NON-TREATY STORAGE AGREEMENT

“Non Treaty Storage – history and current project focus”

Presenter: Jim Gaspard
WHAT IS THE NON-TREATY STORAGE AGREEMENT?

A commercial agreement between BC Hydro and Bonneville Power Administration (BPA) that provides further coordination of Kinbasket and Arrow reservoir, beyond that which is provided by the Columbia River Treaty.
COLUMBIA RIVER TREATY
NON-TREATY - THE DIFFERENCE

Treaty:
- International Treaty
- Entities: BC Hydro (BCH), Bonneville Power Administration (BPA) and the US Army Corp of Engineers (COE)
- 15.5 million acre feet (MAF) of storage operated under a set of rules (at Mica, Arrow, and Duncan)

Non-Treaty Storage Agreement:
- Bilateral agreement between BCH and BPA
- An enabling agreement that provides for up to 5 MAF of storage operated by mutual agreement (at Mica, but also impacts Arrow)
STORAGE AT MICA-ARROW

**Kinbasket Reservoir**
- Treaty Storage (7.0 MAF)
- Non-Treaty Storage (5.0 MAF)
- Unusable Storage (8.0 MAF)

**Arrow Reservoir**
- Treaty Storage (7.1 MAF)

1 MAF = top 10 feet at Kinbasket
1 MAF = top 8 feet at Arrow
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1961-64</td>
<td>Columbia River Treaty signed and ratified.</td>
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<td>1969</td>
<td>Arrow Reservoir filled for first time</td>
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<td>1973-76</td>
<td>Kinbasket (Mica) Reservoir filling</td>
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<td>1984</td>
<td>Original NTSA signed: 2 MAF of storage release possible</td>
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<td>1990</td>
<td>Expanded NTSA signed: 5 MAF included, with 4.5 MAF of storage release possible</td>
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<td>2004</td>
<td>June 30 - Expiration of NTSA release provisions. Storage was 15% full. Refill requirements remained in effect for seven years</td>
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<td>2010</td>
<td>NTSA storage refilled to 90% full</td>
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<tr>
<td>2011</td>
<td>June 30 - NTSA storage must be 100% full</td>
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1990 Non-Treaty Storage Agreement

• Mica Account Volume: 5 MAF
  – 0.5 MAF empty (could be filled by mutual agreement).
  – 4.5 MAF of Active Storage split between BPA and BCH

• Other Accounts:
  – 0.25 MAF at Arrow (used in early 1990’s)
  – 1.0 MAF at Revelstoke (option for reliability)

• Restrictions on Activity:
  – Enabling Agreement (activity by mutual agreement), except
    • 2 kcfs release right for each party from September through April.
2003-2005 Operation of Kinbasket/Arrow

- 2003 - 2005 characterized by exceptionally low summer reservoir levels:
  - Kinbasket 2003: Max summer refill of 2442 feet
  - Arrow 2005: Max summer refill of 1426 feet
- Caused by combination of:
  - Proportional Draft in Treaty
  - End of life issue with 1990 NTSA
Objectives: To secure an agreement with the US that will:

- Optimize additional power and non-power benefits for BC Hydro
- Improve control of Kinbasket/Arrow reservoir levels
- Support the system capability to meet existing Columbia Water Use Planning objectives.
- Extend to maximum of 2024, with short notice termination to protect from negative implications of sudden regulatory or other changes.

Renegotiations Status:

- Preliminary dialogue
- If agreement is reached, it will likely be in early 2011