



Columbia Basin Regional Advisory Committee

Provincial Columbia River Treaty Review
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Nelson, BC

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Ministry of
Energy and Mines



Objectives

- BC Treaty and review recap
- Overview of BC decision
- US process
- Next steps

Columbia River Treaty

- Significant flooding around the Columbia in 1948 and growing US power demand after WWII led to the desire for a water management agreement between Canada and the US
- Main objective: power and flood control in both countries
- Treaty was signed in 1961 and ratified in 1964.



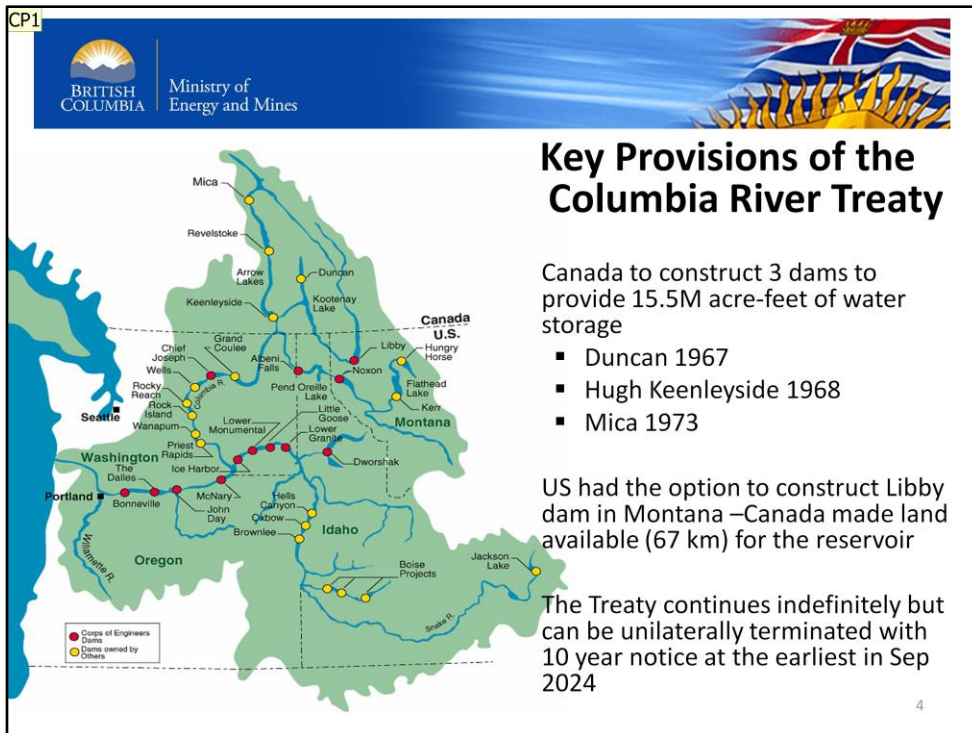
Diefenbaker and Eisenhower
signing the Treaty in 1961



Treaty and Protocol ratified
and proclaimed by Pearson
and Johnson in 1964

3

- Studies, negotiations and project selection took over 20 years with the primary objective of maximizing the benefits of power and flood control.
- The Treaty was signed in 1961 and ratified in 1964 for a couple of reasons.
- Ratification in Canada delay due to the need to:
 - Negotiate **Canada - BC Agreement** to transfer benefits and obligations to BC
 - Negotiate sale of power benefits for 30 years to Pacific Northwest utilities



- Non-Treaty Storage extra 5 MAF
- Assured flood storage 8.45 MAF



Treaty Provisions

- Canada operates 15.5 Maf for optimum power generation downstream in Canada and US
- US delivers to Canada one-half the estimated US power benefits (Canadian Entitlement - CE)
- The first 30 years of CE were pre-sold for an up front price of US\$254.4 million
- The US bought 8.45 Maf of “primary” or assured flood control up to 2024 for \$64.4 million
- Regardless of Treaty continuation or termination, assured flood control ends in 2024 and flood control changes to “Called Upon”



5

- The first 30 years of CE was sold by BC to a consortium of US utilities for an up front price of US\$254.4 million
- CE based on Annual Operating Plan 5 year ahead calculation of 50% of potential power production due to coordination of Treaty flows at the border to maximise power production.
- Current CE approx. worth about \$100-200M/yr
- The US bought 8.45 Maf of “primary” flood control up to 2024 for \$64.4 million
- Called Upon is not well defined: disagreement on which dams, when and how.

CRT Review

- Coordination of provincial ministries and federal agencies
- Technical studies
- Consultation with First Nations
- Engagement of Basin residents
- Recommendations to BC Cabinet



Studies

- Economic, environmental, social, financial, legal and hydrological analyses
- System modeling for effects from Treaty terminate, continue, enhance:
 - optimal power
 - fisheries
 - wildlife and vegetation
 - recreation



Studies (cont'd)

- Environmental discussion paper
- Study on benefits/impacts of Treaty in BC
- Benefits of Treaty coordination in U.S.
- Impacts of Libby operations on Kootenay River bank erosion and dyking infrastructure



First Nations Consultation

- Consultation to meet Crown's obligations under the Canadian Constitution
- Ktunaxa, Shuswap and Okanagan First Nations
- Separate Government-to-Government engagement to:
 - Identify aboriginal rights
 - Determine potential impacts on rights based on decision scenarios (terminate, continue, enhance)
 - Identify other interests and potential ways to address them



First Nations Consultation

Key issues:

- Historical and ongoing impacts
- Ecosystem function – fish, wildlife
- Archeological/cultural sites
- Revenue sharing
- Governance

Public Consultation

- 4 rounds of community workshops over 18 months
- Conference March 2013
- Social media: website, blog, Facebook, Twitter
e-newsletter, YouTube
- Youth events
- Sounding Board
- Active engagement at municipal/regional district
political level - CRT Local Governments' Committee



