

Duncan, Kate EMPR:EX

From: Giles, Alison GCPE:EX
Sent: July 15, 2019 2:48 PM
To: Cuddy, Andrew EMPR:EX; Sanderson, Melissa EMPR:EX
Cc: McRae, Meghan GCPE:EX; Tally, Holly GCPE:EX; Grewar, Colin GCPE:EX
Subject: FW: A/ADM Approved BC Hydro Phase 2 IB & QA
Attachments: IB_Phase 2_BCH Review_15 July 2019_947am.docx

Hi Andrew and Melissa,

Program/Les-approved IB for Phase 2 attached for your review/approval. Scheduled to go Wed/Thurs at this point. Public Accounts is scheduled for Thursday but the issues team doesn't this IB going Thursday too is an impediment.

s.13

QA coming very shortly.

INFORMATION BULLETIN

Ministry of Energy, Mines and Petroleum
Resources

[release number]

[Date]

Next phase of BC Hydro review focuses on climate goals and new opportunities

VICTORIA – To ensure BC Hydro is working for British Columbians, government is launching phase two of the BC Hydro review, focussing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

Phase 2 of the BC Hydro Review will leverage BC Hydro's strengths and focus on:

- BC Hydro's role in supporting CleanBC and meeting the province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
- future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
- integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
- new opportunities for BC Hydro to expand its business in markets outside B.C. to the benefit of ratepayers.

The Ministry of Energy, Mines and Petroleum Resources will work with energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, BC Hydro and the Ministry of Environment and Climate Change Strategy to produce an interim report before the end of the year.

Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide feedback on the interim report.

A final report with recommendations will be completed in early 2020.

CleanBC is a pathway to a more prosperous, balanced and sustainable future. CleanBC was developed in collaboration with the BC Green Party caucus and supports the commitment in the Confidence and Supply Agreement to implement climate action to meet B.C.'s emission targets.

Quick Facts:

- 98% of BC Hydro's electricity generation comes from clean and renewable resources.
- In December 2018 government released its CleanBC plan.
 - To achieve greenhouse gas reduction targets the plan calls for increasing the use of B.C.'s renewable hydroelectricity and shifting away from a reliance on fossil fuels for transportation, industry and buildings.
- In February 2019 government announced the results of Phase 1 of the BC Hydro review,

including:

- A new rates forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit cumulative bill increases to 1.8% in 2019 and 0.7% in 2020, and keep increases 20% below the forecast rate of B.C. inflation for the next five years.
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Learn More:

To view the terms of reference for Phase 2 of the BC Hydro Review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker

Media Relations

Ministry of Energy, Mines and Petroleum Resources

250 952-0628

QUESTION AND ANSWERS
BC Hydro Review – Phase 2
July 17, 2019

Ministry of Energy, Mines and Petroleum Resources

- To ensure BC Hydro is working for British Columbians, government is launching phase two of the BC Hydro review, focussing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.
- We've already taken action in the first phase of our BC Hydro review to keep rates affordable and to restore independent oversight by the B.C. Utilities Commission. Now we're looking to the future to position BC Hydro for new opportunities.
- The objective of Phase 2 is to create a strategy for the benefit of British Columbians where BC Hydro will continue to provide its customers with clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and BC's commitment to reconciliation with Indigenous Nations.
- Phase 2 of the BC Hydro Review will leverage BC Hydro's strengths and focus on:
 - BC Hydro's role in supporting CleanBC and meeting the province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
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 - new opportunities for BC Hydro to expand its business in markets outside B.C. to the benefit of ratepayers.
- The Ministry of Energy, Mines and Petroleum Resources will work with BC Hydro, energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, and the Ministry of Environment and Climate Change Strategy to produce an interim report before the end of the year.
- Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide feedback on the interim report.
- A final report with recommendations will be completed in early 2020.

Questions and Answers

1. You just finished a review of BC Hydro in February, why do we need another review?

We have always planned for, and publicly committed to a two-phase review of BC Hydro.

The first phase focussed on immediate solutions to keep rates affordable by identifying savings, and efficiencies at BC Hydro, and government measures to reduce BC Hydro's costs and regulatory accounts balances, and restore independent oversight by the province's energy regulator, the B.C Utilities Commission (BCUC).

The second phase will be a broader, transformational review that will examine some of the significant changes and shifts taking place in the energy sector and will produce recommendations to strategically position BC Hydro and the Province for long-term success, including BC Hydro's role in achieving the electrification goals in the CleanBC climate plan.

Phase 2 will also complement other consultation processes by identifying new roles and opportunities for Indigenous Nations to participate in the evolving clean energy economy.

2. What are some examples of the “changes and shifts” taking place in the energy sector that you’re going to address?

Some of the changes and shifts that are poised to impact BC Hydro's business in the future include:

- The growing popularity of electric vehicles, the Province's EV mandate and evolving technologies.
- The falling price of renewable energy sources such as wind and solar.
- The growth of intermittent, renewable energy sources means new opportunities are emerging to support trade in capacity resources to balance this variable electricity supply.
- Customer expectations around service and options to generate their own power or choose their energy sources.
- Technologies and utility structures are evolving.
- Low-carbon electrification supporting the transition from fossil fuels to clean electricity to reduce greenhouse gas emissions will drive demand for clean, firm electricity to power electric vehicles, space and water heating, upstream natural gas and LNG operations.
- Environmental concerns about climate change, ecosystem impacts, and air quality are pushing many other utilities to decrease their use of coal and natural gas to generate electricity and move toward renewable generation from intermittent sources like wind and solar.

- The energy intensive technology sector, including large server farms and data-mining operations, will be looking for clean, affordable, reliable electricity when deciding where to locate their operations.
- Conservation has become a priority as utilities recognize the potential to defer costly new generation and customers make efforts to reduce their bills and their environmental footprint.
- Utilities are developing new rate structures to create incentives to use power at certain times of the day or year to reduce demand during peak periods.

3. What will you be looking at in this second phase of the review?

Phase 2 of the review will:

- Identify how BC Hydro will support the Province in achieving the electrification targets set out in CleanBC and lay the groundwork for additional emission reductions to meet the Province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets including additional opportunities for fuel-switching, energy efficiency and conservation.
- Integrate trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities) into BC Hydro's business to benefit its ratepayers.
- Consider whether there are opportunities to enable increased participation in external energy markets and new lines of business to the benefit of BC Hydro ratepayers.
- Support B.C.'s commitment to reconciliation with Indigenous peoples by considering future opportunities or new roles for Indigenous Nations in the development, ownership or operation of electrical infrastructure or services. The review will also consider how BC Hydro currently works with communities and explore alternatives.

4. What will the review deliver?

The second phase of the BC Hydro Review will provide recommendations on how BC Hydro can build on its success in a changing energy future while supporting the climate and economic development framework set out in CleanBC and maintaining affordable rates.

The recommendations from Phase 2 will be used to support the development of BC Hydro's Integrated Resource Plan (IRP) that will be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs, now and into the future.

The recommendations will also complement the consultations regarding impacts of the Standing Offer Program and potential opportunities arising from CleanBC by identifying potential electricity-sector opportunities for Indigenous Nations.

5. What role will external industry experts play?

The external industry experts will provide advice in each of the review's four areas of focus including opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities to enhance BC Hydro's financial and operational sustainability in the rapidly changing energy sector while keeping rates affordable over the long run.

6. Why is the review being led internally by government and BC Hydro instead of externally by an independent investigator or panel?

The review process we have developed:

- allows for more effective use to be made of experts. Since outside experts would not be required to draft the interim and final reports or conduct consultations, more experts with diverse experience can be hired, and better use can be made of their time and expertise;
- avoids experts being asked to duplicate expertise already within government and BC Hydro while ensuring that expert advisors provide fresh eyes and a broader perspective;
- provides enough flexibility to ensure the advisory group and review committee can ask questions of the expert advisors as new information comes to light;
- helps to ensure that the review will be aligned with existing activities already underway such as CleanBC, BC Hydro's IRP and Indigenous Nations reconciliation initiatives; and
- helps to ensure that the recommendations resulting from the report are relevant to the British Columbian context and are implementable.

7. Who are the expert advisors that will be contributing to the review process?

The Ministry is in the process of contacting experts located in B.C., Canada and the U.S. with knowledge of utility management, regulatory matters, emerging trends and technology, electricity markets, or experience with projects and/or businesses that benefit Indigenous peoples.

8. When will the public find out who the expert advisors are?

The names of the expert advisors will be included in the interim report, which will be released in December 2019.

9. How will you choose the expert advisors who will be informing the review?

The Ministry is in the process of selecting experts for the review. Ministry staff, in consultation with BC Hydro and Powerex, provided a list of suggested expert advisors to the Minister for her consideration. The Minister provided a short-list of experts based on Ministry suggestions.

10. Are the expert advisors being paid? And if so, how much?

Yes. Experts will receive payment in alignment with current market rates for consulting services. The Province will also cover expenses incurred as part of the review. Payment and expenses for each expert advisor is not expected to exceed \$25,000.

11. Are you planning on conducting a competitive, public process to identify external experts – a Request for Proposals on BC Bid for example?

The individuals we will seek as external advisers to the second phase of the review are highly specialized, highly respected experts with extensive experience in North American utility operation, regulation and electricity markets.

Due to the unique experience and subject matter expertise required of expert advisors to the review, and consistent with the Province's core policy on direct awards, we are approaching individuals directly rather than using a competitive bid process.

12. Is there Indigenous participation in the review?

Yes. We are in the process of selecting an expert with Indigenous Nations expertise. Early on in the review, expert advice will be sought to inform preliminary options for opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services.

In addition, Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide feedback on the interim report.

13. Why are staff and executives from BC Hydro so involved – it looks like they're reviewing themselves?

The review is being led by senior staff with the Ministry of Energy, Mines and Petroleum Resources and the Ministry of Environment and Climate Change Strategy and informed by input from external expert advisors.

BC Hydro involvement and expertise is essential to ensure the second phase of the review results in informed, constructive and achievable options and recommendations that will address how BC Hydro must evolve its existing structure, services and assets to ensure its long-term sustainability for the benefit of all British Columbians.

14. Why did you suspend BC Hydro's Standing Offer Program (SOP) if you're so interested in enhancing the participation of Indigenous Nations in the energy sector?

We understand that many Indigenous communities, in most cases with private power producers as partners, have been exploring or seeking energy procurement opportunities under the SOP.

