Waiving Loss Return Obligations During Oversupply Conditions

August 22, 2017
Topics

- Introductions
- Oversupply Conditions as of April 2017
- How Oversupply Management Protocol (OMP) is Billed
- History of Loss Waivers
- Loss Waiver Process
- Customer Proposal(s) for Volunteer Process
- Options to Avoid Mandatory Loss Obligation Waivers
- Summary and Next Steps
Introductions

- **Scope:**
  - How BPA implements the waiver of loss return obligations during oversupply conditions.

- **Why are we here?**
  - BPA has received many comments on the process for how it waives loss return obligations.
Introductions (continued)

- **BPA’s Objectives**
  - Share what has been done in 2017, why, and how things have evolved.
  - Discuss the loss waiver process.
  - Gain an understanding of the barriers preventing customers from using the volunteer process.
What Did the 2017 Oversupply Season Look Like in April?

- Red Bars are the previous years there has been generator displacement.

Average = 132 maf (1929-2008)
*2017 estimated from NWRFC April 30 ESP
Contributing to the Oversupply Problem:

- Unprecedented increase in NW volume since February 1st – nearly 43 Maf!
- California installed over 9000 MW more of metered solar since 2012 and had an above average snowpack
- AC intertie was derated a few times for maintenance
- The runoff shape was early, which resulted in nearly 80 GW-hrs of OMP through April 25th.

* 2017 data through April 25, 2017.
2017 Oversupply Management Protocol

**Water Year 2011**

- March: 0
- April: 507
- May: 111
- June: 34,476
- July: 11,495

Total: 53,961

**Water Year 2012**

- March: 11,744
- April: 3,885
- May: 8,861
- June: 86
- July: 29,387

Total: 53,961

**Water Year 2017**

- March: 24,948
- April: 57,963
- May: 5183
- June: 53,989
- July: 75,607

Total: 202,603

- Voluntary Loss Waiver MWh: 20,789
- Mandatory Loss Waiver MWh: 42,444
- Mandatory MWh: 139,370

*Implemented 4/28/17*

2011 (MWh)
- Voluntary: 507
- Displaced: 95,858
- Total: 96,365

2012 (MWh)
- Voluntary: 3,885
- Displaced: 50,076
- Total: 53,961

2017 (MWh)
- Voluntary: 20,789
- Mandatory*: 42,444
- Displaced: 139,370
- Total: 202,603

*Pre-decisional. For Discussion Purposes Only.*
History of Waiving Loss Obligations

- Why is waiving loss return obligations an OMP tool?
  - Attachment P of the BPA Open Access Transmission Tariff describes the requirements and procedures for implementing OMP.
    - Section 1 lists a number of tools BPA may use to reduce or avoid the need for generator displacement.
    - Waiving real power loss return obligations is one of those tools.
Less Displacement = Lower TDG and Lower OMP Costs

<table>
<thead>
<tr>
<th>Displacement MWh</th>
<th>Cost of Displacement</th>
<th>$/MWh</th>
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<tbody>
<tr>
<td>Displacement With Loss Waivers</td>
<td>139,369</td>
<td>$2,214,363</td>
</tr>
<tr>
<td>Displacement Without Loss Waivers</td>
<td>202,603</td>
<td>$3,250,401</td>
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<tr>
<td>Difference</td>
<td>63,234</td>
<td>$1,036,038</td>
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Credit of $1,036,038

Generators in BA

% Share of Use of Transmission System

Non-Federal Generator’s Share

Federal Generator’s Share

TOCA %*

*Modified Tier 1 Cost Allocation

Pre-decisional. For Discussion Purposes Only.
History of Waiving Loss Obligations

- Volunteer Policy
  - Prior to 2016, BPA relied solely on a volunteer process where resources contacted BPA to have their loss obligations waived during OMP conditions.
  - In 2016, BPA stated it would proactively call generators to solicit loss return waiver volunteers.
  - Heading into the 2017 season, BPA again evaluated the impact of the volunteer policy as a mitigating measure.
Why Explore Mandatory Waiving of Loss Obligations?