Public Consultation Report

- Released September 28th
 - Checking in to see if people felt heard
- General agreement on key issues
- Support for path forward
- Historical impacts still alive
- Appreciative of consultation process





Public Engagement

Key issues:

- Historical/footprint issues
- Impacts from current operations
- Opportunities to enhance environmental values
- Infrastructure needs and economic development



Provincial Decision

- Released March 13th, 2014
- Decision to continue the Treaty and seek improvements within the existing framework
- 14 principles to guide BC in discussion of any potential treaty changes
- Good feedback

Provincial Decision - Principles

High level themes :

- Goal is to create and share benefits equitably
- There is a lot of value from upstream regulation provided by Canada to a broad range of U.S. interests
- Treaty operations continue to impact Canadian basin residents and regional interests

15

- The Treaty has brought significant benefits to both countries and we believe the value of upstream regulation is only going to increase over time.
- Today these benefits extend to other values that the Treaty didn't explicitly recognize, such as ecosystem – salmon enhancement, water supply, navigation, recreation and others.
- For example, in dry periods Canadian storage is drafted first for power purposes but this provides additional benefits to other interests in US
- There continue to be impacts to Canadian interests from ongoing Treaty operations - some reservoirs fluctuating by as much as 155 ft
- Still very strong feelings around the Treaty in the Canadian Columbia Basin.
- Value of benefits needs to be assessed in today's terms. The Treaty is not just about power and flood control anymore – it touches all aspects of trans-boundary water management
- Valuation of US benefits is underway; need to address this in a rational manner – not positional or emotional
- Although there are benefits associated with the Treaty, there were also many negative impacts due to historic dam and reservoir construction: these issues remain top of mind for many Columbia Basin residents, old and new.
- Impacts are ongoing due to reservoir operations to meet Treaty requirements, e.g. operations at Arrow Lakes Reservoir primarily serving US Flood Control needs

Provincial Decision - Principles

- Changing flood control in 2024 is a step backwards
 - BC is open to discussing alternatives
- Improve Libby coordination to incorporate BC interests
- Climate change will make collaboration even more important



16

- Changing flood control provisions to an ad hoc system creates unnecessary impacts from the planned storage and flood control operations that the U.S. currently enjoys
- Impacts and risks from lowering U.S. reservoir levels to fisheries, water supply, navigation; risk of not achieving refill
- Disagreement centers on: at what flood risk, which reservoirs, when to call
- BC interpretation based on wording in Treaty
- Predicted climate change impacts on hydrology: total annual inflow in BC basin same or higher; in U.S. 20-40% less total annual inflow predicted. Some climate change scientists predict that 60% of Columbia River flow will come from BC in future

Provincial Decision - Principles

- Treaty should be adaptable to changing conditions
- Treaty has flexibility to incorporate ecosystems and further improvements should be explored within and outside of the Treaty
- Salmon migration not a Treaty issue. Each country responsible for its own infrastructure
- Commitment to continued engagement with First Nations and the public

17

- Adaptive management should be included in Treaty discussions with enough certainty for planning purposes but with a realization that things can change: new science, different economic and energy conditions, changing societal values
- Changes to Treaty operations have been made to benefit ecosystems and further improvements can be investigated – no need to change the Treaty framework
- Upstream regulation will become even more important to mitigate climate change impacts – extreme events, floods and droughts
- Continued engagement is a priority for First Nations, local governments and the public – e.g. Columbia Basin Regional Advisory Committee

Further Modelling: Treaty Continue Plus – Stabilized mid Arrow (& Flood Control)



Objective – investigate different ways of maintaining a stable lower level and reducing Arrow Reservoir fluctuation and in a Treaty Continues Scenario.

This is a learning process:

- 1425 ft elevation using just Canadian Flex
- Range 1420-1430 ft using just Canadian Flex
- Add current Supplemental Operating Agreement
- Add in use of Non-Treaty Storage
- Maybe increase Supplemental Operating Agreement Volume
- Add Flood Control – allow to fill in 20% of years with highest forecast runoff volume

- Test runs are sequential – not all operating considerations modelled at once

US Firm Energy – Ernst and Young study



Firm Energy

- Energy that can be relied upon in low water conditions
- Reduction in firm energy must be replaced with new resources

Objective – determine reduction in US Firm Energy and Dependable Capacity if the Treaty is terminated.



US Process

- The US Entity led the Treaty review through:
 - Sovereign Review Team
 - Public listening sessions
 - Stakeholder engagement
- Regional recommendations made to US State Department in December 2013
- Internal federal interest review will lead to a confidential recommendation to the Secretary of State for a negotiating mandate



US Entity Recommendation

- Would like to 'modernize' Treaty by:
 - Minimizing payments of the Canadian Entitlement – 10-50 % of current
 - More water for ecosystem function and other interests (irrigation, industrial)
 - Similar level of flood risk post-2024



US Process

- US has signaled that it wishes to negotiate changes to the Called Upon Flood Control provisions
- Not clear if US will add anything else
- No US decision is expected in near future
- US has indicated that State Department will lead negotiations with Canada - BC will be there

22

- US Army Corps of Engineers does not want to increase flood risk US decision is not expected before mid-term elections
- Negotiating process, if any, is not defined nor developed

Next Steps

- Conduct rigorous valuation of full suite of U.S. benefits
- Pursue further modeling of potential B.C. ecosystem options and analysis of social, environmental and economic benefits and impacts
- Work with Canada on developing a collaborative negotiation framework
- Ensure that U.S. stakeholders and legislators understand BC perspectives

23

- Gain a further understanding of U.S. perspectives and next steps in U.S. process

Thank you

