

## **ADMINISTRATOR'S DECISION RECORD**

### **NON-TREATY STORAGE AGREEMENT WITH BC HYDRO**

#### **1. DECISION**

This document supports a decision by the Administrator of the Bonneville Power Administration (BPA) to enter into an agreement (the 2012 Non-Treaty Storage Agreement [2012 NTSA]) with the British Columbia Hydro and Power Authority (BC Hydro). The 2012 NTSA provides for additional use of existing storage space on the Columbia River in Canada for increased value to the region. The 2012 NTSA does not require any particular operation of the storage space but provides the opportunity for both BPA and BC Hydro (jointly, the Parties) to shape flows within existing downstream requirements and utilize the additional flexibility to create power and nonpower benefits for the parties and the region. This flexibility is expected to provide additional power benefits for the federal system, downstream mid-Columbia projects, and BC Hydro. The 2012 NTSA fulfills an objective called for in NOAA Fisheries 2008/2010 Biological Opinion on the Federal Columbia River Power System (FCRPS) to seek a long-term agreement on use of non-Treaty space in Canada to provide benefits to Endangered Species Act (ESA) listed fish. The 2012 NTSA allows for coordinated use of non-Treaty storage in Canada to shape flows within the year for fisheries benefits, and provides up to an additional half million acre-feet water to benefit fish in the lowest water conditions.

#### **2. BACKGROUND**

##### **a. Non-Treaty Storage and Relationship to the Columbia River Treaty**

Coordination of the Pacific Northwest and BC Hydro systems began in 1964 with ratification of the Columbia River Treaty (Treaty). Under the Treaty, Canada was required to construct and operate 15.5 million acre-feet (MAF) of storage in Canada at Mica, Arrow, and Duncan projects. The United States was allowed to construct 5 MAF of storage at Libby Dam. BC Hydro designed and built Mica dam to store more water than the 7 MAF required under the Treaty. As a result, an additional 5 MAF of usable storage is available at Mica.

This extra storage is referred to as non-Treaty storage and is not operated under the terms of the Treaty. The Treaty limits use of non-Treaty storage to actions that do not reduce Treaty flood control and power benefits. Within that constraint, BC Hydro has used the storage space for its benefit by redistributing water among its reservoirs. BPA access to this storage is obtained only through negotiation of operational agreements that provide mutual benefits to the BPA and BC Hydro. Absent an agreement, the benefits of releasing water from Arrow across the Canada-U.S. border cannot be achieved.

Beginning in the mid-1990's, Biological Opinion objectives included seeking use of storage in Canada to improve flows for fisheries in the U.S. through use of both Treaty and non-Treaty storage. Under the Treaty, the U.S. and Canada have developed Treaty supplemental operating agreements within the operating year to provide additional flow

augmentation for U.S. fisheries in exchange for trout spawning and whitefish protection downstream of Arrow in Canada. Most typically this results in storage of 1 MAF of water in Treaty space during the winter for release in the May-July period. These agreements do not provide any ability to shape Treaty flows from one operating year to the other, from July into August for example, or for additional water in a dry year. These annually negotiated agreements will only be successful to the extent that mutual benefits can be obtained for both Canada and the U.S. In order to have greater flexibility to shape flows from Canada, access to non-Treaty storage is needed.

b. Prior Agreements

BPA and BC Hydro signed the first long-term non-Treaty storage agreement (NTSA) in 1984 to provide mutual energy benefits and to address a dispute over the initial filling of Revelstoke reservoir. The 1984 NTSA included access to 1 MAF of non-Treaty storage each for BPA and BC Hydro. In 1990, BPA and BC Hydro expanded the agreement to use 4.5 MAF of the storage continuously and extended the termination date from 1993 to 2003 (later extended to 2004). Companion agreements with some of the owners, operators, and power purchasers from five non-federal generating projects on the Columbia River were also developed under both prior long-term agreements.

Non-Treaty storage provides additional storage needed to shape flows from Canada both within the year and between years, consistent with the Treaty. Because non-Treaty storage may not be operated to reduce power and flood control benefits, BPA and BC Hydro seek opportunities to provide power as well as non-power benefits under non-Treaty storage agreements. During the term of the 1990 NTSA, that long-term agreement provided terms under which arrangements to shape flows through the spring and summer periods could be developed.