However, because of the electricity surplus we inherited, and our commitment to keep BC Hydro's rates affordable, it was necessary to suspend the SOP indefinitely with the exception of electricity purchase agreements for five Indigenous-related projects which are part of impact benefit agreements with BC Hydro and/or mature projects that have significant Indigenous Nations involvement as announced March 2018.

The Province remains committed to reconciliation with Indigenous peoples of British Columbia. The Ministry of Energy, Mines and Petroleum Resources is engaging with Indigenous Nations and organizations to discuss the extent to which the indefinite suspension of the Standing Offer Program may affect the economic interests of individual Indigenous Nations, and to explore opportunities to mitigate these impacts, where they exist.

Emerging opportunities for this conversation include clean energy sector opportunities under the CleanBC plan.

15. Is Site C to be reviewed again?

The Site C project was reviewed extensively by the BCUC and government over a four-month period in late 2017.

The Site C review was informed by BC Hydro, technical experts, a broad range of stakeholders, hundreds of members of the public, and Indigenous Nations.

That review resulted in a new Site C budget and improved oversight of the project, including a Project Assurance Board that is providing enhanced oversight to future contract procurement and management, project deliverables, environmental integrity, and quality assurance – all within the mandate of delivering the project on time and budget.

Now, we're focusing on the future and positioning BC Hydro and the Province for long-term success including BC Hydro's role in achieving the electrification goals in the CleanBC plan and new opportunities for Indigenous Nations in the evolving clean energy economy.

That said, clearly, the capacity and energy produced by Site C, and the costs of the project will have a major impact on BC Hydro's long-term future and will be factored into the review.

16. How much is this two-phased review going to cost?

The first phase of the review was conducted internally, with no incremental costs to taxpayers or BC Hydro's customers.

We anticipate the second phase of the BC Hydro review could cost approximately \$500,000, including costs associated with the expert advisors and engagement with Indigenous Nations and organizations, stakeholders, and the public.

Comprehensive Review of BC Hydro – Phase 2

Biographies of Expert Advisors

(The following have confirmed participation as of July 17, 2019)

David Bibby

David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the Vice President, Information Technology, at Vancity Savings and the Senior Vice President of Technology at Canaccord Genuity Corporation.

Gwenne Farrell

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Prior to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union.

Mark Jaccard

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as Chair and Chief Executive Officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.

Stephen Koch

Stephen Koch is the Director of Emerging Issues at the Canadian Electricity Association (CEA), the National Voice of Electricity in Canada. As Director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously President of the Oil Heat Association, Executive Director of NAIMA Canada and held other leadership roles which included Chairperson of Envirocentre.

Caitlin Liotiris

Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into modeling tools. She is a Principal at Energy Strategies.

Liisa O'Hara

After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as Commissioner to the B.C. Utilities Commission (BCUC) for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions.

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Dan Woynillowicz

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Duncan, Kate EMPR:EX

From: MacLaren, Les EMPR:EX
Sent: July 17, 2019 12:42 PM
To: Sanderson, Melissa EMPR:EX; Cuddy, Andrew EMPR:EX; McRae, Meghan GCPE:EX
Subject: RE: BCH Review Phase 2 - QA

Hi Melissa

s.13

Les

From: Sanderson, Melissa EMPR:EX
Sent: Wednesday, July 17, 2019 12:13 PM
To: Cuddy, Andrew EMPR:EX ; MacLaren, Les EMPR:EX ; McRae, Meghan GCPE:EX
Subject: Fwd: BCH Review Phase 2 - QA

s.13

Sent from my iPhone

Begin forwarded message:

From: "Grewar, Colin GCPE:EX" <Colin.Grewar@gov.bc.ca>
Date: July 17, 2019 at 12:55:13 PM MDT
To: "Sanderson, Melissa EMPR:EX" <Melissa.Sanderson@gov.bc.ca>
Cc: "Cuddy, Andrew EMPR:EX" <Andrew.Cuddy@gov.bc.ca>, "McRae, Meghan GCPE:EX" <McRae.Meghan@gov.bc.ca>, "Giles, Alison GCPE:EX" <Alison.Giles@gov.bc.ca>, "Tally, Holly GCPE:EX" <Holly.Tally@gov.bc.ca>
Subject: RE: BCH Review Phase 2 - QA

Here you go. The attached IB includes three tracked suggestions for minor edits from BC Hydro received this morning.

Colin



INFORMATION BULLETIN

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Resources

[release number]

[Date]

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s.13

Commented [AG2]: Note: BCH's clean energy generation for 2018/19 was 97.8%. Assume you're rounding up here?

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Learn More:

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Contact:

Kent Karemaker

Media Relations

Ministry of Energy, Mines and Petroleum Resources

250 952-0628

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Sent: July 17, 2019 12:21 PM
To: Sanderson, Melissa EMPR:EX
Cc: Cuddy, Andrew EMPR:EX; McRae, Meghan GCPE:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: RE: BCH Review Phase 2 - QA
Attachments: IB_Phase 2_BCH Review_Jul17_1212pm_2019.docx; Biographies of Expert Advisors_Jul17_2019.docx; QA_Phase 2_BC Hydro Review_Jul17_1218pm_2019.docx

Here you go Melissa.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Sanderson, Melissa EMPR:EX
Sent: July 17, 2019 11:59 AM
To: Grewar, Colin GCPE:EX
Cc: Cuddy, Andrew EMPR:EX ; McRae, Meghan GCPE:EX ; Giles, Alison GCPE:EX ; Tally, Holly GCPE:EX
Subject: Re: BCH Review Phase 2 - QA

I just need finals to share w Greens

Sent from my iPhone

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Subject: Re: BCH Review Phase 2 - QA

Can you send me the IB and the list of people in two separate documents?

Sent from my iPhone

On Jul 17, 2019, at 12:44 PM, Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca> wrote:

Hi Melissa: Hope you're enjoying your time at EMMC in Cranbrook.

Please find attached the latest version of the QA to complement the IB announcing phase 2 of the BC Hydro Review.

As you know, the IB is scheduled to go out at 7:30 on Friday morning.

Thanks,
Colin

Colin Grewar
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 - BC Hydro's role in supporting CleanBC and meeting the province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
 - future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
 - integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
 - new opportunities for BC Hydro to expand its business in markets outside B.C. to the benefit of ratepayers.
- The Ministry of Energy, Mines and Petroleum Resources will work with BC Hydro, energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, and the Ministry of Environment and Climate Change Strategy to produce an interim report by early 2020.
- Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide feedback on the interim report.
- A final report with recommendations will be completed in 2020.

Questions and Answers

1. You just finished a review of BC Hydro in February, why do we need another review?

We have always planned for, and publicly committed to a two-phase review of BC Hydro.

The first phase focussed on immediate solutions to keep rates affordable by identifying savings, and efficiencies at BC Hydro, and government measures to reduce BC Hydro's costs and regulatory accounts balances, and restore independent oversight by the province's energy regulator, the B.C Utilities Commission (BCUC).

The second phase will be a broader, transformational review that will examine some of the significant changes and shifts taking place in the energy sector and will produce recommendations to strategically position BC Hydro and the Province for long-term success, including BC Hydro's role in achieving the electrification goals in the CleanBC climate plan.

Phase 2 will also complement other consultation processes by identifying new roles and opportunities for Indigenous Nations to participate in the evolving clean energy economy.

2. What are some examples of the “changes and shifts” taking place in the energy sector that you’re going to address?

Some of the changes and shifts that are poised to impact BC Hydro's business in the future include:

- The growing popularity of electric vehicles, the Province's EV mandate and evolving technologies.
- The falling price of renewable energy sources such as wind and solar.
- The growth of intermittent, renewable energy sources means new opportunities are emerging to support trade in capacity resources to balance this variable electricity supply.
- Customer expectations around service and options to generate their own power or choose their energy sources.
- Technologies and utility structures are evolving.
- Low-carbon electrification supporting the transition from fossil fuels to clean electricity to reduce greenhouse gas emissions will drive demand for clean, firm electricity to power electric vehicles, space and water heating, upstream natural gas and LNG operations.
- Environmental concerns about climate change, ecosystem impacts, and air quality are pushing many other utilities to decrease their use of coal and natural gas to generate electricity and move toward renewable generation from intermittent sources like wind and solar.

- The energy intensive technology sector, including large server farms and data-mining operations, will be looking for clean, affordable, reliable electricity when deciding where to locate their operations.
- Conservation has become a priority as utilities recognize the potential to defer costly new generation and customers make efforts to reduce their bills and their environmental footprint.
- Utilities are developing new rate structures to create incentives to use power at certain times of the day or year to reduce demand during peak periods.

3. What will you be looking at in this second phase of the review?

Phase 2 of the review will:

- Identify how BC Hydro will support the Province in achieving the electrification targets set out in CleanBC and lay the groundwork for additional emission reductions to meet the Province's legislated 2030, 2040 and 2050 greenhouse gas reduction targets including additional opportunities for fuel-switching, energy efficiency and conservation.
- Integrate trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities) into BC Hydro's business to benefit its ratepayers.
- Consider whether there are opportunities to enable increased participation in external energy markets and new lines of business to the benefit of BC Hydro ratepayers.
- Support B.C.'s commitment to reconciliation with Indigenous peoples by considering future opportunities or new roles for Indigenous Nations in the development, ownership or operation of electrical infrastructure or services. The review will also consider how BC Hydro currently works with communities and explore alternatives.

4. What will the review deliver?

The second phase of the BC Hydro Review will provide recommendations on how BC Hydro can build on its success in a changing energy future while supporting the climate and economic development framework set out in CleanBC and maintaining affordable rates.

The recommendations from Phase 2 will be used to support the development of BC Hydro's Integrated Resource Plan (IRP) that will be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs, now and into the future.

The recommendations will also complement the consultations regarding impacts of the Standing Offer Program and potential opportunities arising from CleanBC by identifying potential electricity-sector opportunities for Indigenous Nations.

5. What role will external industry experts play?

The external industry experts will provide advice in each of the review's four areas of focus including opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities to enhance BC Hydro's financial and operational sustainability in the rapidly changing energy sector while keeping rates affordable over the long run.

6. Why is the review being led internally by government and BC Hydro instead of externally by an independent investigator or panel?

The review process we have developed:

- allows for more effective use to be made of experts. Since outside experts would not be required to draft the interim and final reports or conduct consultations, more experts with diverse experience can be hired, and better use can be made of their time and expertise;
- avoids experts being asked to duplicate expertise already within government and BC Hydro while ensuring that expert advisors provide fresh eyes and a broader perspective;
- provides enough flexibility to ensure the advisory group and review committee can ask questions of the expert advisors as new information comes to light;
- helps to ensure that the review will be aligned with existing activities already underway such as CleanBC, BC Hydro's IRP and Indigenous Nations reconciliation initiatives; and
- helps to ensure that the recommendations resulting from the report are relevant to the British Columbian context and are implementable.

