# **EPA Renewals Information Session for EPA Holders**

**February 16, 2022** 



#### Welcome

- Acknowledgements
- Introductions
  - Attendees from BC Hydro:
    - Heather Matthews, Director of Generation System Operations
    - Bruce Chow, Manager, IPP Portfolio Management
    - Alan Tan, Contract Manager, IPP Portfolio Management
    - Maridee Wersta, Engagement Lead, IPP Portfolio Management
  - Representatives from EPA Holders



Welcome	Heather Matthews Director, Generation System Operations
Overview & Key Principles	Bruce Chow Manager, IPP Portfolio Management
EPA Renewals Key Terms	Alan Tan EPA Renewals Lead
Key Requirements for EPA Renewals Next Steps	Bruce Chow Manager, IPP Portfolio Management
Questions	Maridee Wersta, Engagement Lead All



#### Welcome

#### Purpose of today's meeting:

- Outline key principles for the renewal of EPAs
- Outline key commercial terms
- Outline key requirements for renewing EPAs
- Get further input from you



#### **EPA Renewals - Context**



- 2021 Integrated Resource Plan Near Term Action
- Energy surplus until early 2030s
- EPA renewals maintain flexibility for BC Hydro and provide opportunity for continued operation for IPPs
- Offer for all clean or renewable projects with expiring EPAs in the next 5 years
- Market-based pricing on shorter term contracts



Welcome	Heather Matthews Director, Generation System Operations
Overview & Key Principles	Bruce Chow Manager, IPP Portfolio Management
EPA Renewals Key Terms	Alan Tan EPA Renewals Lead
Key Requirements for EPA Renewals Next Steps	Bruce Chow Manager, IPP Portfolio Management
Questions	Maridee Wersta, Engagement Lead All



### **Overview – Expiring EPAs**

- EPAs expiring within next five years:
  - 19 clean or renewable projects
  - 900 GWh/year
  - 200 MW in total nameplate capacity
    - Individual projects from 0.2 to 50 MW
  - Each project has supplied electricity to BC Hydro for 20–35 years



			(MW)	(GWh/yr)
Brandywine Creek Small Hydro	Non-Storage Hydro	Whistler	7.6	34.1
Brown Lake 2	Storage Hydro	Prince Rupert	7.2	57.0
China Creek Small Hydroelectric	Non-Storage Hydro	Port Alberni	6.3	24.7
Coats IPP	Non-Storage Hydro	Gabriola Island	< 1	0.4
Eagle Lake C2 Micro Hydro	Non-Storage Hydro	West Vancouver	< 1	1.2
Furry Creek	Non-Storage Hydro	Lion's Bay	10.4	39.5
Hartland Landfill Gas Utilization	Biogas	Saanich	1.8	14.5
Marion 3 Creek	Non-Storage Hydro	Port Alberni	4.6	17.5
McNair Creek Hydro	Non-Storage Hydro	Sechelt	9.8	38.0
Mears Creek	Non-Storage Hydro	Gold River	3.8	19.5
Miller Creek Power	Non-Storage Hydro	Pemberton	29.5	118.0
Pingston Creek	Non-Storage Hydro	Revelstoke	45.0	193.0
Robson Valley (Ptarmigan Creek)	Non-Storage Hydro	McBride	3.6	19.2
Rutherford Creek Hydro	Non-Storage Hydro	Pemberton	50.0	172.0
Sechelt Creek 2	Non-Storage Hydro	Sechelt	16.6	84.6
South Sutton Creek	Non-Storage Hydro	Port Alberni	4.9	26.0
Upper Mamquam Hydro	Non-Storage Hydro	Squamish	25.0	108.0
Vancouver Landfill Gas Utilization - Ph 1	Biogas	Delta	5.5	40.0
Walden North	Non-Storage Hydro	Lilloet	16.0	54.0

Resource Type

Capacity

Location

Energy

**Project Name** 

## **Key Principles**

- Align with BC Hydro's needs for energy/capacity and current market conditions
- Renew EPAs at cost-effective prices
- Reduce complexity for both BC Hydro and IPPs
- Utilize standard contract terms



#### **Overview - Timeline**

- Phase 1 February 2022
  - Information Session #1 (today) for EPA Holders



- Notices to Indigenous Nations
- Phase 2 March/April 2022 Focus Groups on Draft Term Sheet
- Phase 3 July/August 2022 Information Session #2
- Phase 4 August/Ongoing Implementation/Renewals



Welcome	Heather Matthews Director, Generation System Operations
Overview & Key Principles	Bruce Chow Manager, IPP Portfolio Management
EPA Renewals Key Terms	Alan Tan EPA Renewals Lead
Key Requirements for EPA Renewals Next Steps	Bruce Chow Manager, IPP Portfolio Management
Questions	Maridee Wersta, Engagement Lead All



### **Key Terms**

- Contract length options
- Application of market-based pricing
- Energy profile / freshet energy
- Other key terms