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<thead>
<tr>
<th></th>
<th>April</th>
<th>May</th>
<th>June</th>
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<tbody>
<tr>
<td>Total Off-Peak</td>
<td>76,344</td>
<td>101,664</td>
<td>100,146</td>
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<tr>
<td>Physical Losses (MWh)</td>
<td></td>
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<td></td>
<td>116,495</td>
<td>130,730</td>
<td>146,528</td>
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<tr>
<td>Total On-Peak</td>
<td></td>
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<tr>
<td>Physical Losses</td>
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</tbody>
</table>

| Total Off-Peak       | 88,974 | 115,248| 105,303| 114,172| 97,322 | 131,416| 100,145|
| Physical Losses (MWh)|        |        |        |        |        |        |        |
|                      | 112,794| 153,749| 144,451| 146,198| 125,175| 157,552| 188,417|
| Total On-Peak        |        |        |        |        |        |        |        |
| Physical Losses      |        |        |        |        |        |        |        |

| Total Off-Peak       | 79,187 | 109,863| 100,132| 120,077| 85,281 | 105,651| 93,914 |
| Physical Losses (MWh)|        |        |        |        |        |        |        |
|                      | 122,708| 157,772| 130,775| 156,748| 139,545| 161,523| 189,429|
| Total On-Peak        |        |        |        |        |        |        |        |
| Physical Losses      |        |        |        |        |        |        |        |

| Volunteered Losses   | 618    | 4,068  | 6,847  | 677    | 0      | 1,232  | 17,330 |
| Grand Total (MWh)    |        |        |        |        |        |        |        |
| Volunteered % of Total Obligation | 0.1%  | 0.5%   | 0.9%   | 0.1%  | 0.0%   | 0.2%   | 2.1%   |

2011 – is for 6/23, 7/3, and 7/4
2012 – is for April and May
2013 – is for 5/17/13 to 5/20/13. There were no voluntary returns in June of 2013.
2014 – is for 6/3/14. There were no voluntary returns in May of 2014.
2015 – No voluntary returns waived in 2015.
2016 – is for 4/22/16 to 4/26/16. There were no voluntary returns in May or June of 2016.
2017 – is for April, May, and June. The March volunteers quantity was 3,459 MWh. The season total was 20,789 MWh.

See Notes below
2017 Outreach and a Shortened Comment Period

- BPA met one-on-one with customers that made up over 80% of all in-kind real power loss returns.
- The OMP business practice was posted for comment on March 30. By then the 2017 oversupply season was well underway and had the potential to be severe (See slide 5 and slide 6).
  - Because of these conditions BPA needed to be fast and agile.
  - BPA used its standard process to change its business practice, although it shortened the comment period to fit the timeline.
Loss Obligation Waiver Process

- What BPA took away from the initial customer outreach.
  - Seek volunteers as early as possible in the preschedule day.
  - Add a preschedule notification process to resources who elected to be loss waiver volunteers.
  - In the notification include specific date and hour or block of hours BPA is seeking volunteers.
Loss Obligation Waiver Process (see handout)

4) Notification - Date & hours sent to Volunteer list
2) Customers & Trade
   Negotiate & confirm
   Date/Hour/MWO we need
3) Loss tags continuing to flow could be notified
   via real-time
4) OAS
   Waiver
   process
5) Real-Time - additional requests for volunteers
6) Loss schedules are curtailed in full for the full hour
Loss Obligation Waiver Process

- Evolution of the process since going live.
  - BPA’s intent is to provide the volunteer notification as early in the preschedule day as possible (attempting to beat the 12 pm time in the business practice).
  - BPA has moved back the time that it initiates the mandatory waiver:
    - Prior to the flow of energy, to;
    - Prior to the close of the scheduling window at xx:40.
  - The current policy preserves BPA’s ability to waive loss obligations should operational conditions change after the close of the scheduling window.
Loss Obligation Waiver Process

- BPA has begun evaluating the establishment of a “no later than time” for mandatory waiver of loss obligations.
  - Risks to establishing a “no later than time”:
    - The market may still be actively trading.
    - Slice schedules are not in until xx:30; therefore, load requirements are not fully known.
    - Conditions may change after the established time causing displacement that could have been avoided.
  - What are customer thoughts?
Current Options to Avoid Mandatory Loss Obligation Waivers

- Volunteer
- Elect Financial Returns
  - Loss return elections can be changed 4 times per fiscal year.
  - Election changes require a 60 day notice.
  - The energy price is the simple monthly average of Intercontinental Exchange (ICE) Mid-Columbia Electricity Price Index, Firm On Peak (excludes Sundays and NERC holidays) plus 15%.
How Can BPA Improve the Process?

- How can BPA increase volunteer participation?
  - What is not working with the volunteer process?
- Customer proposals for the volunteer process?
Summary and Next Steps

- Recap of key takeaways
- Please provide additional comments by September 22, 2017.
  - Email to techforum@bpa.gov
- BPA will host a follow up conference call in early December 2017