Additional Slides Presented at Stakeholder Meeting

• Sept. 13, 2010

Regional Energy and Peak Demand

Annual Average Growth Rates by State, 2010 to 2030 (Leaning)



Cost and Performance of New Generation

Overnight Capital Cost of New Capacity Options (Leaning)



Cost and Performance of New Generation Capital Cost of New Nuclear Capacity

The chart below plots capital cost estimates for several domestic and international nuclear projects, both proposed and in development, as announced publicly by project developers and in industry publications.



Fuel Prices

Average Delivered Fuel Prices to RGGI Region (Leaning)



New England Energy Efficiency Assumptions

Connecticut

Connecticut used ICF's proposal of the ISO NE baseline with EE¹ through 2012.

<u>Maine</u>

Based on the New England States Committee on Electricity (NESCOE) 7/1/10 proposal of an additional 234 MW per year EE for ISO-NE modeling assumptions (<u>www.nescoe.com/uploads/Memo to ISO on Assumtions</u> 7.1.10.pdf pp. 3-4), Maine reduced their peak demand by a proportional 20MW annually and applied the annual ISO NE load factor to the peak numbers to derive the energy load forecast.

1. ISONE energy efficiency includes the PDR that have cleared the first 3 Forward Capacity Auctions (for delivery through 2012), but does not assume any incremental PDR beyond that date.

New England Energy Efficiency Assumptions Cont'd

Massachusetts

Assumptions for development of MA loads and usage with EE to 2030 reflect the aggressive energy efficiency investments required of investor owned utilities in MA (funded in part by RGGI Auction proceeds). DPU has approved a mechanism for funding the efficiency programs.

- •Each year's incremental improvements are calculated as a percentage of that year's baseline w/o EE
- •Municipal Light Plants supply 14% of each zone's baseline w/o EE
- •Municipal Light Plants make no energy efficiency improvements
- •Efficiency Improvements have the same effect on peak load as on energy usage
- •Efficiency Improvements at Investor Owned Utilities (IOUs) are 1.31% in 2010, 1.87% in 2011, 2.29% in 2012 based on 3-year plans.
- •Efficiency Improvements are thereafter constant as a percent of the baseline at 2.4%. The Green Communities Act (Acts of 2008 Chapter 169 Section 116(a)) sets a goal of meeting 25% of load through energy efficiency by 2020. The Energy Efficiency Advisory Council (EEAC) has set 2.4% as a goal for 2012 (see page 168 of http://www.ma-eeac.org/docs/DPU-filing/1-28-10%20DPU%20Order%20Electric%20PAs.pdf as well as attachment I of http://www.ma-eeac.org/docs/091027-Resolution.pdf). The EEAC expects to maintain that 2.4% goal going forward to 2020.
- •0.9% Efficiency Improvement Case included because that has been rate in recent years
- Includes any assumptions that are part of the baseline w/o EE

New England Energy Efficiency Assumptions Cont'd

New Hampshire

Based on the ISO-NE baseline modified by the New England States Committee on Electricity (NESCOE) 7/1/10 proposal of an additional 234 MW per year EE under BAU for ISO-NE modeling assumptions (www.nescoe.com/uploads/Memo to ISO on Assumtions 7.1.10.pdf pp. 3-4), New Hampshire reduced the load and peak demand proportionate to the regional estimate, which is approximately the same as the annual projected (and historically experienced) reduction in load and peak demand from continuation of current utility energy efficiency programs plus RGGI funded energy efficiency programs.

Rhode Island

Rhode Island used ICF's proposal of the ISO NE baseline with EE¹ through 2012.

<u>Vermont</u>

Vermont demand assumptions are based on the load forecast prepared by the Vermont System Planning Committee (VSPC). The VSPC is composed of stakeholders, including all utilities, public representatives, DPS, the Energy Efficiency Utility (EEU), and the Sustainably Priced Energy Enterprise Development (SPEED) Facilitator. The VSPC forecasts a 20 year load forecast and an adjusted forecast with energy efficiency based on what VT expects to spend on

efficiency. http://www.vermontspc.com/VSPC%20Reports%20%20Correspondence/Forms/AllItems.aspx

1. ISONE energy efficiency includes the PDR that have cleared the first 3 Forward Capacity Auctions (for delivery through 2012), but does not assume any incremental PDR beyond that date.

New York Energy Efficiency Assumptions

New York

New York used NYISO baseline with EE. This is the forecast that the NYISO is using for its Reliability Needs Assessment. It represents the achievement of 37% of the State's energy efficiency goal by 2015 and approximately 50% of the goal by 2018.

PJM Energy Efficiency Assumptions

Delaware

• The DPL Zone consists of 9 Maryland counties, 3 Delaware counties and 2 Virginia Counties and the EE forecast was assembled using each of the individual state goals for consumption (energy) reductions and peak demand reduction.

• The Delaware forecast was based on a hard 15% reduction from 2007 numbers by 2015.

Delaware assumed an additional 5% over the period 2016-2025 for a maximum 20% efficiency and stable to 2030

•The Maryland forecast was based on an estimated 15% per capita reduction from a 2007 base year and included the same 5% additional beyond the 2015 time frame, stable 2025 thru 2030. •The Virginia forecast was based on the state's voluntary goal of 10% use reduction by 2022 with continuing moderate increase to 2025 and stable to 2030.While Virginia may not have intended its goal to apply to peak demand, the Virginia portion was only 47 MWs at maximum contribution.

 Individual State starting points were established based on an allocation of the PJM forecast by population which assumes a similar diversity of customer classes. Actual state forecasts are not available.

• Maryland population was estimated from historic growth patterns and reductions were applied on a per capita basis, consistent with their legislation.

• Each of the states will take the actions necessary to achieve their stated goals and EE will not suddenly stop at 2015, but is anticipated to slow dramatically as less opportunity will be available.

• The state goals are separate from the EE that PJM has qualified in its base capacity auctions since the PJM forecast does not yet include public policy goals.

PJM Energy Efficiency Assumptions Cont'd

Maryland

Based on data for the Empower Maryland 15% by 2015 energy efficiency and DSM goals, Maryland assumed a factor of 35% for energy savings and a factor of 100% for the Empower Maryland peak demand goal.

New Jersey

New Jersey assumes the continuation of NJ Clean Energy Program (CEP) EE savings performance at 2009 levels and average measure lifetime of 15 years, and incorporates the recent enactment of updated building energy codes.

Sources: New Jersey's Clean Energy Program Report (Reporting Period: Year-to-Date through Fourth Quarter 2009); New Jersey Clean Energy Program Protocols (2009 Revisions).

Building Codes: Assumes energy savings for IECC 2006/ASHRAE 90.1-2004 building energy code updates promulgated by DCA in 2007; GWh savings estimates from NJ EMP modeling assumptions (Rutgers CEEEP, Modeling Report for the New Jersey Energy Master Plan - Appendix A, October 2008).