

PROJECT PROFILE COGENERATION/TRIGENERATION FEASIBILITY STUDY TAMPA GENERAL HOSPITAL

Tampa, Florida. U.S.A., 2014

Maven Power completed a cogeneration/trigeneration (CCHP-Combined Cooling, Heat & Power) feasibility study for Tampa General Hospital in Florida - a Level I Trauma Center and one of the largest hospitals in the state.

Maven Power analyzed the existing consumption of utility power, natural gas, on-site boilers, chillers, and cooling towers to determine the existing energy baselines. Once the baseline condition was established, and the future utility requirements were determined, Maven Power was able to use its proprietary software algorithms to determine plant performance in multiple configurations. Maven was able to analyze more than 10 onsite generation options (turbines, reciprocating engines, HRSG's, absorbsion chillers and more) and present the expected performance technically and financially.

Upon completion of the study, Tampa General Hospital was able to effectively determine the following for the hospital campus' evaluation of a new combined heat and power plant:

- Optimal technology –gas engines or turbines, electric vs. absorbsion chilling, cooling tower req't
- Plant configuration—cogeneration vs. trigeneration, impact to financials & existing infrastructure modifications required.
- Overall cost—capex expenditures
- Sensitivity analysis of project financials to volatility of natural gas and electric power prices.
- Payback period required to recover capital expeditures and cover all ongoing costs.
- Project schedule
- Availability—availability/cost tradeoff for more or fewer units
- Future expansion—flexibility of technology to accommodate additional capacity, physical space

The results allowed the hospital to clearly select the configuration which provided the optimal solution meeting the needs of their critical operations.

Check out the simple tools to learn more about how Cogeneration/CHP or Trigeneration/CCHP may be a good fit for your facility at Maven Power's website on <u>Cogeneration</u>
To receive a quotation, please complete our short <u>Cogeneration Questionnaire</u>.

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Figure 1. Tampa General Hospital Campus to be Served by Combined Heat & Power



Figure 2. Proposed Location for Trigeneration Plant

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