7. Who are the expert advisors that will be contributing to the review process?

The Ministry is in the process of contacting experts located in B.C., Canada and the U.S. with knowledge of utility management, regulatory matters, emerging trends and technology, electricity markets, or experience with projects and/or businesses that benefit Indigenous peoples.

8. When will the public find out who the expert advisors are?

The names of the expert advisors will be included in the interim report, which will be released by early 2020.

9. How will you choose the expert advisors who will be informing the review?

The Ministry is in the process of selecting experts for the review. Ministry staff, in consultation with BC Hydro and Powerex, provided a list of suggested expert advisors to the Minister for her consideration. The Minister provided a short-list of experts based on Ministry suggestions.

10. Are the expert advisors being paid? And if so, how much?

Yes. Experts will receive payment in alignment with current market rates for consulting services. The Province will also cover expenses incurred as part of the review. Payment and expenses for each expert advisor is not expected to exceed \$25,000.

11. Are you planning on conducting a competitive, public process to identify external experts – a Request for Proposals on BC Bid for example?

The individuals we will seek as external advisers to the second phase of the review are highly specialized, highly respected experts with extensive experience in North American utility operation, regulation and electricity markets.

Due to the unique experience and subject matter expertise required of expert advisors to the review, and consistent with the Province's core policy on direct awards, we are approaching individuals directly rather than using a competitive bid process.

12. Is there Indigenous participation in the review?

Yes. We are in the process of selecting an expert with Indigenous Nations expertise. Early on in the review, expert advice will be sought to inform preliminary options for opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services.

In addition, Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide feedback on the interim report.

13. Why are staff and executives from BC Hydro so involved – it looks like they're reviewing themselves?

The review is being led by senior staff with the Ministry of Energy, Mines and Petroleum Resources and the Ministry of Environment and Climate Change Strategy and informed by input from external expert advisors.

BC Hydro involvement and expertise is essential to ensure the second phase of the review results in informed, constructive and achievable options and recommendations that will address how BC Hydro must evolve its existing structure, services and assets to ensure its long-term sustainability for the benefit of all British Columbians.

14. Why did you suspend BC Hydro's Standing Offer Program (SOP) if you're so interested in enhancing the participation of Indigenous Nations in the energy sector?

We understand that many Indigenous communities, in most cases with private power producers as partners, have been exploring or seeking energy procurement opportunities under the SOP.

However, because of the electricity surplus we inherited, and our commitment to keep BC Hydro's rates affordable, it was necessary to suspend the SOP indefinitely with the exception of electricity purchase agreements for five Indigenous-related projects which are part of impact benefit agreements with BC Hydro and/or mature projects that have significant Indigenous Nations involvement as announced March 2018.

The Province remains committed to reconciliation with Indigenous peoples of British Columbia. The Ministry of Energy, Mines and Petroleum Resources is engaging with Indigenous Nations and organizations to discuss the extent to which the indefinite suspension of the Standing Offer Program may affect the economic interests of individual Indigenous Nations, and to explore opportunities to mitigate these impacts, where they exist.

Emerging opportunities for this conversation include clean energy sector opportunities under the CleanBC plan.

15. Is Site C to be reviewed again?

The Site C project was reviewed extensively by the BCUC and government over a four-month period in late 2017.

The Site C review was informed by BC Hydro, technical experts, a broad range of stakeholders, hundreds of members of the public, and Indigenous Nations.

That review resulted in a new Site C budget and improved oversight of the project, including a Project Assurance Board that is providing enhanced oversight to future contract procurement and management, project deliverables, environmental integrity, and quality assurance – all within the mandate of delivering the project on time and budget.

Now, we're focusing on the future and positioning BC Hydro and the Province for long-term success including BC Hydro's role in achieving the electrification goals in the CleanBC plan and new opportunities for Indigenous Nations in the evolving clean energy economy.

That said, clearly, the capacity and energy produced by Site C, and the costs of the project will have a major impact on BC Hydro's long-term future and will be factored into the review.

16. How much is this two-phased review going to cost?

The first phase of the review was conducted internally, with no incremental costs to taxpayers or BC Hydro's customers.

We anticipate the second phase of the BC Hydro review could cost approximately \$500,000, including costs associated with the expert advisors and engagement with Indigenous Nations and organizations, stakeholders, and the public.

Comprehensive Review of BC Hydro – Phase 2

Biographies of Expert Advisors

(The following have confirmed participation as of July 17, 2019)

David Bibby

David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the Vice President, Information Technology, at Vancity Savings and the Senior Vice President of Technology at Canaccord Genuity Corporation.

Gwenne Farrell

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Prior to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union.

Mark Jaccard

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as Chair and Chief Executive Officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.

Stephen Koch

Stephen Koch is the Director of Emerging Issues at the Canadian Electricity Association (CEA), the National Voice of Electricity in Canada. As Director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously President of the Oil Heat Association, Executive Director of NAIMA Canada and held other leadership roles which included Chairperson of Envirocentre.

Caitlin Liotiris

Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into modeling tools. She is a Principal at Energy Strategies.

Liisa O'Hara

After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as Commissioner to the B.C. Utilities Commission (BCUC) for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions.

Blake Shaffer

Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake's 15-year career has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and Director of Energy Trading at Transalta Corporation in Calgary, Alberta. He is currently an Adjunct Assistant Professor at the University of Calgary, Department of Economics.

Dan Woynillowicz

Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as Policy Director.

Duncan, Kate EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 18, 2019 2:37 PM
To: Sanderson, Melissa EMPR:EX
Cc: Cuddy, Andrew EMPR:EX; McRae, Meghan GCPE:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: For Final edits/Approval - EMPR IB - DRAFT: Next phase of BC Hydro review to focus on climate goals, new opportunities
Attachments: DRAFT.pdf

Hi Melissa: Please find attached and below the V5'd version of the IB on the BCH Review, still draft.

Are we ok to give final approval for release tomorrow at 7:30am?

I have to head off to the doctor, so please respond directly to Alison.

Thanks,
Colin

NR Number: Not Approved

NR Type: Information Bulletin

State: Planned

Planned Release Date: July 19, 2019 at 7:30 am Media Distribution Lists: 000.0 - Victoria, BUSIN_BUSINESS, ENERG, ETHID_INDIGENOUS, ETHALL_ALL ETHNIC, LEGIS_PRESS GALLERY, LMain, MEDIA, MMVAN_MMVAN, PROVI_PROVINCE WIDE No Lead Organization

Headline: Next phase of BC Hydro review to focus on climate goals, new opportunities

This email was auto-generated.

Not Approved
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

INFORMATION BULLETIN

Next phase of BC Hydro review to focus on climate goals, new opportunities

VICTORIA - To ensure BC Hydro is working for British Columbians, government is launching Phase 2 of the BC Hydro review, focusing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

Phase 2 of the BC Hydro review will leverage BC Hydro's strengths and focus on:

- * BC Hydro's role in supporting CleanBC and meeting British Columbia's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;

- * future opportunities or new roles for Indigenous Nations and for communities in the energy sector;

- * integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and

- * new opportunities for BC Hydro to expand its business in markets outside B.C. for the benefit of ratepayers.

The Ministry of Energy, Mines and Petroleum Resources will work with energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, BC Hydro and the Ministry of Environment and Climate Change Strategy to produce an interim report before the end of this year.

Indigenous peoples and organizations, and stakeholders will have the opportunity to provide feedback on the interim report.

A final report with recommendations will be completed in early 2020.

CleanBC is a pathway to a more prosperous, balanced and sustainable future. CleanBC was developed in collaboration with the BC Green Party caucus, and supports the commitment in the Confidence and Supply Agreement to implement climate action to meet B.C.'s emission targets.

Quick Facts:

- * About 98% of BC Hydro's electricity generation comes from clean and renewable resources.

- * In December 2018, government released its CleanBC plan.

- * To achieve greenhouse gas reduction targets, the plan calls for increasing the use of B.C.'s renewable hydroelectricity and shifting away from a reliance on fossil fuels for transportation, industry and buildings.

- * In February 2019, government announced the results of Phase 1 of the BC Hydro review, including:

- * a new rate forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years; and

- * regulatory and legislative changes to enhance the BCUC's power to make decisions on rate increases, deferral accounts and capital projects, as well as other decisions that affect British Columbians.

- * Phase 2 of the BC Hydro review will support BC Hydro's development of its Integrated Resource Plan (IRP) to be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs now and into the future.

Learn More:

To view the terms of reference for Phase 2 of the BC Hydro review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker
Media Relations
Ministry of Energy, Mines and Petroleum Resources
250 952-0628

Connect with the Province of B.C. at: <http://news.gov.bc.ca/connect>

INFORMATION BULLETIN

Not Approved
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<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

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Resources
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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Michelle Mungall, Minister of Energy, Mines and Petroleum Resources

II ISSUE: Phase 2 of the BC Hydro Comprehensive Review

III BACKGROUND:

In May 2019, Cabinet approved the Terms of Reference for Phase 2 of the BC Hydro Comprehensive Review (Phase 2), which sets out four areas of focus: Supporting CleanBC; Thriving in an Evolving Electricity Sector; Leveraging Our Strengths; and Opportunities for Indigenous Nations and Communities. At the same time, Cabinet approved an internal Phase 2 process that would utilize the extensive knowledge of Ministry of Energy, Mines and Petroleum Resources (EMPR) and BC Hydro staff and would be supplemented by input from expert advisors.

BC Hydro and EMPR staff are preparing for the launch of Phase 2, which includes the public release of the Terms of Reference (Attachment 1), soliciting input from expert advisors, and initiating stakeholder engagement on the key trends and issues in the energy market.

IV DISCUSSION:

Terms of Reference

The launch of Phase 2 will be announced through an InfoBulletin supplemented with updates on both the EMPR and Electricity and Alternative Energy Division (EAED) websites. The EMPR page will state the objective of the Phase 2 review, while the EAED website, which currently houses information on Phase 1, will be expanded to include information on Phase 2. It will include a link to the Terms of Reference and will refer to energy industry experts that will guide the Review (Attachment 2).

