

MMU Proposal for Maximum Notification and Start Times

Market Implementation
Committee
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Proposed Approach

- **Notification Time and Start Time should remain separate parameters**
- **Start Time, as a physical parameter, should be based on unit history, and be limited to that history on an individual unit basis.**
- **Units may request exceptions to start times based on historical operating behavior and physical limitations.**
- **Limits should apply to both market-based and cost-based schedules.**



Proposed Approach

- **Notification Time and Start Time should remain separate parameters**
- **Option 1 for Notification Time:**
 - **Notification Time based on unit history, and be limited to that history on an individual unit basis.**
- **Option 2 for Notification Time:**
 - **Notification Time limited to times in proposed matrix, based on parameter class.**
- **Units may request exceptions to notification times based on historical operating behavior and physical limitations.**
- **Limits should apply to both market-based and cost-based schedules.**



Recommended Cold Notification Time

Parameter Class	Cold Notification Time
PETROLEUMSTEAMPRE-1985	4
PETROLEUMSTEAMPOST-1985	1
COMBINEDCYCLE	2
SUBCRITICALCOALPLANTS	2
SUPERCRITICALCOALPLANTS	2
SMALLCTSTO29MW	0.25
MEDIUMCTS30TO65MW	0.2
MEDIUMLARGECTS66TO134MW	1
LARGECTS136TO180MW	2

*Data based on active cost-based offers within one standard deviation of the mean, at the 70th percentile distribution, from November 1, 2007 to November 1, 2010



Cold Notification and Cold Startup Percentiles (In hours)

Parameter Class	Cold Notification Time			Cold Startup Time			CS + CN		
	70th	80th	90th	70th	80th	90th	70th	80th	90th
PETROLEUMSTEAMPRE-1985	4	8.5	18	12.5	14	18	16.5	22.5	36
PETROLEUMSTEAMPOST-1985	1	1	2	6	12	14	7	13	16
COMBINEDCYCLE	2	5	7	5	6.2	8	7	11.2	15
SUBCRITICALCOALPLANTS	2	2	4	15	16	20	17	18	24
SUPERCRITICALCOALPLANTS	2	2	8	19	20	22	21	22	30
SMALLCTSTO29MW	0.25	1	2	0.5	0.5	0.8	0.75	1.5	2.8
MEDIUMCTS30TO65MW	0.2	0.3	1.4	0.3	0.5	0.5	0.5	0.8	1.9
MEDIUMLARGECS66TO134MW	1	2	2	0.5	0.7	1	1.5	2.7	3
LARGECS136TO180MW	2	5	6	0.5	0.7	1	2.5	5.7	7

*Data based on active cost-based offers within one standard deviation of the mean, since November, 2007.

**Analysis based on calculating notification and startup time distributions independently, then adding together.



Time-To-Start Percentiles (In hours)

Parameter Class	All Months			Peak Months			Off-Peak Months		
	70th	80th	90th	70th	80th	90th	70th	80th	90th
PETROLEUMSTEAMPRE-1985	18	20	32	18	20	30	17	19	32
PETROLEUMSTEAMPOST-1985	9	13	14	9	13	14	9	13	14
COMBINEDCYCLE	9	11	14	8.5	10	13.5	9	11	14
SUBCRITICALCOALPLANTS	16.5	18	22	16.5	18	22.5	16	18	22
SUPERCRITICALCOALPLANTS	21	22	30	21	22	30	21	22	30
SMALLCTSTO29MW	1	1.5	2.2	1	1.5	2.2	1	1.5	2.2
MEDIUMCTS30TO65MW	0.5	0.8	1.7	0.5	0.7	1.7	0.5	1	2
MEDIUMLARGECS66TO134MW	2	2	3.3	2	2	3.3	2	2.3	3.4
LARGECS136TO180MW	3	5	6.6	2.5	4.3	6.6	4	5	6.8

*Data based on active cost-based offers within one standard deviation of the mean since, November, 2007.

**Analysis based on adding notification and startup times together first, then calculating the distribution.



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