

From: [Nikolejsin, Dave MNGD:EX](#)
To: [Sanderson, Melissa EMPR:EX](#); [MacLaren, Les EMPR:EX](#); [Haslam, David GCPE:EX](#)
Subject: FW: Rio Tinto Kemano Backup Announcement
Date: Tuesday, December 12, 2017 9:50:12 AM
Attachments: [image007.png](#)

fyi

From: Egan, Marion (RTA) [<mailto:marion.egan@riotinto.com>] **On Behalf Of** Manderson, Gareth (RTA)

Sent: December 12, 2017 9:46 AM

To: Nikolejsin, Dave MNGD:EX ; Meaghan McCann (Meaghan.mccann@gov.bc.ca)

Cc: Dobbin, Kevin (RTA)

Subject: Rio Tinto Kemano Backup Announcement



Dear Mr. Nikolejsin, Deputy Minister – Ministry of Energy Mines and Petroleum

I am pleased to personally share with you the news that the Rio Tinto Board has approved the US\$473.6M investment to complete the Kemano Second Tunnel (T2) Project.

Construction is expected to begin in Spring 2018 with some early works beginning as soon as possible in preparation. Fulfilment of the T2 project will ensure a sustainable and long-term power supply for the Kitimat smelter and certainty that Rio Tinto's operations will continue to support the economy in BC. This investment will enhance BC Works' position as a world-leading producer of low carbon aluminium through environmentally sustainable hydropower.

The second tunnel will create a back up to the original tunnel that was built over 60 years ago. This will allow us to conduct maintenance work without shutting down our operations and ensuring we can continue to responsibly manage the Nechako Watershed reservoir system. The tunnel will connect to the existing power station with no new generators being built. The T2 project does not require the use of any additional water than what is already allocated in our water license.

The T2 project is expected to reach completion by the end of 2020. Be rest assured that we have made considerable effort these past few years to ensure we have the most appropriate design for the project – in terms of reducing environmental impacts, ensuring cost effectiveness, and maximizing local benefits.

Frontier Kemper Aecon has been appointed as the main contractor to deliver the majority of the construction scope and will be responsible for hiring any subcontractors and employees. While much of the work will be highly specialized, we are working with the main contractor to ensure local First Nations, communities and businesses that are competitive and meet requirements have the opportunity to be involved.

Rio Tinto sees the T2 project as another opportunity to ensure that our operations benefit the local regions in which we operate.

I would like to take this opportunity to thank you for your continued support in Northwest BC. I sincerely value the partnership that our respective organizations have developed and look forward to working with you to ensure that the communities in which we live and work realize their full potential. Please don't hesitate to contact me personally if you have any questions or

wish to discuss this exciting project further.

Best regards,



Gareth Manderson

General manager – British Columbia Works, Atlantic Operations, Aluminium



Rio Tinto

As pioneers in mining and metals, we produce materials essential to human progress.

Kitimat, BC, V8C 2H2 Canada

T: s.22 M: +1 s.22

gareth.manderson@riotinto.com <http://www.riotinto.com>

From: [Sanderson, Melissa EMPR:EX](#)
To: [Nikolejsin, Dave MNGD:EX](#); [MacLaren, Les EMPR:EX](#); [McNish, James EMPR:EX](#)
Subject: Fwd: Follow-up meeting request | First Nations Major Projects Coalition
Date: Friday, December 15, 2017 1:27:31 PM
Attachments: [FNMPC to Premier re follow up meeting.pdf](#)
[ATT00001.htm](#)

Can you review this request and provide information

Sent from my iPhone

Begin forwarded message:

