN Cases
  - 2013 Maine Omnibus Energy Bill, **Part C**
    - An Act To Reduce Energy Costs, Increase Energy Efficiency, Promote Electric System Reliability and Protect the Environment, Chapter 369, L.D. 1559
  - Rulemaking

For More Information

- http://www.gridsolar.com/
- http://www.maine.gov/mpuc/online/
- Jason.Rauch@maine.gov