Standard Capacity Product Refresher

Jenny Pedersen
Client  Training Consultant
Customer Services Department
Agenda

- Overview
- Establishing the Availability Standards
- Determining Resource’s Monthly Availability
- Reporting Outages and De-rates in SLIC
- Using Resource Adequacy Availability Management (RAAM) Tool for Unit Substitution
- Financial Implications of Performance Metrics
Disclaimer

- All values used in this presentation are for illustrative purposes only and do not represent actual values used for establishing market awards, LMPs or any other payment or charge.

- Actual LMPs will be based on actual bids from Scheduling Coordinators and will be determined by the Market Software.
Standard Capacity Product Refresher

Overview
Standard Capacity Product Overview

- Established a standard product definition for Resource Adequacy (RA) Capacity
- Defined annual and monthly availability standards
- Created a standard method for evaluating performance from RA Resources
- Created performance incentives and non-availability charges
- Provided grandfathering clauses for existing RA contracts
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Establishing the Annual Availability Standard
Availability Standards are calculated annually to determine a Monthly Standard for the fleet.

Calculation of Availability Standard measures availability of the fleet based on amount of RA Sold and amount of RA Available over a 3 year period by evaluating 5 consecutive hours in a peak period.

Monthly Availability Standard has a performance tolerance range 2.5% above or below the Monthly Availability Standard.
Availability Standards for Compliance Year 2011
Effective January 1, 2011

- Availability Standard may be located on the ISO’s website at:
  
Availability Standards for Compliance Year 2011
Effective January 1, 2011

```
<table>
<thead>
<tr>
<th>Trade Month</th>
<th>Availability Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2011</td>
<td>97.68%</td>
</tr>
<tr>
<td>February 2011</td>
<td>97.73%</td>
</tr>
<tr>
<td>March 2011</td>
<td>96.10%</td>
</tr>
<tr>
<td>April 2011</td>
<td>94.60%</td>
</tr>
<tr>
<td>May 2011</td>
<td>95.00%</td>
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<tr>
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<td>96.95%</td>
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<tr>
<td>July 2011</td>
<td>96.03%</td>
</tr>
<tr>
<td>August 2011</td>
<td>95.98%</td>
</tr>
<tr>
<td>September 2011</td>
<td>96.24%</td>
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<tr>
<td>October 2011</td>
<td>97.62%</td>
</tr>
<tr>
<td>November 2011</td>
<td>96.48%</td>
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<tr>
<td>December 2011</td>
<td>97.97%</td>
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</tbody>
</table>
```
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Determining a Resource’s Monthly Availability Performance Metric
RA Resource availability is calculated monthly and measured against the Availability Standard for the Month

Availability is measured by:

- SLIC outage reporting use information for Forced and temperature-related ambient derates
- Use of unit substitution for RA Resources on outages/derates

Unit substitution may be used to meet capacity obligation for the calculation of the monthly availability metric

- Unit substitution may be requested in either the Day-Ahead or Real-Time
- Substitution requests are subject to rules associated with Local CAISO System and NRSSR resources.
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Requesting Unit Substitution

- Local RA Resources can only use Local resources
  - Real Time substitution must be pre-qualified
  - Day Ahead substitution may be pre-qualified or non pre-qualified

- CAISO System RA Resources can substitute Local or CAISO System resources
  - Real Time Substitution Not Allowed
  - Day Ahead may be pre-qualified or non pre-qualified

- NRSSRs RA Resources can substitute Local or CAISO System resources
  - Real Time Substitution Not Allowed
  - Day Ahead may be pre-qualified or non pre-qualified
## Standard Capacity Product Refresher
### Requesting Unit Substitution in Day-Ahead