Expert Advisors

Eleven potential advisors were selected to provide input across a number of fields relevant to the four focus areas of Phase 2 (Attachment 3). Of these eleven, eight have agreed to participate (Liisa O'Hara, Mark Jaccard, David Bibby, Steven Koch, Blake Shaffer, Caitlin Liotiris, Dan Woynillowicz and Gwenne Farrell). s.22

s.22

At the outset, expert advisors will be asked to review a joint BC Hydro – EMPR Environmental Scan (EnviroScan), which describes the emerging energy trends and issues and to provide their views on which of the trends would be the most impactful / relevant to BC Hydro.

Additional Opportunities for Public Engagement

There is growing interest in understanding the Phase 2 Review process as well as organizations seeking opportunities to provide input into the Review. EMPR staff will arrange two 2-hour engagement sessions in late August/early September. Representatives from key stakeholder groups will be invited to attend either session where they will hear about Phase 2 process and Terms of Reference. At the two meetings, EMPR staff will solicit feedback from stakeholders on the following questions:

1. Do you have any suggestions on how BC Hydro can remain sustainable in the future while delivering benefits to all British Columbians?
2. Reflecting specifically on the Phase 2 Terms of Reference:
 - Do you have any suggestions on how to position BC Hydro for the future so that it can further support CleanBC?
 - With the changes occurring in the electricity sector, and what steps can BC Hydro take so that British Columbians can benefit from new technologies and markets?
 - Are there other areas of strength that BC can leverage with respect to (clean) energy trade?
 - What type of opportunities can BC Hydro provide Indigenous Nations within the energy sector?
 - Do you have any suggestions on how BC Hydro currently works with communities and whether there are alternate opportunities for the benefit of both parties?

Potential stakeholder groups include:

- BC Business Council
- BC Investment Management Corp.
- FortisBC
- Columbia Power Corp. / Columbia Basin Trust
- Clean Energy BC
- Brookfield Renewables
- Innergex
- City of Vancouver
- Association of Major Power Consumers
- Mining Association of BC
- Commercial Energy Consumers
- BC Old Age Pensioners' Organization
- Council of Forest Industries
- BC LNG Alliance
- Canadian Association of Petroleum Producers

- Pembina Institute
- BC Sustainable Energy Association / Sierra Club
- Suzuki Foundation

A similar but separate engagement process will be arranged with the following Indigenous groups:

- Assembly of FN
- Union of BC Indian Chiefs;
- First Nations Summit;

These stakeholders may also choose to provide written submissions to the Ministry for consideration.

V CONCLUSION:

Government Communications and Public Engagement will be managing the roll out of the InfoBulletin announcing the BC Hydro Phase 2 Terms of Reference and updating EMPR websites. Contracting is well underway with the eight confirmed advisors, and additional experts could replace those who are not able to participate. Timely engagement on the energy trends and issues that will shape BC Hydro's future will provide interested stakeholders with an opportunity to be involved in Phase 2 at an early stage.

DRAFTED BY:

Amy Sopinka, Dir., TIB, EAED
778-698-7280

APPROVED BY:

Paul Wieringa, Exec. Dir., EPB ✓
Les MacLaren, ADM, EAED ✓
Dave Nikolejsin, DM ✓

Attachments (4)

Attachment 1

Terms of Reference

Comprehensive Review of BC Hydro – Phase 2

Context

The 2017 Mandate Letter to the Minister of Energy, Mines and Petroleum Resources directs the ministry to undertake a Comprehensive Review of BC Hydro and to work with BC Hydro to develop a refreshed plan to keep rates affordable over the long-term.

In June 2018, Government announced a two-phase approach for carrying out the Minister's mandate:

- Phase 1 - examine opportunities to keep BC Hydro's rates affordable by increasing BC Hydro's revenues, reducing its costs and protecting ratepayer interests by re-empowering the British Columbia Utilities Commission (BCUC) to oversee BC Hydro's costs and activities; and
- Phase 2 - explore global energy sector shifts and provincial strategies that could transform the way BC Hydro does business.

Phase 1 of the Comprehensive Review of BC Hydro is now complete. On February 14, 2019, the Province released a final report on this first phase, which details actions to ensure sound financial and regulatory oversight of BC Hydro, and a five-year rate forecast reflecting cost and revenue strategies to keep rates affordable.

In December 2018, Government released its CleanBC plan, a combined economic development, energy and climate strategy. CleanBC offers a pathway that will enable our Province to seize opportunities for innovation and growth. To meet the goals in CleanBC, we must increase our use of cleaner energy, including electricity generated from renewable sources, to shift away from our reliance on fossil fuels for transportation, industry, and buildings. CleanBC's actions will get British Columbia (BC) approximately 75% of the way to legislated 2030 greenhouse gas (GHG) reduction targets. Achieving the remaining 25%, and ultimately the 2040 and 2050 targets, will require additional clean energy.

Objective

The objective of the Comprehensive Review's second phase is to develop recommendations for how BC Hydro can accomplish the provincial policy objectives laid out in the CleanBC plan,

including how BC Hydro can support meeting BC's legislated 2030, 2040, and 2050 GHG reduction targets in a manner that ensures BC Hydro sustainability in the future for the benefit of British Columbians.

The Review will consider the potential impacts of North American energy and market trends, the needs of current and future BC Hydro customers, evolving technologies and utility structures, the affordability of electricity to consumers, and opportunities to involve indigenous peoples and communities.

The recommendations from the Phase 2 Review will be used to inform BC Hydro's Integrated Resource Plan that will be filed with the BCUC in early 2021.

Governance

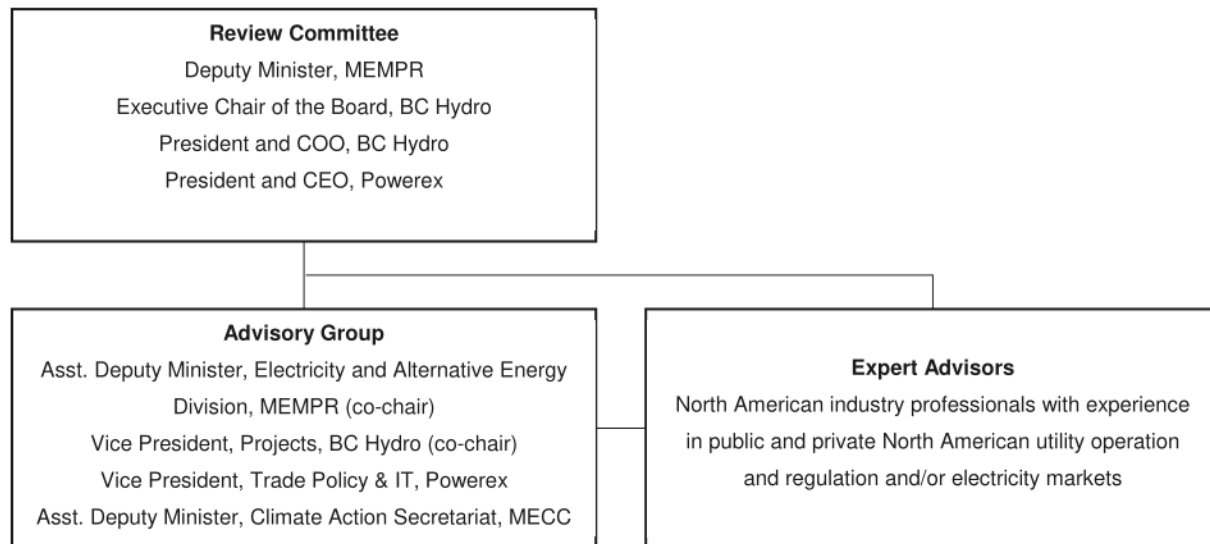
Overseeing the Phase 2 Review process will be a Review Committee consisting of:

- Deputy Minister of the Ministry of Energy, Mines and Petroleum Resources (MEMPR),
- Executive Chair of the BC Hydro Board of Directors,
- President and Chief Operating Officer (COO) of BC Hydro, and
- Chief Executive Officer (CEO) of Powerex.

This Review Committee is responsible for ensuring that the objective of the second phase of the Review is met.

An Advisory Group consisting of senior staff from MEMPR, Ministry of Environment and Climate Change (MECC), BC Hydro, and Powerex will provide advice to the Review Committee, draft material for their consideration and prepare a final report that includes the recommendations of the Review Committee. Industry experts that have extensive experience in public and private North American utility operation, regulation, and/or electricity markets will inform and guide Review Committee recommendations.

Governance Chart - Phase 2 Review:



Areas of Interest

The Review Committee, with the support of the Advisory Group and advice from industry experts, is tasked with addressing questions within four areas of interest, with the goal of gathering the information necessary to develop a final report with recommended actions for the utility.

1. Supporting CleanBC

CleanBC is central to reducing GHG emissions while also meeting BC's energy and economic development goals. Any recommended changes to BC Hydro must achieve the electrification goals set out in CleanBC to meet our legislated 2030 GHG reduction targets and lay the groundwork for additional GHG emissions reductions to meet the Province's legislated 2040 and 2050 emissions targets. Achieving the electrification targets will support the production of lower carbon natural resources for export. The Review will identify additional opportunities to reduce GHG emissions through fuel-switching, electrification, energy efficiency and conservation and will include responses to the following questions:

- What is required to ensure that new customer demand for access to clean electricity from the grid is achieved in an efficient, cost-effective, and timely manner?

- How should the costs of this new access be allocated between existing and new customers? Is there a role for government(s) in financing the infrastructure to provide this access?
- What can/should BC Hydro do to encourage fuel switching to increase the use of clean electricity as an alternative to fossil fuels and reduce GHG emissions?
- How can BC Hydro and the Province's CleanBC Better Homes/Better Buildings program coordinate further to address climate change by reducing GHG emissions and meeting CleanBC objectives?

2. Thriving in an Evolving Electricity Sector

The Phase 2 Review final report will describe the trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities). Recommendations will address how BC Hydro must adapt to a broad range of future scenarios and evolve its existing structure, services, and assets in support of ensuring BC Hydro's sustainability for the benefit of all British Columbians. At a minimum, the Phase 2 Review final report will address the following questions:

- Which industry trends are most likely to have an impact on BC Hydro?
- What actions are needed to ensure that BC Hydro is able to benefit from new markets and integrate new technologies while keeping rates affordable?
- Are there opportunities for BC Hydro to provide customers with more energy choices and information?
- Are changes needed to BC Hydro's governance structure to allow the utility to pursue new business opportunities?

