
New York's DG/CHP Experience To Date

Challenges & Opportunities

James Gallagher
Director, Office of Electricity & Environment
NYS Department of Public Service
James_Gallagher@dps.state.ny.us

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Basics of the New York Electric System

- ❑ 6 Major Investor-Owned Utilities
- ❑ 2 Large Power Authorities
- ❑ 47 Small Municipalities
- ❑ 4 Small Rural Electric Co-ops
- ❑ Diverse territory
 - *47,000 square miles*
 - *Con Edison/NYC, 600 square miles, 3.1 million customers*
 - *Adirondack Park, 3900 sq mi, less than 100,000 customers*
- ❑ Load: 32,000 MW at peak -- 16,500 MW in NYC & Long Island
 - *Extreme electric transmission congestion downstate*
- ❑ Generating capacity: 39,000 MW

DG – Requirements for Grid Interconnection

- ❑ New York has standard interconnection requirements (SIR)
 - *Covers facilities of 2 MW and under*
 - *Includes interconnections with networks*
 - *Provides model contract language*
 - *Provides technical requirements*
 - *Defines process/timelines*
 - Con Edison to use SIR timelines for units up to 5 MW
 - *Establishes guidelines for utility interconnection fees*
 - Small units (15 kW or less) - no fee
 - Larger units (> 15 kW) -- cost reimbursement for studies and upgrades
- ❑ Development of SIR was through a collaborative process
 - *Utilities implement SIR*
 - *PSC enforces rules and resolves conflicts*
 - *Utilities are ultimately responsible for interconnection safety*

DG - Rules of Grid Interconnection

- Engineering reviews of system characteristics for DG units
 - *Units under 15kW using certified equipment get minimal review*
 - *Units over 15 kW receive more detailed reviews*
- Net Metering allowed
 - *PV up to 10 kW*
 - *Farm waste up to 400 kW*
 - *Wind – Law Recently Signed - Tariffs under review*
 - *Residential up to 25 kW*
 - *Farms up to 125 kW*
- NY active in efforts by FERC and others to develop National Interconnection Standards

Standby Rates

- ❑ Applies to on-site generators sized at greater than 15% of their hosts annual peak loads.
- ❑ Basic provisions of Standby Rates (Three elements)
 - *Monthly customer charge - based on average cost of serving the individual customers in the service class (cost of meter, installations on customer's premises, billing, and sales and customer services).*
 - *Contract demand charge - reflects average cost per kW for customers in the service class associated with use of the local distribution system (wires, distribution transformers, etc.), based on the customer's maximum annual kW demand.*
 - *As-used on-peak daily demand charge - reflects costs shared by all customers in the class, regardless of their location within system (primarily transmission related costs), based on on-peak actual deliveries (only for interval metered customers, i.e., > 50 kW)*
 - produces strong price signal to run DG and displace more expensive utility on-peak commodity deliveries

Standby Rates

□ *Hourly Pricing Option*

- *Hourly load-integrated market commodity prices available as an option for all interval metered (> 50 kW) standby customers*
 - Commodity service bill directly reflects cost consequences of customer's individual load (not class average)
 - DG has better information upon which to choose between buying energy from the grid or generating themselves

Standby Rates

□ Existing Units

- *Immediate billing @ full standby rate OR*
- *Phase-in to full standby rate (fixed 8 year period)*
 - initial 4 years at standard rates
 - 2nd 4 years at equal % increase

□ Exempt Technologies

- *Fuel cells, wind, solar thermal, PV, sustainably-managed biomass, geothermal, methane waste, and small (\leq 1 MW) efficient CHP*
- *Options*
 - billing @ standard tariff delivery rates, or
 - can choose billing @ full standby rates
- *Need to commence operation between July 29, 2003 and May 31, 2006*

GAS RATES FOR DG CUSTOMERS

- In April 2003, the NY PSC issued “Order Providing for Distributed Generation Gas Service Classifications”
 - *Tariffs were filed and became effective January 2004*
 - *Provides significant savings in delivery rates for DG customers as compared with non-DG delivery rates*
 - Savings example for 700 kW customer using 23,000 therms*
 - *RG&E – 37% Summer and 28% Winter*
 - Savings example for 2 MW customer using 75,000 therms*
 - *RG&E – 40% Summer and 29% Winter*

CHP Incentive/Development Programs

- ❑ NYSERDA Funding, primarily via Systems Benefit Charge (SBC) program
 - *Demonstration projects, studies, and technology development*

- ❑ Project commitments to date
 - *84.6 MW -- 12.6 MW operational*
 - *\$43 million in funding*
 - *\$160 million committed by developers*

Emergency Demand Response (EDRP)

- ❑ Voluntary load curtailment program activated by the NYISO during periods of potential shortfall in electricity supply.
- ❑ Incentive based, no penalties.
- ❑ Current registration over 1100 customers, representing nearly 600 MW of Load (about 250 MW from generators).

Installed Capacity-Special Case Resources (ICAP-SCR)

- ❑ Pays customers to provide load reduction capability during a contractual period. Program is called when system reserve shortfall expected.
- ❑ Current registration over 1050 customers, representing nearly 800 MW of Load (about 27 MW from generators).