#### Resource that is in an outage

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Dispatchable</th>
<th>3rd Party</th>
<th>Submission Time</th>
<th>Duration</th>
<th>Submission Time Restriction</th>
<th>Location</th>
<th>Dispatchable</th>
<th>Pre-Qualified</th>
<th>3rd Party Approved?</th>
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<tbody>
<tr>
<td>DA</td>
<td>Local</td>
<td>Yes</td>
<td>No</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local</td>
<td>Yes</td>
<td>Any</td>
<td>N/A</td>
</tr>
<tr>
<td>DA</td>
<td>Local</td>
<td>Yes</td>
<td>Yes</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local</td>
<td>Yes</td>
<td>Any</td>
<td>APPROVED</td>
</tr>
<tr>
<td>DA</td>
<td>Local</td>
<td>No</td>
<td>No</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local</td>
<td>Any</td>
<td>Any</td>
<td>N/A</td>
</tr>
<tr>
<td>DA</td>
<td>System</td>
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<td>No</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local or system</td>
<td>Yes</td>
<td>Any</td>
<td>N/A</td>
</tr>
<tr>
<td>DA</td>
<td>System</td>
<td>Yes</td>
<td>Yes</td>
<td>72 Hours</td>
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<td>No</td>
<td>72 Hours</td>
<td>Any</td>
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<td>Any</td>
<td>N/A</td>
</tr>
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<td>System</td>
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<td>Yes</td>
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<td>Any</td>
<td>By 6AM</td>
<td>Local or system</td>
<td>Any</td>
<td>Any</td>
<td>APPROVED</td>
</tr>
<tr>
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<td>NRSSR</td>
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<td>No</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local or system</td>
<td>N/A</td>
<td>Any</td>
<td>N/A</td>
</tr>
<tr>
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<td>NRSSR</td>
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<td>Yes</td>
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<td>NRSSR</td>
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<td>Any</td>
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</tr>
<tr>
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<td>NRSSR</td>
<td>N/A</td>
<td>Yes</td>
<td>72 Hours</td>
<td>Any</td>
<td>By 6AM</td>
<td>Local or system</td>
<td>N/A</td>
<td>Any</td>
<td>APPROVED</td>
</tr>
</tbody>
</table>
Real-Time substitutions must remain in effect for the remainder of the entire trade date plus the next trade date.

Annual pre-registration process to request pre-qualification for non-RA Resources of like kind through the RAAM Tool.

Resource parameters for pre-qualification:
- Substitute unit must be located on the same bus
- Must have similar operating characteristics
- Must be dispatchable according to ISO definition
<table>
<thead>
<tr>
<th>ID</th>
<th>Time</th>
<th>Location</th>
<th>Dispatchable</th>
<th>3rd Party</th>
<th>Submission Time</th>
<th>Duration</th>
<th>Submission Time Restriction</th>
<th>Location</th>
<th>Dispatchable</th>
<th>Pre-Qualified</th>
<th>3rd Party Approved?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RT</td>
<td>Local</td>
<td>Yes</td>
<td>No</td>
<td>Immediate</td>
<td>Any</td>
<td>T-75 Min Mkt (30 Min SLIC)</td>
<td>Local</td>
<td>Yes</td>
<td>Prequal</td>
<td>N/A</td>
</tr>
<tr>
<td>2</td>
<td>RT</td>
<td>Local</td>
<td>Yes</td>
<td>Yes</td>
<td>Immediate</td>
<td>Any</td>
<td>T-75 Min Mkt (30 Min SLIC)</td>
<td>Local</td>
<td>Yes</td>
<td>Prequal</td>
<td>APPROVED</td>
</tr>
<tr>
<td>3</td>
<td>RT</td>
<td>Local</td>
<td>No</td>
<td>No</td>
<td>Immediate</td>
<td>Any</td>
<td>T-75 Min Mkt (30 Min SLIC)</td>
<td>Local</td>
<td>Any</td>
<td>Prequal</td>
<td>N/A</td>
</tr>
<tr>
<td>4</td>
<td>RT</td>
<td>Local</td>
<td>No</td>
<td>Yes</td>
<td>Immediate</td>
<td>Any</td>
<td>T-75 Min Mkt (30 Min SLIC)</td>
<td>Local</td>
<td>Any</td>
<td>Prequal</td>
<td>APPROVED</td>
</tr>
</tbody>
</table>

No CAISO System Resources or NRSSR substitutions allowed in Real-Time. Unit substitution in Real-Time may only use prequalified (Local) resources.
Market Rules for Resources under Unit Substitution Requests

