

MRC Charge to OC
Maximum Notification and Startup Times for Capacity Units

Overview

- MRC was presented with a problem statement at the January MRC meeting
- OC charged with determining the operational / reliability requirements (only)
- Timeline is complete in February OC and March OC meeting timeframes
- Take to MIC as operational requirement 3/17 or 4/12
- MIC will tackle market issues associated with operational requirements

Approach:

- Use GAST M34 process to:
 - Problem Investigation
 - Review charter and charge explicitly w/ group including purpose, goal (single recommendation or multiple options), problem statement, deliverables, and deadlines
 - Educate and perform joint fact finding
 - Clarify/describe existing operations, procedures, policies, etc., related to the problem
 - Interest identification and exploration
 - Ask participants why/how the issue/topic is important to their organization (or not)
 - PJM should indicate if it has significant interests related to issue, what they are and why
 - IMM should indicate if it has significant interests related to issue, what they are and why
 - Refine evaluation criteria developed earlier to account for key interests surfaced during discussions
 - Identify proposal requirements (components) and potential options
 - Package options into comprehensive solutions

Timeline:

MRC Charge – January 19 – 10 am

OC Meeting – February 15 – 9:30 am

OC Conference Call – March 1 – 2 pm

OC Conference Call – March 4 – 2 pm

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OC Conference Call – March 11 – 1:30 pm

OC Meeting – March 15 – 9:30 am

Proposal Development:

| Consensus Design Criteria (or Component) | Consensus Importance | Brainstorm Potential Component Solutions | | | | | | | Notes | |
|--|----------------------|---|---|---|--|--|---|---|---|---------|
| | | A | B | C | D | E | F | G | | |
| 1 Maximum Startup Times | Medium | Tied to physical characteristics of the unit | Defined by unit class | Defined for each individual unit | Cold / Hot / Medium Startup based on how unit is layed up | Maximum COLD Start / best estimate | Needs to accommodate multi unit starts at a single plant. | | Allow updates to changes in physical characteristics | 1-C,E,F |
| 2 Maximum Notification Times | High | use markets database definition | Needs to accommodate multi unit starts at a single plant. | Retirements - affected by announcements or plan to announce | staffing issues (labor unions, holidays) includes fuel scheduling issues | at the end of this "phase" ready to start startup sequence | resource limited | Cold / Hot / Medium Startup based on how unit is layed up | market tool changes required; economically; at the end of this "phase" ready to start startup sequence; Must look out at least 4-5 days (through the weekend); generators need to be able to manage base load design units on a 7 day basis | 2-C,D |
| 3 "Exception" "Notice of Extended Notification" | Medium | | applies to notification times | exception based - PJM approval | Notification based (not exception) | at the end of this "phase" ready to start startup sequence | coming back from outages - blanket exception | | | 3-D |
| 4 Alerts For Readiness | High | Takes units from exception status | | | Zonal | | can be sub zonal | | Should target specific units based on economic value; are alerts private or public | 4-F |
| 5 Total MAX Startup & Notification Time (not to exceed) | Low | | 6 days notice prior to operating day | | 7 Documented Approved Exception? | | | | Discussion of 2 different types of cases at the extreme end of the exceptions; anything greater has a potential consequence or exception - who approves | 5-B,D |
| 6 Scheduling Tool Changes to accommodate rule change* | High | Must look out at least 7 days (through the weekend) | Must Make Choice to Move Units with long notifications to a readiness state | | Must look out at least 4-5 days (through the weekend) | | | | NOTE - May not be a component; capture local or transmission outage issues; Must Make Economic Choice to Move Units with long notifications to a readiness state; | 6-B |

No Decision Criteria are developed, as individuals will defer on the valuation (as to which potential component is better and Consensus Packaged Solution is: 1-C,E,F + 2-C,D + 3-D + 4-F + 5-B,D + 6-B
 Principal applies to non-consensus decisions (Tier 2), with another package selected as an alternate:

Key:

Yellow – Consensus Proposal

Blue – attributes of the requirement / component

White – option – not selected

Proposal:

1. Maximum Startup Times - Tied to physical characteristics of the unit:
 - a. Defined for each individual unit
 - b. Maximum COLD Start / best estimate
 - c. Needs to accommodate multi unit starts at a single plant
 - d. NOTE - Allow updates to changes in physical characteristics

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2. Maximum Notification Times - use markets database definition; staffing issues (labor unions, holidays) includes fuel scheduling issues; at the end of this "phase" ready to start startup sequence
 - a. Needs to accommodate multi unit starts at a single plant.
 - b. Should include "retirement" type units or at risk units based on age – could be units affected by announcements or plan to announce
 - c. Startup plus notification times should be less than 48 hours – normally – all others (see #3 below) will need notification
 - d. NOTE: market tool changes required; economically; tools need to look out at least 4-5 days (through the weekend); generators need to be able to manage base load design units on a 7 day basis
3. Notice of Extended Notification - applies to notification times; at the end of this "phase" ready to be at Maximum Notification sequence; coming back from outages - blanket exception
 - a. Notification based (not exception)
 - b. Nominally needed if startup plus notification times are more than 48 hours – normally
 - c. NOTE: Formerly referred to as exception "Exception"
4. Alerts For Readiness - Takes units from exception status back to Maximum Notification times; zonal implementation; similar to a "hot weather alert" – called to have units move from notification times (#3) to Notification times (#2)
 - a. can be sub zonal
 - b. NOTE: Should target specific units based on economic value; are alerts private or public
5. Total MAX Startup & Notification Time (not to exceed) –
 - a. 6 days notice prior to operating day*
 - b. Documented Approved Exception
 - c. NOTE: Discussion of 2 different types of cases at the extreme end of the exceptions; anything greater has a potential consequence or exception – approvals will be based on consequence determination (forced outage, removal from capacity, etc.)
6. Scheduling Tool Changes to accommodate rule change (s)
 - a. Must Make Choice to Move Units with long notifications to a readiness state
 - b. NOTE - May not be a component; capture local or transmission outage issues; Must Make Economic Choice to Move Units with long notifications to a readiness state

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*NOTE – An alternate / minority proposal was introduced to have the Total MAX Startup & Notification Time (not to exceed) – 72 hours prior to operating day

Table 1 - Unit examples

| Component | Example Unit #1 | Example Unit #2 | Example Unit #3 | Example Unit #4 | Notes |
|-----------------------------|-----------------|------------------------|------------------------|------------------------|---------------------------------------|
| 1 – Max Startup | 18 hours | 18 hours | 18 hours | 18 hours | |
| 2 – Max Notification | 20 hours | 48 hours | 72 hours | 192 hours | |
| 3 – Notice | None required | Required | Required | Required | |
| 4 – Alert | N/A | Needed to reduce to 48 | Needed to reduce to 48 | Needed to reduce to 48 | |
| 5 – Not to Exceed | N/A | N/A | N/A | Exception needed | May be forced outage or not capacity? |
| 6 – Scheduling Tool | N/A | Changes | Changes | N/A | |