3. Leveraging Our Strengths

BC Hydro's wholly-owned subsidiary Powerex currently buys and sells electricity in other markets throughout the Western Interconnection. The Phase 2 Review will consider whether there are opportunities to enable increased participation in external markets to the benefit of BC Hydro ratepayers. The Phase 2 Review final report will make recommendations that consider each of the following questions:

- What constraints, if any, reduce Powerex's ability to trade electricity in the Western Interconnection today or in the future?
- Is there an opportunity or actions that can be taken that will enable Powerex to expand its business in markets outside of BC, further leveraging BC Hydro's clean generation and/or Powerex's expertise in energy markets?
- How should cost effective clean energy located outside of BC be considered in BC Hydro's planning and operations?
- Is there an opportunity to own and/or operate assets outside of BC Hydro's current service area that would benefit BC Hydro's ratepayers?

4. Opportunities for Indigenous Nations and Communities

In support of BC's commitment to reconciliation with Indigenous Peoples, the Review will consider future opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services. In relation to BC Hydro's existing business and proposed new lines of business, the Phase 2 Review final report will include recommendations to enhance Indigenous Nations' participation in the energy sector. The Review will also consider how BC Hydro currently works with communities and explore alternatives.

For each of these four areas of interest, the Expert Advisors will provide advice on opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities for improved organizational readiness to enhance BC Hydro's financial and operational sustainability to keep rates affordable over the long term.

Process

The Review Committee and Advisory Group will undertake the Review June 2019 to November 2019 utilizing the advice of the Expert Advisors as and when needed. In late fall 2019, stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results.

A final report will be completed in early 2020 and will outline the Review Committee's recommendations on policy, governance, and strategy to ensure BC Hydro's sustainability and ability to contribute to CleanBC and other Government policy objectives.

Attachment 2

BC Hydro Review Phase 2

Draft language to update the EMPR and EAED webpages when TOR is released publicly

UPDATE #1

Link: <https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/energy-mines-and-petroleum-resources>

Phase 2 of the Comprehensive Review of BC Hydro

Learn more about the steps being taken to create a strategy, for the benefit of British Columbians, for BC Hydro to continue to provide its customers with clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and British Columbia's commitment to reconciliation with Indigenous Nations.

UPDATE #2

Link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Phase 2 of the Comprehensive Review of BC Hydro

The objective of Phase 2 of the Comprehensive Review of BC Hydro is to create a strategy, for the benefit of British Columbians, for BC Hydro to continue to provide its customers with clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and British Columbia's (BC's) commitment to reconciliation with Indigenous Nations.

Following completion of Phase 1 of the Review of BC Hydro in February 2019 (see below for more information), Government initiated Phase 2 in June 2019. This second phase will be a broad, transformational review that will examine some of the significant changes and shifts taking place in the British Columbia and continental energy sectors and will produce recommendations to strategically position BC Hydro and the Province for long-term success, including BC Hydro's role in achieving the electrification goals set out in CleanBC. Phase 2 will leverage BC Hydro's strengths and focus on:

- BC Hydro's role in supporting CleanBC and meeting the Province's legislated 2030, 2040, and 2050 greenhouse gas reduction targets;

- future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
- integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
- new opportunities for BC Hydro to expand its business in markets outside BC to the benefit of ratepayers.

Phase 2 will be guided by the [Comprehensive Review of BC Hydro Phase 2 – Terms of Reference](#). The Ministry of Energy, Mines and Petroleum Resources will work with BC Hydro; energy industry experts with extensive experience in North American utility operation, technology, regulation and electricity markets; and the Ministry of Environment and Climate Change Strategy, to produce an interim report before the end of the year.

Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide comments and feedback on the interim report.

A final report with recommendations will be completed in early 2020.

[The following language will be posted on a separate page on the EAED site]

Phase 1 of the Comprehensive Review of BC Hydro

The first phase of the review was completed in February 2019.

Government worked with BC Hydro to identify cost savings, efficiencies, new revenue streams and other changes to keep electricity rates low, while ensuring sound regulatory and financial oversight of BC Hydro and enabling implementation of government policy priorities.

Phase 1 was an internal review, carried out by an advisory group consisting of staff from the Ministry of Energy, Mines and Petroleum Resources, the Ministry of Finance and BC Hydro. This work was guided by the [2018 Comprehensive Review of BC Hydro Phase 1 – Terms of Reference \(PDF, 282 KB\)](#).

The key outcomes of Phase 1 are:

1. A new five-year (April 1, 2019 – March 31, 2024) rates forecast that reflects cost and revenue strategies to keep rates affordable; and
2. A regulatory framework that enhances the British Columbia Utilities Commission's (BCUC's) oversight of BC Hydro.

For further information on the outcomes, please read the [Comprehensive Review of BC Hydro: Phase 1 Final Report \(PDF, 828 KB\)](#).

Among other things, the Phase 1 Final Report has informed BC Hydro's April 1, 2019 – March 31, 2021 Revenue Requirements application, which was filed with the BCUC at the end of February 2019.

Indigenous Engagement on the Standing Offer Program

As a result of Phase 1, BC Hydro's Standing Offer Program (SOP) will be indefinitely suspended. The Province understands that a significant number of Indigenous Nations in British Columbia have expressed interest in developing or partnering on clean energy projects under this program. The Province is seeking to engage with Indigenous Nations and organizations to explore how the indefinite suspension of the SOP may affect the economic interests of individual Indigenous Nations, and to explore alternate opportunities to meet those interests, where they exist.

For further information, please visit the [BC Government's Engagement on the SOP Suspension website](#).

Independent Report on BC Hydro's Purchase of Power from Private Power Producers

Through a separate process, the Minister of Energy, Mines and Petroleum Resources contracted with an independent consultant, Ken Davidson, to examine the factors that have influenced BC Hydro's purchases of electricity from private power producers. The report also looks at the impact these purchases have had on BC Hydro costs and rates.

For more information, read the [Review of BC Hydro's Purchase of Power from Independent Power Producers Report \(PDF, 1.6 MB\)](#).

Attachment 3 – Biographies of Expert Advisors

Liisa O’Hara – Former BCUC Commissioner

Liisa O’Hara served as Commissioner to the BCUC for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province’s natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions. During her 30-year career, Liisa worked in the airline industry and was a senior oil pipeline executive with finance, corporate and regulatory responsibilities. Her regulatory and policy expertise spans both Canadian federal and provincial jurisdictions.

Stephen Koch – Director of Emerging Issues, Canadian Electricity Association

Stephen Koch works with senior Canadian Electricity Association members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. He received his Master of Business Administration from Lansbridge University in 2010.

David Bibby – Head of Global Digital Services – Finning International

David Bibby is a future-focused technology executive with over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Service (Finning Digital) at Finning International since January 2016. Prior to this, he has worked as the Vice President, Information Technology, at VanCity, and the Senior Vice President of Information Technology at Canaccord Genuity Corporation.

Launched in 2016 as an internal tech start-up, Finning Digital operates on the edge of Finning International, the world’s largest Caterpillar dealer. Like much of the Canadian economy, Finning International was grappling with declining sales amidst falling oil and gas prices and lower demand from the mining sector. Its customers were looking for ways to decrease costs and increase efficiencies. Finning Digital is leveraging digital technology to connect machines, people and sites, transact business and provide new solutions to transform their customers’ performance. They support Finning International in connecting data and technology with the expertise of employees world-wide to deliver an enhanced customer experience and improve customer outcomes. Finning Digital’s initiatives include IoT or machine-to-machine technology, which allows intelligent computer systems to transmit data and respond accordingly in real time without any human interaction.

Blake Shaffer – Adjunct Assistant Professor – University of Calgary, Department of Economics

Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake enjoyed a 15-year career that has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and finally as Director of Energy Trading at Transalta Corporation in Calgary, Alberta. Blake has served as a Policy Advisor for the Government of Alberta on various energy-related matters. He served on the 2015 Royalty Review Secretariat, playing a pivotal role in the development of Alberta's modernized royalty framework. His research focus is on energy and environmental policy.

Caitlin Liotiris – Energy Strategies Consultant

Caitlin Liotiris leads many of Energy Strategies' efforts in electricity market development, regional transmission planning and policy, and energy procurement arenas. Caitlin provides clients with a unique combination of technical capabilities and energy policy perspective. Her primary work efforts include advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into the firm's modeling tools. She applies her leadership, management, and broad industry perspective in directing and enhancing Energy Strategies' strategic thinking, research, and analytical capabilities.

Dan Woynillowicz – Policy Director – Clean Energy Canada

Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as Policy Director. Prior to that, he was the Director of Strategy and Communications and a senior analyst with the Pembina Institute from 2001 to 2012.

Actively engaged in Canadian energy and climate change policy and politics, Dan has authored or contributed to numerous reports on environmental, climate change and economic policy related to Canadian energy production and use. Since 2001, Dan has lobbied for policy change, testified before regulatory and legislative bodies and has been a frequent media commentator on energy issues. He has authored numerous reports, published commentaries in numerous publications including the Globe and Mail, Policy Magazine, Policy Options, Canadian Business, iPolitics, the Hill Times and Postmedia, and has presented at conferences and roundtables throughout North America and in Europe.

Dan holds a Master's degree in Environment and Management from Royal Roads University, where he conducted research on corporate climate change strategy in the Canadian oil and gas sector as a Social Science and Humanities Research Council scholar. He also holds a Bachelor of Science in Environmental Science from the University of Calgary.

Gwenne Farrell – former Vice President of MoveUP

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Previous to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union. Gwenne chaired a number of MoveUP Committees, including the Health and Safety, Convention, and Arbitration Review and Education Committees. She sat on the New West District Labour Council Executive and the Canadian Labour Congress' Energy Task Force. Gwenne has a Bachelor's degree in Economics from Simon Fraser University.

Mark Jaccard – Professor – Simon Fraser University School of Resource and Environmental Management

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. The only exception is 1992 to 1997, when he took a leave of absence to serve as Chair and Chief Executive Officer of the BCUC.

His PhD is from the Energy Economics and Policy Institute at the University of Grenoble. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies. For this career research, he was named a Fellow of the Royal Society of Canada in 2009 and British Columbia's Academic of the Year in 2008. He has contributed to several major processes and assessments, including the Intergovernmental Panel on Climate Change (93-96 and 2010-2012), the China Council for International Cooperation on Environment and Development (1995-2001 and 2007-2009), Canada's National Roundtable on the Environment and the Economy (2006-2009), British Columbia's Climate Action Team (2007-2009), and the Global Energy Assessment (2008-2012).

In 2006, his book, Sustainable Fossil Fuels, won the Donner Prize for top policy book in Canada. At Simon Fraser University, he teaches graduate and undergraduate versions of an interdisciplinary course in energy and materials sustainability, covering basic physics, technologies, economics, policy and human cognition and behavior.