Following expiration of release provisions under the 1990 NTSA in 2004, short-term stand-alone agreements were negotiated, when possible. Such agreements were developed each year from 2006 through 2011 with the amount and shape of water stored and released coordinated in-season with fisheries managers. All of the seasonal agreements involved storing water in the spring period when flows were higher and releasing water later in the summer when flows were lower. The amount of water stored and released depended on the water conditions including the seasonal flow volume and shape. This operation was considered beneficial for fish and also provided power benefits due to the higher summer electricity prices compared to those in the spring.

In 2010, as refill of accounts under the 1990 NTSA neared completion, BPA and BC Hydro agreed to seek a new long-term NTSA that would provide flexibility to both Parties. Such an agreement could provide greater power and non-power benefits, including fisheries benefits, than could be achieved through continued use of annual seasonal agreements.

c. Mid-Columbia Participants

The 2012 NTSA is not expected to result in companion agreements with any of the mid-Columbia participants. Actions under the 2012 NTSA with respect to downstream parties are addressed under the 1997 Pacific Northwest Coordination Agreement.

d. Negotiation of 2012 NTSA

BPA held several meetings with federal agencies, states, and tribes to solicit input for negotiating a new long-term NTSA and to report on progress during the negotiations with BC Hydro.

The feedback BPA received during these meetings was considered by BPA in discussions with BC Hydro. During these discussions, BPA and BC Hydro developed non-binding terms for negotiating an NTSA. These terms were captured in a term sheet that was released for public review in the U.S. and Canada. BPA held a series of open house meetings in the region to provide information and answer questions related to the 2012 NTSA terms. BPA held public meetings in Spokane, Boise, Portland, and Seattle. In addition, BPA conducted two conference calls with customers, met with tribes and other interested groups, and published information in the BPA Journal. Written information, including a Fact Sheet and Key Messages also were provided to designated BPA staff to assist them in informing public interest groups, power utility groups and customers, state and local officials and Northwest delegation members about the NTSA Term Sheet and draft contract language. BPA accepted public comments on the draft contract for a 10-day period in March 2012; there were no comments submitted that opposed the contract language.

During outreach efforts, most questions related to one of two general topics; 1) how the 2012 NTSA would create power benefits for the region and for BC Hydro, and 2) how the provisions related to fisheries benefits would work, specifically the BPA dry water provisions. During meetings and calls, questions were answered and additional information was provided, when requested.

Staff from the Shoshone Paiute Tribes of the Duck Valley Indian Reservation raised concerns regarding the level of environmental analysis that would be conducted for the 2012 NTSA under the National Environmental Policy Act (NEPA). BPA environmental staff, NEPA Compliance Officer, and BPA's lead negotiator met with the Shoshone Paiute Tribes and other interested Upper Snake River Tribes to follow up on concerns raised and answer additional questions regarding the 2012 NTSA. BPA has conducted environmental review of the 2012 NTSA in accordance with the U.S. Department of Energy NEPA implementing regulations (please see Section 5. NEPA Analysis of this decision record).

BPA and BC Hydro drafted the 2012 NTSA consistent with the Term Sheet made public in May 2011. The 2012 NTSA Final draft contract was made available for public review and comment on March 7, 2012.

### **3. PUBLIC REVIEW AND COMMENT**

BPA provided 10 days to allow public review and comment on the draft 2012 NTSA, which closed March 16, 2012. BPA received one comment from the Springfield Utility Board (SUB). SUB expressed concern over whether the 2012 NTSA could potentially and unintentionally impact and/or interfere with BPA's Environmental Redispatch and Oversupply efforts. SUB believes any lost revenues associated with the 2012 NTSA should be redistributed among BPA customers.

BPA appreciates SUB's concern; however SUB's concern is misplaced. Rather than adversely impacting BPA's efforts to address Environmental Redispatch and Oversupply, the 2012 NTSA is expected to provide additional flexibility that can help manage and potentially improve conditions with respect to Environmental Redispatch and Oversupply. The 2012 NTSA will provide additional flexibility to reduce flows and spill during periods when dissolved gas levels caused by spill exceed state standards. This flexibility will be used to help manage oversupply problems. Overall, the 2012 NTSA is expected to produce power benefits on the federal system, providing an economic benefit to BPA's customers and, in accordance with the Treaty, must be operated so that the power and flood control benefits of Treaty operating plans are not reduced.

