

# History of The Columbia River Treaty

## **HISTORY OF THE COLUMBIA RIVER TREATY**

The 1964 Columbia River Treaty (Treaty) is an international agreement between Canada and the United States of America for the cooperative development and operation of water resources for the upper Columbia River.

Though the Treaty was ratified in 1964, its foundation was laid well before in the 1940s and was born out of the need to address growing demands for energy and flooding concerns.

## **Hydroelectric Development on the Columbia River**

Hydroelectric development of the Columbia River in the United States began with the construction of Rock Island Dam completed in 1932. A year later, the U.S. government began construction of Bonneville Dam, followed by the Grand Coulee Dam in 1934. These economy-stimulating projects increased employment during the Great Depression. Bonneville Dam primarily provided power generation and navigation while Grand Coulee initially provided irrigation and power and later provided flood control. Power generated at Grand Coulee is used to pump water from the Columbia River to a series of reservoirs for irrigation in central Washington.

When the Grand Coulee power plant came into service in 1942 there was little demand for the power. The huge potential for power development on the Columbia River, however, soon attracted World War II industries. In addition, the economy and population of the Pacific Northwest grew

rapidly during the postwar period. This spurred the construction of a number of American dams, both Federal and non-Federal, on the Columbia main stem and its many tributaries.

These projects, however, provided little storage. A coordinated development plan was envisioned by Canada and the U.S. as the preferred method to address flooding concerns within the basin and growing demands for energy.

## **International Joint Commission Studies, 1944-1959**

In 1944, Canada and the United States asked the International Joint Commission (IJC), an organization formed by both countries under the 1909 Boundary Waters Treaty, to investigate development of the water resources of the Columbia basin in Canada. The commission established the International Columbia River Engineering Board to conduct studies in the basin.

## **Columbia River Flood in 1948**

In 1948, a major Columbia River flood devastated communities along the Columbia River, killed several dozen people, and made thousands homeless. The resulting Columbia Basin Study by the IJC took 15 years to complete and investigated a number of different dam sites on the Columbia-Kootenay system above the border, as well as alternative development plans. At the same time, the U.S. Army Corps of Engineers



updated its master resource plan which had provided the basis for U.S. Federal development on the Columbia. Both studies recommended the development of upriver storage on the Columbia and its tributaries for economic and flood benefit to both countries.

In addition to the technical studies, the IJC recommended principles for determining and apportioning benefits for the cooperative use of storage. In developing the principles, the commission recognized that the development and operation of Canadian storage would help regulate water flows. This would also allow a greater amount of useable energy and a higher level of dependable capacity to be generated at American power plants than was possible without Canadian storage.

This would ultimately enable the United States to serve greater power demands. At the same time, the regulation would greatly reduce peak river flows during the spring run-off (snow melt) months and provide significant flood protection to river basin occupants in Canada and the U.S.

### **Negotiations**

On February 11, 1960, direct negotiations began between Canadian and United States representatives regarding the selection, construction and joint use of specific projects. Talks proceeded rapidly and, on January 17, 1961, the

Canadian Prime Minister and the President of the United States signed the Columbia River Treaty (Treaty). The Treaty required Canada to provide 15.5 million acre-feet of storage by building three dams: Duncan, Arrow (later renamed Hugh Keenleyside) and Mica. The Treaty also allowed the United States the option to build Libby Dam. In exchange for providing and operating the Treaty storage projects, Canada received an upfront payment for 50 per cent of the estimated future flood control benefits in the U.S. through 2024 and entitlement to one-half of the estimated average usable energy that could be generated at existing downstream hydroelectric generating stations in the United States as a result of the operation of the Canadian Treaty storage.

Initially there was a disagreement related to the construction of the dams in British Columbia. To enable the Treaty to go ahead and in recognition of the costs of developing these hydroelectric facilities, the Canadian government and B.C. signed an agreement addressing the issues of authority and responsibility.

Canada and the U.S. agreed to share the benefits of cooperative water management equally. Canada agreed to sell the first 60 years of guaranteed flood control to the U.S. Canada also received an entitlement to one-half of the estimated downstream power benefits generated in the United States. The first 30 years of this entitlement was also sold to a consortium of utilities in the United States.

The Columbia River Treaty between Canada and the United States has brought significant flood control and power benefits to both countries through coordinated river management for the last 40 years.



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### Implementing the Treaty

On September 16, 1964, President Lyndon Johnson, Prime Minister Lester Pearson and Premier W.A.C. Bennett met at the International Boundary at Blaine, Washington and Surrey, B.C., to acknowledge legislative ratification of the Columbia River Treaty and its Protocol, which amplified and clarified certain Treaty aspects.