- Substituted units are subject to the same bidding and scheduling requirements of RA resources.
- Must submit an energy bid or schedule up to RA obligation in DAM IFM.
- Must provide A/S Offer up to certified capacity in DAM IFM for all products.
- Must provide A/S Offer up to certified capacity in RTM if submitting an incremental energy bid in RTM.
Summary

- Day-Ahead unit substitution requests:
  - Local resources must use Local resources for substitution
  - CAISO System resources may substitute Local or CAISO System resources
  - NRSSRs resources may substitute Local or CAISO System resources

- Real-Time unit substitution can only be performed by Local RA Resources using pre-qualified units

- Pre-qualified resources:
  - Are approved in an annual process
  - Must be located on the same bus
  - Have similar operating characteristics, and
  - Are dispatchable according to ISO definition
Quiz

True or False:

1. In the Day-Ahead timeframe, CAISO System RA Resources may use either Local or CAISO System resources for substitution.  
   True

2. In the Real-Time, only CAISO System RA Resources are allowed to request unit substitution.  
   False

3. In Real-Time, only pre-qualified resources may be used for unit substitution.  
   True

4. In the Day-Ahead, NRSSRs may use Local resources for substitution.  
   True
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Reporting Outages and Derates in SLIC
Reporting Forced Outages and De-rates in SLIC

- Reporting Forced Outages

- Resources with Pmax between 1MW and 10MW
  - Submit availability data for the calendar month
  - All Forced Outages must be submitted no later than 3 business days from the end of the month.
  - Does not have to submit Forced Outage data with 60-minutes of discovery
  - Does not have to submit a Forced Outage report within 2-days of event

- Temperature-Related Ambient De-rates

- Forced Outages and Unit Substitution

- Planned Outages versus Forced Outages
Reporting Outages and De-rates in SLIC

- Impacts that will affect Resource’s monthly capacity availability
  - Forced Outages
  - Temperature-related ambient de-rate
  - Use-Limited Resources under energy limit constraint

- Use-Limited Resources
  - Temperature-related ambient de-rate affects availability until energy limit constraint is reached
  - Energy limit constraint must be reported in SLIC using ambient outage card with energy limit constraint attribute enabled
  - Outage card ends when energy limit constraint ends
Summary – Reporting Outages and De-rates in SLIC

- Forced Outages and Temperature-Related Ambient De-rates affect monthly availability
- Unit substitution may be requested in the Day-Ahead or Real-Time Markets using the RA Availability Management tool
- Outage reporting required monthly for resources with $P_{max}$ between 1MW and 10MW
- Use Limited Resources should enable Use Limit Reached attribute as use limits are reached
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Using Resource Adequacy Availability Management (RAAM) Tool for Unit Substitution
Resource Adequacy Availability Management Tool (RAAM) versus SLIC

- RAAM is not SLIC and is not used to report outages
- Requires a digital certificate for access
- Use RAAM to:
  - Request New Unit Substitution
  - Request New Pre-Qualification
  - Determining status of requests
  - Download SCP Calculations for validation
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Request New Substitution
Key Concept: Unit Substitution for RA Resources

- Local RA Resources can only use Local resources
  - Real Time substitution must be pre-qualified
  - Day Ahead substitution may be pre-qualified or non pre-qualified

- Internal System RA Resources can substitute Local or internal System resources
  - Real Time Substitution Not Allowed
  - Day Ahead may be pre-qualified or non pre-qualified

- NRSSRs RA Resources can substitute Local or internal System resources
  - Real Time Substitution Not Allowed
  - Day Ahead may be pre-qualified or non pre-qualified
Request New Unit Substitution by Resource ID
Request New Unit Substitution by Outage

View Candidate Outages [optional, click arrow at right to expand, click table row to populate fields above]