### **4. SUMMARY OF AGREEMENT**

The 2012 NTSA (contract 12PG-10002) will replace both the 1990 long-term NTSA (contract DE-MS79-90BP92754), which fully expired in January 2011, and the September 2011 non-Treaty storage "Bridge" agreement (contract 11PB-21385) which expires March 30, 2012. The NTS "Bridge" agreement was designed to transition to the 2012 NTSA upon execution. The 2012 NTSA expires on Sept. 15, 2024, unless either party terminates under the early termination provisions.

Like previous non-Treaty storage agreements, and consistent with the requirement of the Treaty regarding non-Treaty storage use, operations under the 2012 NTSA will be conducted in a manner that does not reduce flood control and power benefits under the Columbia River Treaty. Absent an agreement such as this 2012 NTSA, BPA does not have access to non-Treaty storage.

The 2012 NTSA will provide opportunities to achieve benefits for ESA-listed fish by providing flexibility for BPA to store water when it is abundant and exceeds fish requirements in the spring and then release that water in the summer to provide water when Columbia River flows are low. This operation benefits fish by providing needed summer flows and also provides power benefits by increasing hydro generation when it is needed to meet summer loads. In the driest water conditions, the proposed terms will allow BPA to release water in the spring to provide additional water for fish.

The 2012 NTSA will also provide additional flexibility to reduce flows and spill during periods when dissolved gas levels (caused by spill) exceed state standards and to reduce or increase flows to move generation into higher value periods.

Under terms of the 2012 NTSA:

- BPA and BC Hydro each have continuing access to 1.5 MAF of active storage.
- BC Hydro may make available from time to time recallable accounts of 1 MAF each for BPA and BC Hydro.
- With the exception of limited firm release rights by both BPA and BC Hydro during dry water conditions, all water transactions are by mutual agreement and are coordinated on a weekly basis.
- BPA has firm release rights of up to 0.5 MAF of water releases in spring of years within the lowest 20 percent of water conditions if not used in the prior year.
- BC Hydro benefits from the energy value of generation changes at downstream U.S. federal hydro projects that result from its water transactions
- BC Hydro's benefits are either delivered as energy at the B.C./U.S. border or are financially settled with the exception of BC Hydro's firm energy benefits, which are always delivered to the border with all transmission costs paid by BC Hydro.

BPA compensates BC Hydro for headlosses on the BC Hydro system resulting from BPA's non-Treaty storage use. As with the current non-Treaty storage "Bridge" agreement, no energy value is associated with BPA water transactions under the 2012 NTSA.

BC Hydro water transactions are converted to energy values using the federal downstream projects' daily conversion factor and an agreed daily flat mid-C index price, limited to minimum on-peak (HLH) and off-peak (LLH) prices of \$0.00. If BPA's policy changes such that BPA participates in negative markets, this minimum price provision will be re-visited. The energy values are tracked and cumulated over time as an energy benefit. The benefit may be delivered as energy upon request by the party owed by coordinating energy deliveries on a weekly basis, up to 300 MW, uniformly on light load hours. Unless otherwise agreed, any remaining energy benefit will be settled financially in September each year.

## **5. NEPA ANALYSIS**

### **a. NEPA Evaluation**

BPA has reviewed the 2012 NTSA for potential environmental effects that could result from its implementation, consistent with NEPA, 42 U.S.C. § 4321, et seq. Based on this review, BPA has determined that the 2012 NTSA falls within a class of actions that normally do not require environmental assessments or environmental impact statements and are excluded from further NEPA review pursuant to U.S. Department of Energy NEPA implementing procedures, which are applicable to BPA. More specifically, the 2012 NTSA falls within Categorical Exclusions B4.4 and B4.5, found at 10 CFR 1021, Subpart D, Appendix B. The B4.4 categorical exclusion involves actions of "[p]ower marketing services and power management activities (including, but not limited to, storage, load shaping and balancing, seasonal exchanges, and other similar activities), provided that the operations of generating projects would remain within normal operating limits." The B4.5 categorical exclusion involves actions of "[t]emporary adjustments to river operations to accommodate day-to-day river fluctuations, power demand changes, fish and wildlife conservation program requirements, and other external events, provided

that the adjustments would occur within the existing operating constraints of the particular hydrosystem operation.” The environmental clearance memorandum that documents the categorical exclusion analysis and determination for the 2012 NTSA will be posted to BPA’s website at:

[http://efw.bpa.gov/environmental\\_services/categorialexclusions.aspx](http://efw.bpa.gov/environmental_services/categorialexclusions.aspx)

## **6. ALTERNATIVES CONSIDERED**

### **a. Status Quo**

Under the Status Quo, BPA would seek to negotiate seasonal agreements with BC Hydro for non-Treaty storage use for fisheries and other benefits. Specific agreement terms would be negotiated in season by mutual agreement. Typically these agreements have been for spring storage and summer release.

### **b. Implement the Proposed 2012 NTSA**

The 2012 NTSA provides for long-term coordination and use of non-Treaty storage. BPA and BC Hydro would coordinate use of 1.5 MAF each of active storage on an ongoing basis under terms of the 2012 NTSA. BPA would gain firm rights to 0.5 Maf of water in the driest 20<sup>th</sup> percentile of water conditions, as described in NOAA’s 2008/2010 Biological Opinion on the FCRPS, provided a dry year release has not occurred in the previous year and there is water in BPA’s Active account. The 2012 NTSA also provides additional operational flexibility for power and non-power purposes including shaping flows from spring to summer to benefit U.S. fish. Accounting mechanisms are very similar to those used in recent short-term non-Treaty storage agreements with BC Hydro, however there are additional provisions for energy deliveries during the year and an option for financial settlement of obligations at the end of the year. The terms of the 2012 NTSA are consistent with the objectives under which BPA was to seek a long-term NTSA described in the NOAA Fisheries 2008/2010 Biological Opinion on the FCRPS.

### **c. No Action**

Under the No-Action Alternative, there would be no negotiation of either short- or long-term non-Treaty storage agreements in the future.

## **7. DECISION FACTORS**

### **a. Economic Factors**

The greatest economic benefits to be gained under the 2012 NTSA result from operation of BPA’s 1.5 MAF Active Account. The NTSA will provide flexibility to shape flows to better meet operational and marketing objectives. It is expected that operation of non-Treaty storage would result in federal power benefits of about \$8 million per year, with additional benefits for downstream mid-C project owners and participants and BC Hydro. BC Hydro also achieves power benefits within its own system by increasing the flexibility and space to re-balance reservoir operations within Canada.

Energy deliveries under the NTSA are generally limited to 300 MW in light load hours and are designed to minimize transmission costs. It is expected that energy deliveries to BC Hydro will be made on transmission that is purchased for delivery of the Canadian Entitlement under the Treaty, but which is unused during most light load hours. Under the 2012 NTSA, all deliveries may be made on non-firm transmission and will not require additional firm transmission purchases.

**b. Operational Factors**

The 2012 NTSA will provide additional operating flexibility on BPA's system that would otherwise terminate with the NTS "Bridge" Agreement on 30 March 2012. Absent a new NTSA, weekly flows from Canada are established under the Treaty with limited flexibility to mutually agree to alternative and mutually-beneficial operations. The NTSA will allow additional shaping of flows into the U.S. for both power and non-power purposes beyond that afforded under the Treaty, including shaping within the operating year and between operating years.

**c. Environmental Factors**

1. Biological Opinion

The 2012 NTSA fulfills an objective called for in the NOAA Fisheries 2008/2010 Biological Opinion on the FCRPS to seek a long-term non-Treaty storage agreement on the use of non-Treaty space in Canada to provide benefits to ESA-listed fish (Reasonable and Prudent Alternative (RPA)) Action 12. The 2012 NTSA provides the opportunity to shape flows within the year for fish benefit and provides up to an additional 0.5 MAF of water in the spring to benefit fish in lowest 20<sup>th</sup> percentile of water conditions, if not used in the prior year. This is consistent with the objective included in RPA Action 14, Dry Water Year Operations to explore opportunities to shape non-Treaty storage water to benefit ESA-listed fish in dry years.