From: Niilo Edwards <executivedirector@fnmpc.ca>
Date: December 15, 2017 at 1:20:47 PM PST
To: premier@gov.bc.ca, ABR.Minister@gov.bc.ca, geoff.meggs@gov.bc.ca,
"Sas, Jonathan IRR:EX" <jonathan.sas@gov.bc.ca>, jessica.d.wood@gov.bc.ca,
"Sanderson, Melissa MEM:EX" <melissa.sanderson@gov.bc.ca>,
EMPR.Minister@gov.bc.ca
Cc: adam.olson.mla@leg.bc.ca, Sharleen Gale <sharleen.gale@fnnation.ca>,
Willie Blackwater <willie.blackwater@gitsegukla.net>, Corrina Leween
<cleween@cheslatta.com>, Jackie <jackie.thomas@saikuz.com>, Larry Nooski
<lnooski@nadleh.ca>, s.22 >,
tjack@cheslatta.com
Subject: Follow-up meeting request | First Nations Major Projects Coalition

Good afternoon,

On behalf of the Major Projects Coalition Board of Directors, please see the attached letter requesting a follow-up meeting with Premier Horgan, Minister Fraser, and Minister Mungall during the Natural Resources Forum being held January 17-18, 2018 in Prince George.

Thank you for your consideration.

Sincerely,

Niilo Edwards
Executive Director
First Nations Major Projects Coalition
Direct: (778) 875-0169
www.fnmpc.ca

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Dave Nikolejsin, Deputy Minister

II ISSUE: Rio Tinto Alcan operational changes and second tunnel completion

III BACKGROUND:

The Kemano generating station (KMO), which is supplied with water from the Nechako Reservoir, is owned and operated by Rio Tinto Alcan (RTA) and provides electricity to RTA's aluminum smelter in Kitimat. Under BC Hydro's 2007 Electricity Purchase Agreement (EPA) with RTA, RTA is obligated to sell all KMO electricity above the smelter load to BC Hydro and BC Hydro is obligated to purchase all KMO electricity above the smelter load up to the ability of the transmission system to receive the electricity.

The sale of electricity to BC Hydro is divided into two categories:

- Tier 1 is a guaranteed quantity of electricity that BC Hydro can schedule.
 - It is a fixed quantity that RTA cannot change once the final smelter load under the EPA is established.
 - It is currently priced at (\$2017) \$88.16/megawatt hour (MWh), escalating at 50% CPI (Consumer Price Index).
- Tier 2 is the remaining electricity and it can be scheduled by RTA.
 - It is a variable quantity, which can change from year to year based on water conditions, actual smelter load, changes to reservoir operations, and KMO improvements.
 - It is currently priced at (\$2017) \$64.44/MWh, escalating at 100% CPI, and adjusted for time of delivery.

s.17

IV DISCUSSION:

In September 2016, RTA informed BC Hydro of its intentions to ^{s.21} _{s.21} BC Hydro was advised of further changes to the model and operations in November 2017. The changes in operations include ^{s.17,s.21} _{s.17,s.21}

RTA is also building a second tunnel between Kemano and the Nechako Reservoir, with an estimated in-service date of the end of 2020. Construction on the \$473.6 million (USD) project is expected to begin in spring 2018. While the new tunnel will connect the reservoir to the existing power station with no new generators being built, RTA estimates s.17,s.21

Table 1 provides details on the EPA cost impact of the changes. BC Hydro continues to work with RTA to understand the nature of the changes and the cost impacts. BC Hydro will refine these estimates as additional information comes available and suggest that revised information will be available in early 2018.

Table 1: RTA Improvements and BC Hydro Rates Plan Impacts

	Incremental energy	Cost	Net cost ¹ (net of market sales)	Net Cost Over Rates Plan Period (F2019-F2024)
Operational Changes	s.17,s.21			
Tunnel 2 Completion				
Total				

V CONCLUSION:

The estimated cost impact of the operational changes and the second tunnel to BC Hydro due to increased energy sales over the remaining Rates Plan period (F2019-F2024), net of market sales, s.17,s.21. These impacts would start following the 2020 in-service date of the second tunnel and the estimated incremental impact to BC Hydro would be approximately s.17,s.21 per year net of forecast market sales. This is equivalent to a s.17,s.21 rate increase based on BC Hydro's current rates, and therefore may place pressure on rates starting in F2021. s.13

