

Project Background

MMWEC Stony Brook Unit 3

A Necessary Resource

MMWEC has identified a long-term need among its Member municipal utilities for several hundred megawatts of new energy resources, including significant quantities of “baseload” generating resources. Without new resources, the MMWEC Members will need to rely on highly volatile spot market purchases to meet a large percentage of their energy needs – a situation that is unacceptable to MMWEC and its Members. In a comprehensive study of alternatives for meeting this baseload capacity requirement, MMWEC reviewed various baseload plant technologies and fuel types, as well as potential ownership in existing or proposed plants. The results clearly identify MMWEC’s Stony Brook Unit 3 as an economic, efficient and practical alternative for meeting the identified need.

Unit Description

MMWEC’s proposed new unit is a highly-efficient, 280-megawatt, combined-cycle generating unit capable of burning both natural gas and ultra-low-sulfur distillate oil. The unit will include a single combustion turbine/generator, a heat-recovery steam generator (boiler) and a steam turbine/generator. It will operate as a “baseload” generator, intended for 24-hour/day operation, with an average heat rate of less than 7000 btu/kwh.

The unit will use F-Class generation technology, the most recent gas turbine technology with a solid track record and proven efficiency. In addition, the unit is designed to meet Lowest Achievable Emission Rate (LAER) and Best Available Control Technology (BACT) emissions standards, including the use of selective catalytic reduction for nitrogen oxides and a catalyst for carbon monoxide mitigation.

Location, Location, Location

The site for the new unit is MMWEC’s Stony Brook Energy Center in Ludlow, Massachusetts, which is home to the existing 522-megawatt Stony Brook Power Plant, operated and principally owned by MMWEC. The Stony Brook site received the highest ranking of four sites studied in an independent analysis of alternative sites for the new unit. The Stony Brook site is relatively isolated so as to minimize the visual, noise and other impacts on the local community. The site also contains existing infrastructure that will support the new unit, including oil, natural gas and water pipelines; oil and water storage tanks; transmission facilities; and features that mitigate environmental impacts. Importantly, an agreement is in place regarding the use of these common facilities by the existing and new units.

Development Work Completed

Over the past two years, MMWEC has completed many project development tasks, including regulatory, environmental, permitting, siting, design, contract development and pre-financing tasks. This work, at a cost of approximately \$6 million, was funded through a Project Development Agreement between MMWEC and 24 Massachusetts municipal utilities and two other municipal utility entities.

The commercial operation date is planned for mid 2015 but is currently being assessed in light of market conditions and a recent FERC decision that if upheld affects capacity revenues for new generation assets.

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