### Controversy in Canada over the Columbia River Treaty

In Canada, the years between the Treaty signing in 1961 and its ratification in 1964 were marred with controversy that went beyond the dispute between the federal and provincial governments. Development and ratification of the Treaty occurred with little regional consultation, and there was much debate in British Columbia regarding the location of the dams and the desirability of the Treaty itself. The IJC International Columbia River Engineering Board had studied a number of different configurations, each of which resulted in different valleys being flooded. Debate centred on the tradeoffs between flooding the East Kootenays or flooding the Arrow Lakes. Regional interests generally preferred the Conservation Plan, which limited the flooding in the Arrow Lakes Valley to the existing high-water levels, but did not provide the 15.5 million acre feet of storage deemed necessary to appropriately limit U.S. flooding downstream.

In September 1961, a series of Water License Hearings were held throughout the region that would be impacted by the flooding. The hearings were, however, limited to water licence issues instead of discussing the Treaty itself. In the spring of 1964, a public hearing on the Treaty and Protocol was held in Ottawa

by the Standing Committee on External Affairs.

The Standing Committee's role was to either accept or reject the Treaty and Protocol after hearing from the interveners, and no changes to the Treaty (already signed by the Canadian Prime Minister and the U.S. President and ratified by the U.S. Senate) were to be considered. In comparison to Canada, there was much less controversy in the U.S. regarding the Treaty, as post-ratification discussions were largely confined to whether the U.S. had paid too much for the benefits.

In Canada, additional controversy surrounded the flooding caused by the filling of the four Treaty reservoirs. In particular, the filling of both the Arrow Lakes reservoir and the Kootenai reservoir flooded fertile farm land and important wildlife habitats, inundated many ancient Native archeological sites and artifacts, and displaced a large number of long-term residents.

### Columbia Basin Trust

The Columbia Basin Trust (CBT) was established in 1995, in recognition of the long term impacts in the region most directly affected by the creation of the Columbia River Treaty dams.

The CBT was endowed with \$295 million from the Province of B.C. (about five per cent of Canadian Entitlement). In addition, the Columbia Basin Trust receives \$2 million per year between 1996 and 2012. The Province further committed to transfer \$250 million to Columbia Power Corporation (CPC), the CBT's Joint Venture Partner in power projects in the Basin. Income from the investments is being spent on social, economic and environmental benefits for the residents of the Basin.



Additionally, B.C. transferred equally to CBT and CPC the expansion water rights of the Brilliant and Waneta dams. This is worth approximately \$56 million.

## ECONOMIC IMPACTS OF THE TREATY

The direct benefits of the Treaty in Canada and the United States include:

- ▶ flood protection,
- ▶ an increase in power generation at downstream facilities,
- ▶ assured winter flows for power,
- ▶ at-site generation (at Mica and Libby Dam), and
- ▶ cash payments and Entitlement power for Canada (currently at approximately \$300 million annually).

In addition, there are a number of other indirect economic benefits and developments made possible by the Treaty. For example, other hydropower resources in both Canada and the U.S. Northwest were developed although none are mentioned in the Treaty. In British Columbia, the Revelstoke Dam(1984) and the Kootenay Canal plant (1975) were both made possible by the regulation provided by upstream Treaty storage.

More recently, a joint venture between the CPC and the CBT constructed the 185 MW Arrow Lakes Generating Station utilizing the elevation and storage provided by Hugh Keenleyside Dam, 35 years after the storage dam was originally completed. The Brilliant Expansion Project owned by the same two organizations was also made possible by the upstream Libby and Duncan Treaty Dams.

Arguably, the Pacific Intertie was also an important development which evolved concurrent with the Columbia River Treaty. Both of these large infrastructure projects relied on each other. The Intertie may have been the prime catalyst in getting the Treaty ratified and implemented in its present form. The Intertie assured that the Canadian Entitlement could be resold in the California market during the early years of the Treaty implementation when British Columbia and the U.S. Pacific Northwest had no need for the additional power.

The sale of the Canadian Entitlement provided the justification for the Pacific Northwest-Southwest intertie and paid for its original construction. The intertie remains a vital component of the western connected grid, providing enhanced reliability and power trading benefits to western Canada and the western U.S. The Treaty also spurred the development of the U.S. Pacific Northwest Coordination Agreement, which coordinates the operation of U.S. projects of the Pacific Northwest and takes advantage of improved water flows from Canada.

The low electricity rates enjoyed both in British Columbia and the United States' Pacific Northwest are due in no small measure to coordination benefits provided by the joint development and operation of hydroelectric projects within the Columbia basin, and the Pacific Northwest-Southwest intertie made possible by the Columbia River Treaty. The Treaty has provided significant benefits on both sides of the border, and remains the standard against which other international water coordination agreements are compared.