<table>
<thead>
<tr>
<th>Outage ID</th>
<th>Short Description</th>
<th>Resource ID</th>
<th>SC ID</th>
<th>Outage Start</th>
<th>Outage End</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>Annual Maintenance</td>
<td>BEACHBALL_U1</td>
<td>1244</td>
<td>12/18/2007 14:00</td>
<td>12/31/2010 17:00</td>
</tr>
<tr>
<td>124685</td>
<td>Unit Modification</td>
<td>SANDLOT_4</td>
<td>1244</td>
<td>06/29/2009 08:00</td>
<td>12/31/2010 23:59</td>
</tr>
<tr>
<td>146529</td>
<td>Inspection</td>
<td>WINDLAND_2</td>
<td>1244</td>
<td>09/11/2010 00:00</td>
<td>09/17/2010 23:59</td>
</tr>
<tr>
<td>125542</td>
<td>Testing</td>
<td>FOREST_1</td>
<td>1244</td>
<td>07/26/2010 07:00</td>
<td>09/23/2010 17:00</td>
</tr>
</tbody>
</table>

*Select Substitute Resources [dbl-click row for detail, ctrl-click row to select]

Resource Details

Double-click resource for details

Proxy Request: [additional details required]
Request New Unit Substitution – Resources with No Capacity Available for Substitution

<table>
<thead>
<tr>
<th>Outage ID</th>
<th>Short Description</th>
<th>Resource ID</th>
<th>SC ID</th>
<th>Outage Start</th>
<th>Outage End</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>Annual Maintenance</td>
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<td>Unit Modification</td>
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</tr>
<tr>
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<td>Testing</td>
<td>FOREST_1</td>
<td>1244</td>
<td>07/26/2010 07:00</td>
<td>09/23/2010 17:00</td>
</tr>
</tbody>
</table>

RA Capacity information not available for third party resource.
Request New Unit Substitution –
Select Non-RA Capacity for Substitution

New Unit Substitution Request

- **Start Date:** 06/29/2009 08:00
- **End Date:** 12/31/2010 23:59
- **Resource ID:** Sandlot_4
- **Resource Description:** Unit Modification
- **Outage ID:** 124685

View Candidate Outages (optional, click arrow at right to expand, click table row to populate fields above)

<table>
<thead>
<tr>
<th>Outage ID</th>
<th>Short Description</th>
<th>Resource ID</th>
<th>SC ID</th>
<th>Outage Start</th>
<th>Outage End</th>
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<tbody>
<tr>
<td>123456</td>
<td>Annual Maintenance</td>
<td>BEACHBALL_U1</td>
<td>1244</td>
<td>12/18/2007 14:00</td>
<td>12/31/2010 17:00</td>
</tr>
<tr>
<td>124685</td>
<td>Unit Modification</td>
<td>SANDLOT_4</td>
<td>1244</td>
<td>06/29/2009 08:00</td>
<td>12/31/2010 23:59</td>
</tr>
<tr>
<td>146529</td>
<td>Inspection</td>
<td>WINDLAND_2</td>
<td>1244</td>
<td>09/17/2010 23:59</td>
<td></td>
</tr>
<tr>
<td>125542</td>
<td>Testing</td>
<td>FOREST_1</td>
<td>1244</td>
<td>09/23/2010 17:00</td>
<td></td>
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Select Substitute Resources [dbl-clk row for detail, ctrl-clk row to select]

<table>
<thead>
<tr>
<th>Resource ID</th>
<th>Resource Name</th>
<th>SC ID</th>
<th>SC Name</th>
<th>Sub. RA Cap (MW)</th>
</tr>
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<tbody>
<tr>
<td>DYNS_2</td>
<td>DYNOSAUR_2</td>
<td>1244</td>
<td>AJB1</td>
<td>15.00</td>
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<tr>
<td>DYNS_3</td>
<td>DYNOSAUR_3</td>
<td>1244</td>
<td>AJB1</td>
<td>15.00</td>
</tr>
<tr>
<td>SUBMAR 4</td>
<td>SUBMARIN 4</td>
<td>1244</td>
<td>AJB1</td>
<td></td>
</tr>
<tr>
<td>SUBMAR_5</td>
<td>SUBMARIN 5</td>
<td>1244</td>
<td>AJB1</td>
<td></td>
</tr>
</tbody>
</table>

Resource Details

- **Start Date:** 05/08/2009 00:00
- **End Date:** 12/31/2010 23:59
- **Contact Email:**
- **NDC (PMax):** 70.4
- **RA Capacity:**
  - RA Cap 55.0
  - Non-RA Cap 15.00