DRAFTED BY:
Scott Cutler
778-698-7256

APPROVED BY:
Katherine Rowe, Dir, GRB ✓
Kathy Eichenberger, A/ADM, EAED ✓

¹ Assumptions include: all additional incremental energy is delivered to BC Hydro; deliveries are flat across the year; estimates are based on the average, not median; and a high level market forecast was used. In addition to the above, cost estimates will vary based on factors such as actual reservoir inflows, smelter load, and RTA's operational decisions.

**MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES**

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Minister Michelle Mungall

II ISSUE: Meeting with First Nations Major Project Coalition – Kenney Dam Cold Water Release Facility

III KEY POINTS

- The Carrier Cheslatta Nation (CCN) and Nechako Environmental Enhancement Fund (NEEF) Management Committee have identified benefits to developing a water release facility at the Kenney Dam, and the CCN have previously asked that BC Hydro be required to negotiate an electricity purchase agreement.
- In addition to the CCN this proposal is now being supported by the Nadleh Whut'en, Saik'uz and Stelat'en First Nations. ^{s.14}
s.14
- While a water release facility is expected to have environmental and social benefits, it could also have potential negative environmental impacts to downstream fish habitat, and raise water licensing challenges as Rio Tinto has primary water rights over the management of the Nechako reservoir.
- A previous CCN economic feasibility study for the project showed anticipated power costs (up to \$150 MW/hr in 2013 dollars) far exceeding the cost of other renewable sources.

s.16

IV BACKGROUND:

In the 1950s, the Carrier Cheslatta people were relocated when the Kenney Dam was built on the Nechako River, creating the Nechako Reservoir and diverting the watershed's flow from the Nechako River to Alcan's (now Rio Tinto's) Kemano power project. The diversion of water for the Kemano project significantly decreased the flow of water to the lower reaches of the Nechako River, while a spillway constructed at Skins Lake to send excess water and cooling flows back to the Nechako River is blamed for erosion in

downstream Cheslatta Lake that has washed away an estimated 60 Carrier Cheslatta graves.

Subsequent studies have suggested that a water release facility at Kenney dam can help rehabilitate the Cheslatta watershed, but that this project would require more than \$375 million in capital funding. The project would not be economically viable without an Electricity Purchase Agreement (EPA) with BC Hydro for power generated by a hydro-electric facility located at the water release facility. The CCN have been advised on several occasions that the costs of an EPA were too high for the value of the power.

V DISCUSSION:

This project could generate significant renewable power. The CCN estimate that the 44 megawatts project would generate between 173 and 182 gigawatt-hours of firm energy, per year, at a cost of up to \$150 per megawatt hour (MWh) over 40 years. The project would also generate an unknown amount of non-firm power. In low water years this project would have a reduced capability to generate non-firm power.

Due to BC Hydro's surplus, it is not clear that this power is needed outside of low water years. Unless market prices or domestic demand increase, BC Hydro could lose about \$20 million per year selling the excess in the markets, creating an approximate 0.4 percent upward pressure on electricity rates. It would also set an unattractive precedent as there are a number of other power developers whose projects have not proceeded due to BC Hydro's surplus.

The CCN highlighted potential environmental benefits from a water release facility at Kenney Dam. Such a facility would restore the flows to a 9 kilometer dry section of the Nechako River and limit further erosion and flooding damage to Cheslatta Lake from flood and temperature management water releases through the Skins Lake Spillway. However, extreme floods would still send flows from the Skins Lake Spillway into Cheslatta Lake and total flows to the Nechako River would not return to pre-Kemano volumes s.13,s.16

s.13,s.16

A water release facility carries risk of further environmental impact. Silt deposited at the Cheslatta Fan, where the Cheslatta system merges with the Nechako reservoir, could be disturbed by water coming from the Kenney Dam, causing fish impacts downstream.

