Renewable Integration Model and Analysis

Objectives

• Formulate methodology that quantifies the amount of conventional generation needed to integrate a given portfolio of renewable resources

• Provide a wide range of flexibility in simulating and estimating the system impact associated with renewable generation based on resource-specific characteristics

• Calculate the fixed and variable costs of accommodating variable generation on the system

Data Input

Historical minute-by-minute load and wind/solar data

Analytical Approach

Estimate incremental system-wide operational need to integrate renewable resources

Quantify the conventional generation capacity needed using a technology screening curve

Data Input Output Analytical Approach

Output

Fixed and variable costs of integrating renewable energy resources

Incremental generating capacity need for renewable integration (assuming not provided by existing system)

Optimal mix of resources (based on input assumptions about available technologies and costs)

Contact Information

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