Page 51 of 72 to/à Page 53 of 72

Withheld pursuant to/removed as

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INFORMATION BULLETIN

Ministry of Energy, Mines and Petroleum
Resources

[release number]

[Date]

Next phase of BC Hydro review focuses on climate goals and new opportunities

VICTORIA – To ensure BC Hydro is working for British Columbians, government is launching phase two of the BC Hydro review, focussing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

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Quick Facts:

- About 98% of BC Hydro's electricity generation comes from clean and renewable resources.
- In December 2018 government released its CleanBC plan.
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- In February 2019 government announced the results of Phase 1 of the BC Hydro review,

s.13

Commented [AG2]: Note: BCH's clean energy generation for 2018/19 was 97.8%. Assume you're rounding up here?

including:

- A new rates forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit ~~cumulative~~ bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years.
- Regulatory and legislative changes to restore the BCUC's power to make decisions on rate increases, deferral accounts and capital projects, as well as other decisions that affect British Columbians.
- Phase 2 of the BC Hydro review will support BC Hydro's development of its Integrated Resource Plan (IRP) to be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs, now and into the future.

s.13

Learn More:

To view the terms of reference for Phase 2 of the BC Hydro Review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker

Media Relations

Ministry of Energy, Mines and Petroleum Resources

250 952-0628

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 18, 2019 12:41 PM
To: Hume, Claire LASS:EX
Cc: Hop Wo, Hilary GCPE:EX
Subject: IB_Phase 2_BCH Review_Jul18_1145am_2019.docx
Attachments: IB_Phase 2_BCH Review_Jul18_1145am_2019.docx; ATT00001.txt

Hi Claire - please let me know if you have any questions.

INFORMATION BULLETIN

Ministry of Energy, Mines and Petroleum
Resources

[release number]

[Date]

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Learn More:

To view the terms of reference for Phase 2 of the BC Hydro Review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker

Media Relations

Ministry of Energy, Mines and Petroleum Resources

250 952-0628

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 18, 2019 12:35 PM
To: Hume, Claire LASS:EX
Subject: BCH Phase 2 IB

Hi Claire - we are putting out an IB tomorrow about Phase 2. It's pretty basic but I am just waiting for the final copy and will send to you.

I'm travelling but happy to touch base later this afternoon.

Sent from my iPhone

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 18, 2019 10:39 AM
To: Nash, Amber PREM:EX
Subject: Re: Teck Mines

I've asked for an updated one just to ensure it's up to date - there seems to be additional information from this week.

Sent from my iPhone

On Jul 18, 2019, at 11:09 AM, Nash, Amber PREM:EX <Amber.Nash@gov.bc.ca> wrote:

Hi Melissa,
Amber H mentioned you have a BN you could send my way regarding the Elk Valley Teck Mines. Could you send my way?

A
Amber Nash, Executive Coordinator
Office of the Premier
Mobile: 778-584-3330

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 18, 2019 5:57 PM
To: Mungall, Michelle EMPR:EX
Subject: Re: FYI- EMPR IB - Tomorrow Release: Next phase of BC Hydro review to focus on climate goals, new opportunities

s.22

Comprehensive Review of BC Hydro – Phase 2 **Biographies of Expert Advisors**

(The following have confirmed participation as of July 17, 2019)

David Bibby

David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the Vice President, Information Technology, at Vancity Savings and the Senior Vice President of Technology at Canaccord Genuity Corporation.

Gwenne Farrell

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Prior to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union.

Mark Jaccard

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as Chair and Chief Executive Officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.

Stephen Koch

Stephen Koch is the Director of Emerging Issues at the Canadian Electricity Association (CEA), the National Voice of Electricity in Canada. As Director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously President of the Oil Heat Association, Executive Director of NAIMA Canada and held other leadership roles which included Chairperson of Envirocentre.

Caitlin Liotiris

Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations,

and facilitating the incorporation of new policies and market structures into modeling tools. She is a Principal at Energy Strategies.

Liisa O'Hara

After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as Commissioner to the B.C. Utilities Commission (BCUC) for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions.

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Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake's 15-year career has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and Director of Energy Trading at Transalta Corporation in Calgary, Alberta. He is currently an Adjunct Assistant Professor at the University of Calgary, Department of Economics.

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Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as Policy Director.

Sent from my iPhone

On Jul 18, 2019, at 5:18 PM, Mungall, Michelle EMPR:EX <Michelle.J.Mungall@gov.bc.ca> wrote:

Who are our confirmed experts?

Sent from my iPhone

On Jul 18, 2019, at 3:32 PM, Sanderson, Melissa EMPR:EX <Melissa.Sanderson@gov.bc.ca> wrote:

Hi - just wanted to share with you the IB that is slated to be posted tomorrow (it's a busy news day so not expected to get attention). It's targeted for 11:45am and since the group is meeting we want to make sure this is out.

NR Number: Not Approved

NR Type: Information Bulletin

State: Planned

Planned Release Date: July 19, 2019 at 7:30 am

Media Distribution Lists: 000.0 - Victoria, BUSIN_BUSINESS, ENERG,
ETHID_INDIGENOUS, ETHALL_ALL ETHNIC, LEGIS_PRESS GALLERY,
LMain, MEDIA, MMVAN_MMVAN, PROVI_PROVINCE WIDE

No Lead Organization

Headline: Next phase of BC Hydro review to focus on climate goals, new opportunities

This email was auto-generated.

Not Approved
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

INFORMATION BULLETIN

Next phase of BC Hydro review to focus on climate goals, new opportunities

VICTORIA - To ensure BC Hydro is working for British Columbians, government is launching Phase 2 of the BC Hydro review, focusing on CleanBC electrification targets, future technologies, new roles for Indigenous Nations and examining future market opportunities.

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- * BC Hydro's role in supporting CleanBC and meeting British Columbia's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
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 - * a new rate forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years; and
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- * Phase 2 of the BC Hydro review will support BC Hydro's development of its Integrated Resource Plan (IRP) to be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs now and into the future.

Learn More:

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Contact:

Kent Karemaker
 Media Relations
 Ministry of Energy, Mines and Petroleum Resources
 250 952-0628

Connect with the Province of B.C. at: <http://news.gov.bc.ca/connect>

<DRAFT.pdf>

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 19, 2019 10:35 AM
To: McRae, Meghan GCPE:EX
Cc: Cuddy, Andrew EMPR:EX; Grewar, Colin GCPE:EX
Subject: Re: Hydro phase 2 IB

Thanks

Sent from my iPhone

On Jul 19, 2019, at 10:30 AM, McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca> wrote:

Hi there,
Here's the final IB, going out today at 11:45 AM.

Thanks,
Meghan
<DRAFT.pdf>

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 19, 2019 10:44 AM
To: Marriott, Sarah GCPE:EX
Subject: Fwd: Hydro phase 2 IB
Attachments: DRAFT.pdf; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "McRae, Meghan GCPE:EX" <McRae.Meghan@gov.bc.ca>
Date: July 19, 2019 at 10:30:57 AM PDT
To: "Sanderson, Melissa EMPR:EX" <Melissa.Sanderson@gov.bc.ca>, "Cuddy, Andrew EMPR:EX" <Andrew.Cuddy@gov.bc.ca>
Cc: "Grewar, Colin GCPE:EX" <Colin.Grewar@gov.bc.ca>
Subject: Hydro phase 2 IB

Hi there,
Here's the final IB, going out today at 11:45 AM.

Thanks,
Meghan

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 19, 2019 10:46 AM
To: Howlett, Tim GCPE:EX
Subject: Fwd: Hydro phase 2 IB
Attachments: DRAFT.pdf; ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "McRae, Meghan GCPE:EX" <McRae.Meghan@gov.bc.ca>
Date: July 19, 2019 at 10:30:57 AM PDT
To: "Sanderson, Melissa EMPR:EX" <Melissa.Sanderson@gov.bc.ca>, "Cuddy, Andrew EMPR:EX" <Andrew.Cuddy@gov.bc.ca>
Cc: "Grewar, Colin GCPE:EX" <Colin.Grewar@gov.bc.ca>
Subject: Hydro phase 2 IB

Hi there,
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Thanks,
Meghan

INFORMATION BULLETIN

Not Approved
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

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Contact:

Kent Karemaker
Media Relations
Ministry of Energy, Mines and Petroleum
Resources
250 952-0628

Connect with the Province of B.C. at: news.gov.bc.ca/connect

Duncan, Kate EMPR:EX

From: BC News On Demand GCPE:EX
Sent: July 19, 2019 11:46 AM
To: Cuddy, Andrew EMPR:EX
Subject: BC Gov News - Next phase of BC Hydro review to focus on climate goals, new opportunities

A banner with a background of light gray diagonal lines. In the center, the text "Government of B.C." is written in a large, bold, black serif font, underlined. Below it, "News on Demand" is written in a smaller, black serif font.

Government of B.C.

News on Demand

Next phase of BC Hydro review to focus on climate goals, new opportunities

To ensure BC Hydro is working for British Columbians, government is launching Phase 2 of the BC Hydro review, focusing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

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Energy, Mines and Petroleum Resources, Government Operations

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Please do not respond to this message

Duncan, Kate EMPR:EX

From: Sanderson, Melissa EMPR:EX
Sent: July 19, 2019 3:57 PM
To: Cuddy, Andrew EMPR:EX
Subject: Re: BC Hydro phase 2 - Stakeholder engagement

s.13

Sent from my iPhone

On Jul 19, 2019, at 3:54 PM, Cuddy, Andrew EMPR:EX <Andrew.Cuddy@gov.bc.ca> wrote:

See below from the attached IN that Les sent up. Note the list of stakeholders.

Additional Opportunities for Public Engagement

There is growing interest in understanding the Phase 2 Review process as well as organizations seeking opportunities to provide input into the Review. EMPR staff will arrange two 2-hour engagement sessions in late August/early September. Representatives from key stakeholder groups will be invited to attend either session where they will hear about Phase 2 process and Terms of Reference. At the two meetings, EMPR staff will solicit feedback from stakeholders on the following questions:

1. Do you have any suggestions on how BC Hydro can remain sustainable in the future while delivering benefits to all British Columbians?
2. Reflecting specifically on the Phase 2 Terms of Reference:
 - Do you have any suggestions on how to position BC Hydro for the future so that it can further support CleanBC?
 - With the changes occurring in the electricity sector, and what steps can BC Hydro take so that British Columbians can benefit from new technologies and markets?
 - Are there other areas of strength that BC can leverage with respect to (clean) energy trade?
 - What type of opportunities can BC Hydro provide Indigenous Nations within the energy sector?
 - Do you have any suggestions on how BC Hydro currently works with communities and whether there are alternate opportunities for the benefit of both parties?

