

PRL Performance SubGroup Issues & Recommendations

Prepared for:

**New York ISO
PRL Working Group**

Prepared by:

**Donna Pratt
Neenan Associates**

December 14, 2000

Objective

Determine the hourly level of load curtailment supplied by participants in NYISO PRL programs during those periods when the NYISO has requested load relief from participants.

Design Criteria

- **Comprehensible**
 - By prospective participants
- **Accurate**
 - Minimizes gaming opportunities and bias
- **Flexible**
 - Accommodate different customer circumstances
- **Reproducible**
 - By end-use customer, auditor, and evaluator

Performance Issues

- Basic Assumptions
- End-use Customer Enrollment with NYISO
- Selecting A Performance Method
- Methods of Assessing Performance
- CSP Method Registration with NYISO

Basic Assumptions

- All participating end-use customers will have an approved interval meter
- CSPs will be required to establish what each participant's usage would have been if the event had not occurred
- CSPs will report to NYISO, for each event, the aggregate load reduction measured from participating end-use customers: by hour, by zone

End-use Customer Enrollment with NYISO

- CSPs must register end-use customers with NYISO (solely for auditing and estimating)
- Contract between CSP and end-use customer in place prior to emergency event is sufficient for participation, but does not relieve registration obligation
- End-use customer enrollment permits NYISO to estimate emergency response

Performance Methods

- CSPs may select as many approved methods as suitable for their end-use customer classes
- CSP's registered methods may be applied to any end-use customers enrolled by the CSP in the NYISO PRL program, regardless of any other load reduction program the end-use customer might participate in.

Selecting Performance Methods

- CSPs may select from any existing approved method already in use in NY State
 - Approved means any method approved by the NY-PSC or other governing body where the NY-PSC does not have jurisdiction
- Any other method approved by the NYISO
 - ISO will establish standards, specifications, and an approval process
 - any method that meets those requirements will be approved by the ISO

Methods of Assessing Performance

- Existing NY Program Methods

		Advantage	Disadvantage
Consolidated Edison	“Typical load” less hourly metered usage during event	Simple to administer	May not represent load on day of event
Keyspan	Difference between average load on critical day and maximum load on non-critical day in the same month/bill cycle	Maximum benefit to customers	Actual performance is not known until after the event
Niagara Mohawk	Reduction below baseline load (8760)	Customer knows	More work to administer
NYPA	Compared performance to a matched day – comparable day during the summer period	Simple to administer	May not represent load on day of event

Methods of Assessing Performance - Other Possible Methods⁽¹⁾

		Advantage	Disadvantage
Previous Hour	Forecast normal load on each hour of interruption to be equal to customer's load in the hour prior to the interruption	Reproducible, unambiguous, simple and event certain	Not suitable if load varies from hour to hour or weather sensitive
Average Usage for a select number of days preceding the event	Forecast normal load on each hour of interruption to be equal to customer's average usage in the same hour during a specified number of non-interruption business days prior to the interruption.	Reproducible, unambiguous, simple	Not suitable if load varies from day to day; Not all information available at time of event
Temperature Response Modeling	Forecast normal load in each hour of interruption period using an hourly temperature-response regression model fitted to prior business days.	B iased toward customers with large HVAC load	Complex & may not reflect lagged or accumulated effect of temperature

(1) Source: "Measuring the impact of Load Reduction Response", Roger L. Wright, RLW Analytics

CSP Method Registration with NYISO

- CSPs will register methods of assessing participant performance with NYISO 30 days prior to beginning of each Capacity Period.
- The methods may not be changed during a Capacity Period, but the CSP may select different methods for the next Capacity Period.
- The method selected for an end-use customer must be defined at customer enrollment and may not be changed during a Capacity Period.

CSP Method Registration with NYISO, continued

- Method registration will require complete written disclosure of each method to be used with end-use customers in enough detail to be reproducible by a third party.
 - The disclosure will be solely for the purposes of audit by the NYISO or its designated agent.
 - All data (equations, variables, interval data, etc.) used in the method must be available for verification upon request of the NYISO.

Next Steps

- Establish expedited approval process for evaluating performance methods that demonstrate the design criteria
(comprehensible, accurate, flexible & reproducible)
- Develop program evaluation plan
- Establish metering configurations
- Establish NYISO end-use customer enrollment & performance method registration process