RA Capacity Information available for portfolio resources
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Request New Pre-Qualified Resources
For Local Resources
Key Concept: Pre-Qualified Resources

- Purpose of Pre-Qualification is to provide unit substitution in Real Time for Local RA resources only
- Resource parameters for pre-qualification:
  - Substitute unit must be located on the same bus
  - Must have similar operating characteristics
  - Must be dispatchable according to ISO definition
- May be used by internal System and NRSSR RA Resources in the Day-Ahead Timeframe only
Requesting Approval for New Pre-Qualification of Local Resource

Start Date: 09/24/2010 15:02
End Date: 09/30/2010 15:02

Resource Details:
Start Date: 08/07/2009 00:00
End Date: 12/31/2030 23:59
NDE (PMax): 176.72
Contact Email:  
Contact Name:  
RA Capacity: RA Cap 156.74
Non-RA Cap 9.06
Submit
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Checking Status of Submitted Requests for Unit Substitution
### Checking Approval for Substitution Request

#### Unit Substitution Requests [click row for details]

<table>
<thead>
<tr>
<th>ID</th>
<th>Orig Res ID</th>
<th>Orig SC ID</th>
<th>Substitute Resources</th>
<th>Description</th>
<th>Start Date</th>
<th>End Date</th>
<th>Mkt Time</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
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<td>SANDLOT_4</td>
<td>1244</td>
<td>SUBMICRON_6</td>
<td>Unit Modification</td>
<td>08/13/2010 09:00</td>
<td>08/18/2010 23:59</td>
<td>DA</td>
<td>PENDING</td>
</tr>
<tr>
<td>123456</td>
<td>BEACHBALL_U1</td>
<td>1244</td>
<td>DYNOSAUR_3</td>
<td>Maintenance</td>
<td>08/18/2010 00:00</td>
<td>08/18/2010 23:59</td>
<td>RT</td>
<td>PENDING</td>
</tr>
<tr>
<td>123459</td>
<td>SANDLOT_2</td>
<td>1244</td>
<td>SANDLOT_1</td>
<td>Maintenance</td>
<td>08/18/2010 13:58</td>
<td>08/20/2010 23:59</td>
<td>RT</td>
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</tr>
<tr>
<td>123460</td>
<td>SANDLOT_3</td>
<td>1244</td>
<td>SANDLOT_6</td>
<td>Maintenance</td>
<td>08/18/2010 14:02</td>
<td>08/19/2010 23:59</td>
<td>RT</td>
<td>PENDING</td>
</tr>
</tbody>
</table>
# Checking Approval for Substitution Request

## Details: Request 124685

### Original Resource

<table>
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<tr>
<th>Resource ID:</th>
<th>SANDLOT_4</th>
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</thead>
<tbody>
<tr>
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<td>SANDLOT_4</td>
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<tr>
<td>Resource SC ID:</td>
<td>1244</td>
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<tr>
<td>Resource SC Name:</td>
<td>AJB1</td>
</tr>
<tr>
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<tr>
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<td>6 MIN</td>
</tr>
<tr>
<td>Effectiveness Factor:</td>
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</tr>
<tr>
<td>NSRAI Resource:</td>
<td>No</td>
</tr>
<tr>
<td>Contact Name:</td>
<td></td>
</tr>
<tr>
<td>Contact Email:</td>
<td></td>
</tr>
<tr>
<td>RA Capacity:</td>
<td>From 08/01/2010 00:00 To 08/31/2010 23:59</td>
</tr>
<tr>
<td></td>
<td>RA Cap: 49.46</td>
</tr>
<tr>
<td></td>
<td>Non-RA Cap: 56.56</td>
</tr>
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### Substituted Resources [2]