### **Contract Term Length**

- Contract Term between 5 years and 10 years
  - Provides supply certainty to BC Hydro
  - Provides opportunity for continued operation for IPPs



## **Market-Based Pricing**

- Energy price in the form of either:
  - Variable price based on day-ahead Mid-C index; or
  - Fixed price updated annually based on Mid-C forward curves
- Price adjustments (e.g., losses, wheeling, other)
- Price ceiling will apply on Mid-C prices
- No CPI escalation



## **Energy Profile / Freshet Energy**

- Freshet energy and market prices
  - BC Hydro will accept and pay for deliveries during freshet at market prices
  - IPP may choose not to generate during freshet if EPA energy price is uneconomic



### **Draft Term Sheet**

Key Terms		
Contract Term	Term = 5 yr. Minimum, 10 yr. Maximum	
Pricing	Energy price will be a market-based in the form of either:  A) Variable price based on day-ahead Mid-C index or  B) Fixed price updated annually based on Mid-C forward curves  Price adjustments (e.g., losses, wheeling, other)  Price ceiling will apply on Mid-C prices  No price escalation	
Energy Profile	BC Hydro will accept and pay for freshet energy Seller may choose not to generate during freshet if EPA energy price is uneconomic	
Delivered Energy	BC Hydro will purchase and accept delivery of energy at the POI subject to limitations (e.g., hourly or daily caps) BC Hydro has no obligation to accept or pay for energy in excess of the limits	

# **Draft Term Sheet (cont'd)**

Key Terms		
Environmental Attributes	•	All environmental attributes are transferred to BC Hydro
Exclusivity	•	Seller will not sell or deliver any energy or environmental attributes associated with the generation to any other person
Dispatch / Turn Down Rights	•	BC Hydro may dispatch generator for system safety or reliability issues
Deemed Delivered Energy	•	No payments or liability if BC Hydro is not able to accept delivery of energy at POI
Liquidated Damages	•	No liquidated damages for Seller for non-delivery
Operating Plan	•	No operating plan required
Outages	•	Seller to provide prompt notice of forced outage Seller to provide notice prior to a planned outage

## **Draft Term Sheet (cont'd)**

Key Terms	
Invoices and Payment  Interconnection Agreement	<ul> <li>Seller to provide invoice by the 15<sup>th</sup> day of each month</li> <li>BC Hydro will pay invoice 30 days after receipt of an invoice</li> <li>Invoice disputes can be raised within 36 months</li> <li>Interest on overdue payments will accrue at prime plus 2%</li> <li>Seller must have an interconnection agreement</li> </ul>
Regulatory Condition	<ul> <li>EPA to be filed with BCUC, and subject to BCUC acceptance</li> <li>If EPA not accepted, either party may terminate</li> </ul>
Termination	<ul> <li>Either party can terminate the EPA due to bankruptcy/insolvency or material default</li> <li>BC Hydro can terminate the EPA if Seller does not deliver energy or BC Hydro is unable to accept delivery for 180 continuous days</li> <li>No termination payment by BC Hydro</li> </ul>



Welcome	Heather Matthews Director, Generation System Operations
Overview & Key Principles	Bruce Chow Manager, IPP Portfolio Management
EPA Renewals Key Terms	Alan Tan EPA Renewals Lead
Key Requirements for EPA Renewals Next Steps	Bruce Chow Manager, IPP Portfolio Management
Questions	Maridee Wersta, Engagement Lead All



### **Key Requirements for EPA Renewals**



- Confidentiality and Non-Disclosure Agreement
- Permits review
- Interconnection review and Interconnection Agreement
- Revenue Metering review
- Electricity Service Agreement (generally RS1253 or 1853)
- Indigenous Relations review
- Other due diligence, as applicable
- Filing with the BCUC under section 71 of the UCA



## **Next Steps**

- Phase 1 February 2022
  - Information Session #1 (today) for EPA Holders
  - Notices to Indigenous Nations
- Phase 2 March/April 2022
  - Focus Groups on Draft Term Sheet



- Phase 3 July/August 2022 Information Session #2
- Phase 4 August/Ongoing Implementation/Renewals
- Written feedback can be emailed to <a href="mailto:IPP.Contract@bchydro.com">IPP.Contract@bchydro.com</a>
   with the subject line "EPA Renewals"



Welcome	Heather Matthews Director, Generation System Operations
Overview & Key Principles	Bruce Chow Manager, IPP Portfolio Management
EPA Renewals Key Terms	Alan Tan EPA Renewals Lead
Key Requirements for EPA Renewals Next Steps	Bruce Chow Manager, IPP Portfolio Management
Questions	Maridee Wersta, Engagement Lead All



#### **Questions?**



Please raise your hand if you want to comment or ask a question.

Questions and feedback can also be emailed after the session to <a href="mailto:IPP.Contract@bchydro.com">IPP.Contract@bchydro.com</a> with the subject line "EPA Renewals"

