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Introduction and Summary

This letter report was prepared by The Energy Authority (TEA) at the request of Gainesville Regional Utilities (GRU) to explain the analysis that was performed by TEA. The analysis performed by TEA compares estimates of the market value of GRU's generation portfolio with and without the proposed Gainesville Renewable Energy Center (GREC).

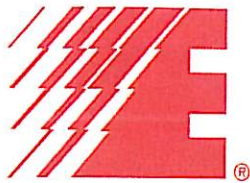
Summary of Analysis

A regional multi-year production cost analysis of the combined Florida Regional Coordination Council (FRCC) and the Southern (SOCO) regions was performed. The analysis consisted of simulating production cost with and without the GREC biomass plant, then comparing results of the two simulations. The individual units of the GRU system were dispatched into the market for each case and each received a revenue stream for their energy sold based on the hourly market clearing price (MCP) produced by the simulations. This revenue less the variable costs of production represents the net revenue to the GRU system for an individual unit. The net revenues were summed up across the GRU generation portfolio to produce the Total Net MCP Revenue for the GRU system.

The difference of the Total Net Revenue values between the two scenarios represents the energy production related benefit to the GRU system by having the "new" generation since that was the only change in the model assumptions.

Summary of Results

	<u>Net Energy Benefit (\$000)</u>
2014	\$22,275
2015	\$16,886
2016	\$18,090
2017	\$19,606
2018	\$20,862
2019	\$21,546
2020	\$24,391
2021	\$26,469



2022	\$29,155
2023	\$33,132
2024	\$37,119
Total	\$269,531

Methodology

Overview of Market Analytics

The Market Analytics¹ model is a powerful electric utility production cost model that allows users to forecast electric market clearing prices by simulating the operation of individual generation units, utilities, loads and transmission area transfer limits within a particular geographic region while taking into account various system and operational constraints.

It incorporates sophisticated production cost optimization algorithms to formulate hourly market clearing prices within each transmission zone. For the regional analysis, all generating units are dispatched into the market as stand-alone entities and operated according to load and price signals within regional transmission and other operating constraints. The plants are dispatched if they are the “next least expensive” unit in the stack.

The MCP revenue is the revenue received by individual units for generating energy over the market study period. It is a gross payment and not “net of incremental costs” revenue.

Variable costs include all of the costs associated with the incremental dispatch of a generating resource. Variable costs include fuel, variable O&M, start-up costs and certain emission allowance costs. Fixed or sunk costs are not included in the analysis.

A portion of the net variable benefits would be realized directly by GRU ratepayers as a decrease in fuel costs. Rate treatment of the variable benefits is outside this studies scope.

The analysis does not include any economic impact of potential revenue from GRU selling Renewable Energy Certificates (RECs). Additionally, variable production costs do not include any consideration for potential greenhouse gas emissions allowances. Fixed costs or potential revenues from capacity sales are not addressed in this analysis.

Summary of Key Assumptions

Market footprint – Southern Company and the Florida markets.

Study period- the years 2014-2024.

Source of generation and load data – Model inputs supplied by Ventyx for all loads and generating resources in the footprint; utilized the latest model update.

Key fuel prices (e.g. NG) – Henry Hub natural gas prices for the study term were updated to reflect the 2010 EIO assumptions, with appropriate basis adjustments to points of delivery.

Handling of emissions cost (SO₂, NO_x) – Costs for both SO₂ and NO_x allowances were included in the model; CO₂ allowance costs were not included in the analysis.

Description of TEA

The Energy Authority (TEA^o) is the nation's leader in public power energy trading and risk management. We are wholly-owned and directed by our Public Power members who participate in our organization's decision-making.

Today, 39 public power utilities across the nation are TEA members and partners, representing more than 25,000 MW of combined generation assets with all fuel types.

ⁱ Market Analytics is a proprietary electric power production cost model owned by Ventyx.