Potential stakeholder groups include:

- BC Business Council
- BC Investment Management Corp.
- FortisBC
- Columbia Power Corp. / Columbia Basin Trust
- Clean Energy BC
- Brookfield Renewables
- Innergex
- City of Vancouver
- Association of Major Power Consumers
- Mining Association of BC

- Commercial Energy Consumers
- BC Old Age Pensioners' Organization
- Council of Forest Industries
- BC LNG Alliance
- Canadian Association of Petroleum Producers
- Pembina Institute
- BC Sustainable Energy Association / Sierra Club
- Suzuki Foundation

A similar but separate engagement process will be arranged with the following Indigenous groups:

- Assembly of FN
- Union of BC Indian Chiefs;
- First Nations Summit;

These stakeholders may also choose to provide written submissions to the Ministry for consideration.

Andrew Cuddy

Ministerial Assistant to the Honourable Michelle Mungall
Minister of Energy, Mines and Petroleum Resources

<106917 BCH Phase 2 Process Jul 3.pdf>

West, Michele L EMPR:EX

From: Tally, Holly GCPE:EX
Sent: July 3, 2019 11:36 AM
To: Norris, Nancy EMPR:EX
Cc: Giles, Alison GCPE:EX
Subject: FW: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch
Attachments: BCHP2_EAED_Website_Content_20190619 as pw.docx

Hi Nancy,

As the engagement part of Phase 2 has changed, will the content for the Ministry website be changing / need to go through approvals again?

I understand that GCPE will be responsible for Update #1 on the main Ministry page and that program staff will be responsible for Update #2 on the EAED page.

Are you in contact with the program person already? I ask because Alison and I have recently been muddling our way through some website change requests, and we're still figuring out who does what.

Thanks! Let me know if there is anything further I can do to assist.

Holly

From: Norris, Nancy EMPR:EX
Sent: June 26, 2019 3:10 PM
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Cc: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Cutler, Scott EMPR:EX <Scott.Cutler@gov.bc.ca>
Subject: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch

Hi Alison and Holly,

I wanted to follow up with you regarding our conversation this morning about the coordination of the TOR release, EMPR/EAED website updates and EngageBC website launch. I've attached the TOR, EMPR/EAED website content and IB/QA that have been approved by Les. Do you think we should update the language with a link to the public engagement on the EngageBC website?

Amy mentioned to me that GCPE may want to bucket the TOR release with the public engagement announcement, and that July 2 – 5 has been flagged as the potential release date for the TOR. I have a meeting with staff at EngageBC tomorrow to discuss what we need them to do and get a sense of their timing/charges. My understanding is that the timeline is doable as long as we can work closely with them on the content etc.

Is there anything further you need from me at this point, given the fairly tight timeline for all this?

Thanks,

Nancy

Page 002 of 285 to/à Page 004 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 3, 2019 11:53 AM
To: Norris, Nancy EMPR:EX; Tally, Holly GCPE:EX
Cc: Giles, Alison GCPE:EX
Subject: RE: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch

The highlight sentence says anyone provide comments any time on anything. Is that what we are after?

A

From: Norris, Nancy EMPR:EX
Sent: July 3, 2019 11:48 AM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: RE: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch

Hi Holly,

I can answer your second question now: yes, I have Irene Wingfield in EAED prepped to make the changes to the EAED website. If she is out of the office when the changes need to be made, I can contact EMPRCommunications@gov.bc.ca and someone in the Executive Services group (possibly Kevin McNeil) will make the changes.

I am not sure whether the language will need to be changed and go through approvals again. I'll have to discuss with Amy. We may want to amend the following sentence to reflect the new approach of targeted engagement in late August/early Sept (subject to the Minister's approval of the new approach) in addition to comments on the interim report later in the year:

Indigenous Nations and organizations, stakeholders and the public will have the opportunity to provide comments in two ways. Ideas and comments can be submitted at (email address) and feedback can be provided on the interim report.

Amy, what are your thoughts on updating the website language and the need to go through the approvals process again?

Thanks,

Nancy

From: Tally, Holly GCPE:EX
Sent: July 3, 2019 11:36 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: FW: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch

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Sent: June 26, 2019 3:10 PM

To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>

Cc: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Cutler, Scott EMPR:EX <Scott.Cutler@gov.bc.ca>

Subject: BCH Review Phase 2 - coordination of TOR release/EAED website update with Engage.bc website launch

Hi Alison and Holly,

I wanted to follow up with you regarding our conversation this morning about the coordination of the TOR release, EMPR/EAED website updates and EngageBC website launch. I've attached the TOR, EMPR/EAED website content and IB/QA that have been approved by Les. Do you think we should update the language with a link to the public engagement on the EngageBC website?

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Is there anything further you need from me at this point, given the fairly tight timeline for all this?

Thanks,

Nancy

West, Michele L EMPR:EX

From: Norris, Nancy EMPR:EX
Sent: July 4, 2019 9:22 AM
To: Wieringa, Paul EMPR:EX
Cc: Sopinka, Amy EMPR:EX; Tally, Holly GCPE:EX; Giles, Alison GCPE:EX; Cutler, Scott EMPR:EX
Subject: One change to the draft language for the EAED website re Phase 2 - FOR YOUR REVIEW
Attachments: BCHP2_EAED_Website_Content_20190704_UPDATED.docx

Hi Paul,

Given the Minister's request for targeted engagement at this point in the Review, I have adjusted one sentence in the draft language for the EAED website (attached), as follows:

s.13

Please let me know if you agree with this change. I'll work with GCPE to ensure the IB and Q&A language is consistent. Also, do you think we need to run this change by Les?

Thanks,

Nancy

Page 008 of 285 to/à Page 010 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Wieringa, Paul EMPR:EX
Sent: July 4, 2019 3:52 PM
To: Norris, Nancy EMPR:EX
Cc: Sopinka, Amy EMPR:EX; Tally, Holly GCPE:EX; Giles, Alison GCPE:EX; Cutler, Scott EMPR:EX
Subject: Re: One change to the draft language for the EAED website re Phase 2 - FOR YOUR REVIEW

Works for me. Yes Les should know

Sent from my iPhone

On Jul 4, 2019, at 9:22 AM, Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca> wrote:

Hi Paul,

Given the Minister's request for targeted engagement at this point in the Review, I have adjusted one sentence in the draft language for the EAED website (attached), as follows:

s.13

Please let me know if you agree with this change. I'll work with GCPE to ensure the IB and Q&A language is consistent. Also, do you think we need to run this change by Les?

Thanks,

Nancy

<BCHP2_EAED_Website_Content_20190704_UPDATED.docx>

West, Michele L EMPR:EX

From: Norris, Nancy EMPR:EX
Sent: July 4, 2019 4:00 PM
To: MacLaren, Les EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Sopinka, Amy EMPR:EX; Cutler, Scott EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: One change to the draft language for the EAED website re Phase 2 - FOR YOUR REVIEW
Attachments: BCHP2_EAED_Website_Content_20190704_UPDATED.docx

Dear Les,

Given the Minister's request for targeted engagement at this point in the Review, I have adjusted one sentence in the draft language for the EAED website (attached), as follows:

s.13

Paul has signed off on this change and asked me to confirm with you that you are comfortable with it as well. I'll work with GCPE to ensure the IB and Q&A language is consistent.

Thanks,

Nancy

Page 013 of 285 to/à Page 015 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: MacLaren, Les EMPR:EX
Sent: July 4, 2019 4:49 PM
To: Norris, Nancy EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Sopinka, Amy EMPR:EX; Cutler, Scott EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: Re: One change to the draft language for the EAED website re Phase 2 - FOR YOUR REVIEW

Thanks Nancy. I made that change on the revised version that went to the Minister.

Led

On Jul 4, 2019, at 3:59 PM, Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca> wrote:

Dear Les,

Given the Minister's request for targeted engagement at this point in the Review, I have adjusted one sentence in the draft language for the EAED website (attached), as follows:

s.13

Paul has signed off on this change and asked me to confirm with you that you are comfortable with it as well. I'll work with GCPE to ensure the IB and Q&A language is consistent.

Thanks,

Nancy

<BCHP2_EAED_Website_Content_20190704_UPDATED.docx>

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMPR:EX
Sent: July 11, 2019 7:48 AM
To: MacLaren, Les EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Darcy Quinn
Subject: Workshop Material - 19 July
Attachments: BCH Phase 2 Review Letter to the Experts clean.docx; Workshop Agenda 19 July clean.docx; Pre read materials for External Advisors July 19 clean.docx; BCH Review Phase II TOR 190618 Public.docx; Overview of Process and Work to Date.pptx; Potential Future Scenarios clean.docx; Key Themes (May 2019).docx

Les,

Please find attached materials for the expert advisors. They include:

- Cover letter to the experts from you and Diane (Darcy Quinn will sign on her behalf)
- Workshop Agenda
- EnviroScan: BC Historical Context, Key Trends and Global Issues
- Phase 2 Terms of Reference
- Overview of Process and Work to Date presentation
- Potential Future Scenarios
- Key Themes

Technology willing, we will be sending the letter via email to the experts and will provide them with access to a folder on our secure SharePoint site where the other documents will reside.

I'd be happy to walk you through the workshop agenda or the other material. A couple of things of note. We will be having a pre-meet with the experts at 9 a.m., which was sent to a smaller group as a separate invitation.

We have allocated a few minutes for opening remarks and have you and Ken P providing comments.

I understand you need to be on a call at 10:30 so we will ensure that you finish before then. However, if the timing is too tight for you, I understand that Ken P could speak for both allotted times.

Otherwise, I am working on speaking notes for you and intend to have them to you by the end of the day.

Diane will be walking through the Overview of Process and Work to Date presentation.