<table>
<thead>
<tr>
<th>Resource ID:</th>
<th>SUBMICR6</th>
</tr>
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<tbody>
<tr>
<td>Resource Name:</td>
<td>SUBMICRON_6</td>
</tr>
<tr>
<td>Resource SC ID:</td>
<td>5726</td>
</tr>
<tr>
<td>Resource SC Name:</td>
<td>JRIES</td>
</tr>
<tr>
<td>Dispatchable:</td>
<td>No</td>
</tr>
<tr>
<td>Startup Time:</td>
<td>180 MIN</td>
</tr>
<tr>
<td>Effectiveness Factor:</td>
<td>1.0</td>
</tr>
<tr>
<td>Ramp Rate:</td>
<td>9.0</td>
</tr>
<tr>
<td>Local Capacity Area:</td>
<td>LA Basin</td>
</tr>
<tr>
<td>NSRAI Resource:</td>
<td>No</td>
</tr>
<tr>
<td>Contact Name:</td>
<td></td>
</tr>
<tr>
<td>Contact Email:</td>
<td></td>
</tr>
<tr>
<td>RA Capacity:</td>
<td>From 08/01/2010 00:00 To 08/31/2010 23:59</td>
</tr>
<tr>
<td></td>
<td>RA Cap: 27.07</td>
</tr>
<tr>
<td></td>
<td>Non-RA Cap: 39.37</td>
</tr>
</tbody>
</table>

### Substitute RA Capacity: 28.52

- NDC (PMax): 382.34
- NQC: 66.44

---

**Request Details**

- **Request Id:** 124685
- **Market Timeframe:** DA
  - **Start Date:** 08/13/2010 00:00
  - **End Date:** 08/18/2010 23:59
- **Outage Id:** 100007
- **Local:** No
- **Submission By:** JTrainer2
- **Submission Date:** 08/11/2010 13:25
- **Description:** TEST
- **Substitution Time Adequate:** Yes
- **Current Status:** PENDING
  - **Request Status Date:** 08/11/2010 13:25
  - **Request Status By:** RAAM System

**New Status:** PENDING

**Proxy Request:** [additional details required]
Standard Capacity Product Refresher

Checking Status of Pre-Qualification Nomination Requests
## Checking Status of Pre-Qualification Nomination Request

### Prequalification Requests [click row for details]

<table>
<thead>
<tr>
<th>ID</th>
<th>Orig Res ID</th>
<th>Orig SC ID</th>
<th>Substitute Resources</th>
<th>Description</th>
<th>Start Date</th>
<th>End Date</th>
<th>Status</th>
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</thead>
<tbody>
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<td>BEACHBALL_U1</td>
<td>1244</td>
<td>DYNAMITE_43</td>
<td>Maintenance</td>
<td>01/01/2011 00:00</td>
<td>01/02/2011 23:59</td>
<td>PENDING</td>
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<td>1244</td>
<td>SANDLOT_1</td>
<td>Maintenance</td>
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<td>01/04/2011 23:59</td>
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<tr>
<td>123460</td>
<td>SANDLOT_3</td>
<td>1244</td>
<td>SANDLOT_6</td>
<td>Maintenance</td>
<td>07/01/2011 16:05</td>
<td>07/20/2011 16:05</td>
<td>PENDING</td>
</tr>
<tr>
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<td>SANDLOT_2</td>
<td>1244</td>
<td>SANDLOT_3</td>
<td>Maintenance</td>
<td>07/29/2011 08:45</td>
<td>08/31/2011 08:45</td>
<td>PENDING</td>
</tr>
</tbody>
</table>
Checking Status of Pre-Qualification Nomination Request

- **Resource 1**
  - Resource ID: SANDLOT_2
  - Resource Name: SANDLOT_2
  - Resource SC ID: 1244
  - Resource SC Name: AJB1
  - Dispatchable: Yes
  - Startup Time: 600 MIN
  - Effectiveness Factor: 1.0
  - Ramp Rate: 6.4
  - Local Capacity Area: LA Basin
  - NRELRAI Resource: No
  - Contact Name: 
  - Contact Email: 

- **Resource 2**
  - Resource ID: SANDLOT_3
  - Resource Name: SANDLOT_3
  - Resource SC ID: 1244
  - Resource SC Name: AJB1
  - Dispatchable: Yes
  - Startup Time: 600 MIN
  - Effectiveness Factor: 1.0
  - Ramp Rate: 8.5
  - Local Capacity Area: LA Basin
  - NRELRAI Resource: No
  - Contact Name: 
  - Contact Email: 