In addition, RPA Action 13 required BPA to coordinate with other Federal Agencies, States and the region's Tribes prior to any negotiations with BC Hydro to obtain ideas and information on possible points of negotiation and to report on major developments during negotiations. As described above in Section 2, BPA has met the coordination and inform requirements.

2. Additional Environmental Benefits

In addition to providing flow benefits for fisheries during low and average water conditions, the NTSA may help reduce dissolved gas levels during high water conditions. One of the advantages of a long-term agreement is the ability to shape water from high flow years and periods, into lower flow periods and into low and average flow years. This can help reduce dissolved gas levels in very high flow conditions.

Because the NTSA does not require a specific operation, the flexibility it provides can be used to meet other non-power objectives that may occur in the future.

#### **d. Statutory Authority**

BPA has broad statutory authority to enter into agreements for greater operational flexibility.<sup>1</sup> Pursuant to this authority, the BPA Administrator has discretion to enter into ‘such contracts, agreements, and arrangements . . . upon such terms and conditions and in such manner as he may deem necessary’ to fulfill BPA’s statutory purposes.<sup>2</sup> BPA has exercised this authority by entering into numerous operational agreements, including predecessor long-term and short-term agreements to the 2012 NTSA.

##### *Equitable Treatment*

BPA has a responsibility to protect, mitigate, and enhance fish and wildlife “in a manner that provides equitable treatment for such fish and wildlife with the other purposes for which such system and facilities are managed and operated.”<sup>3</sup> BPA meets this responsibility on a system-wide basis, and not necessarily in every distinct transaction.<sup>4</sup>

In coordination with the Army Corps of Engineers and Bureau of Reclamation, BPA provides equitable treatment on a system-wide basis through its protection, mitigation and enhancement of fish and wildlife consistent with both the Northwest Power Council’s Fish and Wildlife Program and meeting responsibilities under the Endangered Species Act to avoid jeopardizing listed species and adversely modifying or destroying designated critical habitat, and enabling their recovery.

The 2012 NTSA will further equitable treatment in several ways. For all types of water years it provides operating flexibility on BPA’s system to allow for shaping for non-power objectives, including fisheries benefits, within the operating year and between operating years. The 2012 NTSA also provides up to an additional 0.5 MAF of firm rights to water in the spring of dry water years, if not used in the prior year, to augment fish flows. In addition to providing flow benefits for fisheries, the 2012 NTSA may help reduce dissolved gas levels during high water conditions. One of the advantages of a long-term agreement is the ability to shape water from high flow years and periods, into lower flow periods and into low and average flow years. This can help reduce dissolved has levels in very high flow conditions.

## **8. CONCLUSION**

The 2012 NTSA has economic benefits to the Pacific Northwest, BPA, and BC Hydro. The 2012 NTSA has operational and environmental benefits as described in Section 7. It will provide 0.5 MAF of water in the spring in the driest 20<sup>th</sup> percentile of water conditions (if not

---

<sup>1</sup> See generally: The Bonneville Project Act, 16 USC 832; The Federal Columbia River Transmission System Act, 16 USC § 838; The Regional Preference Act 16 USC §837; and The Pacific Northwest Electric Power Planning and Conservation Act 16 USC §839

<sup>2</sup> 16 USC 832a(f)

<sup>3</sup> 16 USC 839b(h)(11)(A)

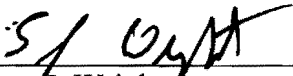
<sup>4</sup> Northwest Environmental Defense Center v BPA, 117 F.3d 1520 (9<sup>th</sup> Cir. 1997).



used in the previous year), a benefit that is not available under short-term seasonal agreements. It will provide additional flexibility and certainty for shaping flows through the spring and summer period and it will provide additional flexibility for shaping flows outside the April-August period and from year to year. All projects will continue to operate within their normal operating limits and, except for very modest and limited release rights in dry water conditions, either BPA or BC Hydro may limit transactions to protect non-power needs.

For the reasons stated above, BPA has decided to proceed with the Non-Treaty Storage Agreement, BPA Contract No. 12PG-10002 with BC Hydro.

Issued in Portland, Oregon.

  
\_\_\_\_\_  
Stephen J. Wright  
Bonneville Power Administration  
Administrator and Chief Executive Officer

March 23, 2012  
Date