Resource Obligations in RPM

June 10, 2014

- Determine the UCAP value of an RPM resource

- Describe the market obligations arising from an RPM commitment

Calculated based on Unforced Capacity (UCAP)

Unforced Capacity (UCAP) value of a generating unit is calculated as:

| Unforced Capacity Value of Unit X | = | **SUMMER** Installed Capacity (ICAP) Rating | * | (1 – EFORd*) |

For Example:

| 96 MW | = | 100 MW | * | (1 – .04) |

Unforced Capacity Value For Unit X = 96 MW

*EFORd = Equivalent Forced Outage Rate

Unforced Capacity (UCAP) value of a solar resource is calculated as:

| Unforced Capacity Value of Solar Unit | = | SUMMER Installed Capacity (ICAP) Rating | * | (38%*) |

For Example:

| 38 MW | = | 100 MW | * | (0.38*) |

Unforced Capacity Value For Solar Unit = 38 MW

*Based on 3yr rolling average capacity factor. Default is 38%

Unforced Capacity (UCAP) value of a wind resource is calculated as:

| Unforced Capacity Value of Wind Unit | = | SUMMER Installed Capacity (ICAP) Rating | * | (13%*) |

For Example:

| 13 MW | = | 100 MW | * | (0.13*) |

Unforced Capacity Value For Solar Unit = 13 MW

*Based on 3yr rolling average capacity factor. Default is 13%

Nominated Value of Load Management Products

- The nominated value is the maximum load reduction of an end-use customer site.
- The process to determine this value is consistent with the process for the determination of the capacity obligation for the customer.

Load Management Product Type	Nominated Value
Direct Load Control	# Customers * Per Participant Impact * Loss Factor *Load Research and Switch Operability Study must be submitted to PJM and approved in order to determine the Per Participant Impact.*
Firm Service Level	Peak Load Contribution – (Firm Load Level * Loss Factor)
Guaranteed Load Drop	Min (Peak Load Contribution, Customer Load Reduction Value * Loss Factor)

The maximum load reduction for each resource is adjusted to <u>include</u> system losses.

Unforced Capacity (UCAP) value of a Load Management Product is calculated as:

Unforced Capacity Value Of DR X	=	Nominated DR Value	*	DR Factor*	*	Forecast Pool Requirement (FPR)

For Example:

10.4 MW	=	10	*	0.955	*	1.0902

Unforced Capacity Value For DR Resource = 10.4 MW

Unforced Capacity (UCAP) value of an EE Resource is calculated as:

| Unforced Capacity Value Of EE Resource | = | Nominated EE Value | * | DR Factor | * | Forecast Pool Requirement (FPR) |

For Example:

| 104.1 MW | = | 100 | * | 0.955 | * | 1.0902 |

Unforced Capacity Value For EE Resource = 104.1 MW

Generation Resources

All generation resources that have an RPM Resource commitment must offer into PJM's Day Ahead Energy Market.

Demand Resource

Demand Resources that have an RPM Resource Commitment must be registered in the Full Program Option of the Emergency Load Response Program and thus be available for dispatch during PJM-declared emergency events.