Mitigating this risk would add additional costs to the project, s.13
s.13

DRAFTED BY:
Kathy Eichenberger
250-953-3362

APPROVED BY:
Les MacLaren, ADM, EAED
Dave Nikolejsin, DM

**MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES**

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Minister Michelle Mungall

II ISSUE: Meeting with First Nations Major Project Coalition – Kenney Dam Cold Water Release Facility

III KEY POINTS

- The Carrier Cheslatta Nation (CCN) and Nechako Environmental Enhancement Fund (NEEF) Management Committee have identified benefits to developing a water release facility at the Kenney Dam, and the CCN have previously asked that BC Hydro be required to negotiate an electricity purchase agreement.

In addition to the CCN this proposal is now being supported by the Nadleh Whut'en, Saik'uz and Stellat'en First Nations. The latter two FNs are in litigation with Rio Tinto over impacts from the Nechako reservoir. The Province is also implicated in the litigation.

- While a water release facility is expected to have environmental and social benefits, it could also have potential negative environmental impacts to downstream fish habitat, and raise water licensing challenges as Rio Tinto has primary water rights over the management of the Nechako reservoir.

- A previous CCN economic feasibility study for the project showed anticipated power costs (up to \$150 MW/hr in 2013 dollars) far exceeding current Electric Purchase Agreement targets.

s.16

IV BACKGROUND:

In the 1950s, the Carrier Cheslatta people were relocated when the Kenney Dam was built on the Nechako River, creating the Nechako Reservoir and diverting the watershed's flow from the Nechako River to Alcan's (now Rio Tinto Alcan) Kemano power project. The diversion of water for the Kemano project significantly decreased the flow of water to the lower reaches of the Nechako River, while a spillway constructed at Skins Lake to

send excess water and cooling flows back to the Nechako River is blamed for erosion in downstream Cheslatta Lake that has washed away an estimated 60 Carrier Cheslatta graves.

Subsequent studies have suggested that a water release facility at Kenney dam can help rehabilitate the Cheslatta watershed, but that this project would require more than \$375 million in capital funding. The project would not be economically viable without an Electricity Purchase Agreement (EPA) with BC Hydro for power generated by a hydro-electric facility located at the water release facility. The CCN have been advised on several occasions that the costs of an EPA were too high for the value of the power.

V DISCUSSION:

This project could generate significant renewable power. The CCN estimate that the 44 megawatts project would generate between 173 and 182 gigawatts firm energy, per year, at a cost of up to \$150 per megawatt hour (MWh) over 40 years. The project would also generate an unknown amount of non-firm power. In low water years this project would have a reduced capability to generate non-firm power.

Due to BC Hydro's surplus, it is not clear that this power is needed outside of low water years. Unless market prices or domestic demand increased, BC Hydro could lose at least \$20 million per year selling the excess in the markets, creating more than 0.7 percent upward pressure on electricity rates.

The CCN highlighted potential environmental benefits from a water release facility at Kenney Dam. Such a facility would restore the flows to a 9 kilometer dry section of the Nechako River and limit further erosion and flooding damage to Cheslatta Lake from flood and temperature management water releases through the Skins Lake Spillway. However, extreme floods would still send flows from the Skins Lake Spillway into Cheslatta Lake and total flows to the Nechako River would not return to pre-Kemano volumes. s.13,s.16

s.13,s.16

A water release facility carries risk of further environmental impact. Silt deposited at the Cheslatta Fan, where the Cheslatta system merges with the Nechako reservoir, could be disturbed by water coming from the Kenney Dam, causing fish impacts downstream. Mitigating this risk would add additional costs to the project, s.13
s.13

DRAFTED BY:
Kathy Eichenberger
250-953-3362

APPROVED BY:
Les MacLaren, ADM, EAED
Dave Nikolejsin, DM