- **Request Details**
  - Request ID: 123461
  - Market Timeframe: DA
  - Start Date: 01/01/2011 00:00
  - End Date: 01/02/2011 23:59
  - Submission By: BYouden
  - Submission Date: 07/23/2010 16:40
  - Description:
  - Substitution Time Adequate: Yes
  - Current Status: PENDING
  - Request Status Date: 07/28/2010 16:40
  - Request Status By: RAAM System

- **Proxy Details**
  - SC Request Date: 07/23/2010 16:40
  - SC First Name: First
  - SC Last Name: Last
  - SC Email: byouden@caiso.com
  - SC Description: desc
  - SC Attachment:

**New Status:** PENDING

[Save, Cancel]
Validating SCP Calculations
SCP Calculations

- SCP Calculations tab in the RAAM Tool provides access to the Hourly Availability Calculations used for Settlements Validation
- Must have access to see the calculations
- Participants have ability to download the data from the RAAM Tool for use in validating Unit Substitutions towards Monthly Resource Availability Metric
# SCP Calculations – Selecting the Period Start/End

## SCP Calculations

<table>
<thead>
<tr>
<th>Id</th>
<th>Period Start</th>
<th>Period End</th>
<th>Executed</th>
<th>Status</th>
<th>Comments</th>
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</thead>
<tbody>
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<tr>
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<tr>
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<td>08/24/2010 0200</td>
<td>PUBLISHED</td>
<td>T+1 Automated Run</td>
</tr>
</tbody>
</table>
Evaluating the Resources Used for SCP Calculation

- SANDLOT_1: SANDLOT_UNIT_1, AJB1, 1244
- SANDLOT_2: SANDLOT_UNIT_2, AJB1, 1244
- SANDLOT_3: SANDLOT_UNIT_3, AJB1, 1244
- SANDLOT_4: SANDLOT_UNIT_4, AJB1, 1244
- SANDLOT_5: SANDLOT_UNIT_5, AJB1, 1244
- SANDLOT_6: SANDLOT_UNIT_6, AJB1, 1244
- SANDLOT_7: SANDLOT_UNIT_7, AJB1, 1244
- SANDLOT_8: SANDLOT_UNIT_8, AJB1, 1244
Detailed information may be downloaded as Excel, CSV, PDF or XML
Detailed information may be downloaded as Excel, CSV, PDF or XML.
Detailed information may be downloaded as Excel, CSV, PDF or XML
Summary

- Unit substitution requests must be submitted using the RAAM Tool.
- Day-Ahead substitutions may be requested as follows:
  - Local RA Resources may only use Local Resources for substitution
  - Internal System RA Resources may use either Local or internal System Resources for substitution
  - NRSSRs RA Resources may use either Local or internal System Resources for substitution
- Real-Time substitution may only be requested by Local RA resources using resources that are Pre-Qualified
Summary

- Status of Substitution requests are available on the Substitution Tab
- Status of requests for Pre-Qualification Nomination are available on the Pre-Qualification Tab
- SCP Calculation tab is available only to those with access.
- SCP Calculation tab presents detailed resource substitution information used for settlement validation purposes.
Standard Capacity Product Refresher

Financial Implications of Performance Metrics
Using Monthly Performance Metric

- Monthly Resource Availability performance metric is evaluated using availability information from SLIC and Unit Substitution information from the RAAM Tool.

- Actual Resource Availability is compared with the Monthly Availability Standard for the fleet.

- Resources who perform above the 2.5% tolerance band are eligible to receive an Availability Incentive Payment.

- Resources who perform below the 2.5% tolerance band incur a Non-Availability Charge.
Calculating Non-Availability Charges and Availability Incentive Payments

- The SCP Training presented on the ISO website details the calculations for the Non-Availability Charges and Availability Incentive Payments.
- This training may be located at:
  - www.caiso.com > Participation > Training > Standard Capacity Product Overview
Standard Capacity Product Refresher

Questions??
Contact MarketTraining@caiso.com

Thanks for attending!