New Jersey Board of Public Utilities Energy Master Plan

Clean and Renewable Power

September 7, 2018

Competitive Power Ventures (CPV)

- CPV Background and Strategy
  - ✓ CPV is a leading North American electric power generation ownership, development and asset management company with offices outside of Washington DC, Boston MA and San Francisco, CA
  - ✓ CPV has concentrated on a clean energy strategy utilizing high efficiency natural gas, wind-powered generation and now solar to meet growing demand in high load areas
  - ✓ Since inception, CPV has developed/financed over 4.2GW of power projects including 760MW of Renewable technologies
- CPV in New Jersey
  - ✓ CPV developed, built and owns the Woodbridge Energy Center a 700MW natural gas fired plant in Woodbridge, New Jersey
    - Completed construction in January 2016 on-time and on-budget
      - +600 construction job at peak construction
      - Construction payroll in excess of $130 million
    - Operated at over a 90% capacity factor in 2017
  - ✓ CPV is developing the Keasbey Energy Center, a 600 MW natural gas fired plant located adjacent to the Woodbridge Energy Center
  - ✓ CPV wants to develop solar in New Jersey and help the State fulfill its solar RPS requirements

A Framework for Clean Energy

What is “Clean Energy” and why is it important?

- ✓ Our business model is focused on grid modernization to reduce carbon emissions from power generation
- ✓ “Clean Energy” means we maximize resources to reduce our environmental impact through grid modernization which includes renewables, energy efficiency, storage, and natural gas
- ✓ It requires a regulatory framework to include RGGI, carbon pricing and an open and fair competitive market

Natural Gas plays a Critical Role

Why include Natural Gas?

- ✓ The goal is and must remain carbon reduction.
- ✓ A new plant can reduce carbon emissions by an estimated half a million tons per year.
- ✓ New combined cycle natural gas plants are significantly more efficient than the installed base.
- ✓ Energy demand and growth are flat…new generation is not built to meet incremental need…it will displace less efficient generation.
- ✓ The operational flexibility is critical in managing the intermittency of renewable resources and facilitates their expansion.

New Jersey Solar Limitations

- Siting
  - ✓ To qualify for SRECs, projects must be located on a brownfield, area of historical fill or on properly closed landfill sites…significantly limits qualified site.
  - ✓ Brownfield sites are limited and municipalities with brownfield sites are looking for uses that:
    - Provide larger tax benefits than solar projects
    - More jobs than solar projects provide
  - ✓ Limited interconnection opportunities

Thoughts/Recommendations

- Incent private capital and companies to accept the development and performance risk
- Make more sites eligible for solar development, not just landfills and brownfields
- Allow developers to interconnect in the most economic way
  - ✓ *Interconnection restrictions limit otherwise qualified sites i.e. current regulations require 65kV or below*
- Long Term tariff based contracts with utilities drives down the cost of capital and ultimately, the cost to consumers

MA SMART Program

- 20 Year tariff based contract program based on a first qualified, first served basis for up to 1,600 MW of new solar
- Tariff rates scheduled in defined declining block program based on remaining program capacity
- Contract with the electric distribution companies for bundled product (power, RECs, capacity)
- Defined tariff rate adders/incentives for certain development types (i.e. landfill/brownfield, use of energy storage)
- Flexible Project Siting Criteria - allows site procurement to meet program goals:
  - ✓ *Limitations around conservation & land tax programs; limited agricultural preclusions*
  - ✓ *Defined Tariff rate deducts for certain zoning designations; land use categories*

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