Amy



July XX, 2019

Ref:

Expert Name

Organisation

Address

Via Email:

Dear _____,

Thank you for agreeing to participate as an expert advisor to the second phase of the Comprehensive Review of BC Hydro ("Phase 2"). We are looking forward to gaining your insights and input as the Ministry of Energy, Mines and Petroleum Resources (EMPR) and BC Hydro work collaboratively to develop recommendations and strategies that will keep BC Hydro sustainable in the future through the continuing evolution of BC Hydro in response to changes in climate, consumer demand and technology and BC's commitment to reconciliation with Indigenous Nations. Your expertise in *[insert subject matter expertise from section 3 of the contract request form]* will provide a valuable perspective to this exciting and unique initiative. Including yourself, the other advisors that will be participating in the Phase 2 review are:

- David Bibby, Head of Global Digital Services – Finning International
- Gwenne Farrell, Former Vice President - MoveUP
- Mark Jaccard, Professor – Simon Fraser University School of Resource and Environmental Management
- Steven Koch, Director of Emerging Issues - Canadian Electricity Association
- Caitlin Liotiris, Principal Consultant - Energy Strategies LLC
- Liisa O'Hara, Former BCUC Commissioner
- Blake Shaffer, Adjunct Assistant Professor – University of Calgary, Department of Economics
- Dan Woynillowicz, Policy Director – Clean Energy Canada

To support your work the following documents are on the Phase 2 SharePoint site:

- Terms of Reference, which outlines the purpose, scope, approach and governance for Phase 2.

- EnviroScan: BC Historical Context, Key Trends and Global Issues, a paper that was jointly drafted by EMPR and BC Hydro
- Agenda with instructions for the July 19th Comprehensive Review workshop at BC Hydro's offices in Vancouver BC.
- Overview of Process and Work to Date presentation
- Future Potential Scenarios
- Key Themes

Each expert advisor is being asked to review the emerging energy trends and issues described in the environmental scan and provide their views on which of the trends would be the most impactful and relevant to BC Hydro. These views will be discussed at the upcoming workshop.

Please feel free to contact us if you have any questions.

On behalf of the Phase 2 Advisory Committee, thank you in advance for your participation in this process.

Sincerely,

Les MacLaren
Assistant Deputy Minister
Ministry of Energy, Mines and Petroleum Resources

Diane McSherry
Vice President, Projects
BC Hydro

Phase 2 Comprehensive Review Experts Advisors Meeting Agenda

July 19, 2019

9:45 am – 4:00 pm Dunsmuir Auditorium - 333 Dunsmuir Street

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
MORNING - Expert Advisor Orientation – Dunsmuir Auditorium 2		
Invitees	Phase 2 Review Committee, Advisory Committee, Focus Area Working Group Sponsors and Leads, Experts and Government Project Support Team	<ul style="list-style-type: none"> BC Hydro office at 333 Dunsmuir, Vancouver
9:45 – 10:00 am	Registration / coffee (15 min)	
10:00 – 10:40 am	Welcome, Opening Remarks and Introductions <ul style="list-style-type: none"> Safety Procedure & First Nations Recognition – Diane McSherry (5 min) Opening remarks - Les MacLaren (7 min) Opening remarks – Ken Peterson (7 min) Agenda review – Diane McSherry (5 min) Introductions of Experts – Diane McSherry (16 min) 	<ul style="list-style-type: none"> Diane will introduce all of the experts (your name, your title), following which you will be asked to present on your background and some details about your area of expertise (2 min)
10:40 – 11:00 am	Overview of Comprehensive Review and Process and Work to Date - Diane McSherry (20 min)	<ul style="list-style-type: none"> This content will be available in advance via the SharePoint site. Please review & think of any questions you may have about your role and/or the process.
11:00 am- 11:45 am	Introduction to Scenarios – Sanjaya de Zoysa (15 min) <ul style="list-style-type: none"> Review of scenarios and the trends that could get us there 	<ul style="list-style-type: none"> Sanjay will be presenting this content at the workshop. Summary material can be found at the SharePoint site.
11:45 – 12:30 pm	Lunch (45 min)	<ul style="list-style-type: none"> Move to Dunsmuir Auditorium 1

Commented [SAE1]: Can we confirm before the agenda goes out? We'll need speaking notes for Dave or Les.

Commented [AG2]: Remove slide 8 – will go on sharepoint – letter out by email referencing the material on the sharepoint. Test with Mark J. Use Mark as a test case (Darcy and Amy to follow up)

AFTERNOON - Panel Discussion with Experts - Dunsmuir Auditorium 1

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
Invitees	Above plus invite to all focus area working group members and other interested BC Hydro / Government employees or participants	
12:30 – 12:40 pm	Brief overview of session for the benefit of new participants – Jeff Nugent (10 min) <ul style="list-style-type: none"> What the afternoon session is about What happened in the morning session 	
12:40 pm – 2:30pm	Plenary Discussion – Jeff Nugent (1 hr 40 min) <ul style="list-style-type: none"> Experts provide their thoughts on Phase 2 Comprehensive Review topics based on their expert perspective (via 'Armchair' interview setup) <ul style="list-style-type: none"> Q/A by Jeff Nugent between the Experts 	s.13

2:30 pm – 2:40 pm	BREAK <i>(10 min)</i>	
2:40 pm – 3:55 pm	Plenary Discussion continues – Jeff Nugent <i>(1 hour 10 min)</i> <ul style="list-style-type: none"> Facilitated Q/A format with audience 	<ul style="list-style-type: none"> Focus will be Q/A session with the audience
3:55 pm – 4:00 pm	Next Steps / Close – Jeff Nugent <ul style="list-style-type: none"> Next steps Close 	<ul style="list-style-type: none"> Following this workshop you will be provided with a summary of the key themes and discussion points

Comprehensive Review Phase 2

Workshop Pre-reading Material for

Expert Advisors

Table of Contents

Introductions for Expert Advisor.....	Page 2
BC Historical Context.....	Pages 3-7
EnviroScan: Key Global and Industry Trends.....	Pages 8-16

Introduction for External Experts:

This document is intended to solicit your input on key global and industry trends that are relevant to BC Hydro in the future.

Please review the **July 19 Workshop Agenda**, the **EnviroScan: Key Global and Industry Trends** including the **BC Historical Context** and the **Phase 2 Terms of Reference**.

For the July 19 workshop, in addition to providing a brief introduction, advisors will be asked to share their knowledge in an 'armchair session' with a moderator provoking discussion with the following questions:

- Given your experience and knowledge of the trends that are emerging, can you provide your views on what you think are the most important issues that BC Hydro will need to address in the future?
- What are your thoughts on how BC Hydro should prepare to meet the objectives outlined in the CleanBC plan (see www.cleanbc.gov.bc.ca)?
- What are your general comments on the trends outlined in the pre-read and other trends you are seeing that could inform the Phase 2 Review? Which of these trends are most relevant / impactful when considering the future of BC Hydro, and why?
- Are there any other trends, actions, risks or themes that should be considered / explored within each of the four areas of focus?

In addition, additional material is available on the Phase 2 SharePoint site:

- A PowerPoint Presentation entitled: Overview of Process and Work to Date;
- Four Planning Scenarios; and
- Identified Key Themes

Reflecting on the four planning Scenarios, please be prepared to address the following questions:

- Please comment on the four planning scenarios in terms of providing a basis for considering a broad range of possible futures, and whether there are additional distinct scenarios that should be included for thinking of future uncertainty.
- For each of the scenarios (and any additional futures you have identified) please comment briefly on the key implications for BC Hydro and the key risks and opportunities for BC Hydro to remain relevant.

About BC Hydro

BC Hydro's mission is to safely provide our customers with reliable, affordable and clean electricity throughout British Columbia. BC Hydro is one of the largest energy suppliers in Canada, generating and delivering electricity to 95 per cent of the population of British Columbia. BC Hydro operates an integrated system backed by 30 hydroelectric plants and two thermal generating stations, as well as approximately 79,000 kilometres of transmission and distribution lines. BC Hydro's electricity generation is 98 per cent clean.

As a provincial Crown Corporation, the owner and sole shareholder of BC Hydro is the Province of British Columbia. BC Hydro reports to the Provincial Government through the Minister of Energy, Mines and Petroleum Resources and the Government's expectations are expressed through the following legislation, policy and instructions:

- The Hydro and Power Authority Act (gives BC Hydro its mandate to generate, manufacture, conserve, supply, acquire, and dispose of power and related products).
- The Utilities Commission Act
- The BC Hydro Public Power Legacy and Heritage Contract Act
- The 2010 Clean Energy Act (CEA)
- The Province's 2007 BC Energy Plan

Powerex Corp. (Powerex) and Powertech Labs Inc. (Powertech) are two wholly-owned subsidiaries of BC Hydro.

Powerex is a key participant in energy markets across North America, buying and selling wholesale power, renewable and low-carbon energy and products, natural gas, ancillary services and financial energy products.

Powertech is internationally recognized for providing research and development, testing, technical services and advanced technology services to clients around the world, including BC Hydro.

Page 026 of 285 to/à Page 038 of 285

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Terms of Reference

Comprehensive Review of BC Hydro – Phase 2

Context

The 2017 Mandate Letter to the Minister of Energy, Mines and Petroleum Resources directs the ministry to undertake a Comprehensive Review of BC Hydro and to work with BC Hydro to develop a refreshed plan to keep rates affordable over the long-term.

In June 2018, Government announced a two-phase approach for carrying out the Minister's mandate:

- Phase 1 - examine opportunities to keep BC Hydro's rates affordable by increasing BC Hydro's revenues, reducing its costs and protecting ratepayer interests by re-empowering the British Columbia Utilities Commission to oversee BC Hydro's costs and activities; and
- Phase 2 - explore global energy sector shifts and provincial strategies that could transform the way BC Hydro does business.

Phase 1 of the Comprehensive Review of BC Hydro is now complete. On February 14, 2019 the Province released a final report on this first phase, which details actions to ensure sound financial and regulatory oversight of BC Hydro, and a five-year rate forecast reflecting cost and revenue strategies to keep rates affordable.

In December 2018, Government released its CleanBC plan, a combined economic development, energy and climate strategy. CleanBC offers a pathway that will enable our province to seize opportunities for innovation and growth. To meet the goals in CleanBC, we must increase our use of cleaner energy, including electricity generated from renewable sources, to shift away from our reliance on fossil fuels for transportation, industry, and buildings. CleanBC's actions will get British Columbia approximately 75% of the way to legislated 2030 greenhouse gas reduction targets. Achieving the remaining 25%, and ultimately the 2040 and 2050 targets, will require additional clean energy.

Objective

The objective of the Comprehensive Review's second phase is to develop recommendations for how BC Hydro can accomplish the provincial policy objectives laid out in the CleanBC plan, including how BC Hydro can support meeting British Columbia's legislated 2030, 2040, and 2050 greenhouse gas reduction targets in a manner that ensures BC Hydro sustainability in the future for the benefit of British Columbians.

The Review will consider the potential impacts of North American energy and market trends, the needs of current and future BC Hydro customers, evolving technologies and utility structures, the affordability of electricity to consumers, and opportunities to involve indigenous peoples and communities.

The recommendations from the Phase 2 Review will be used to inform BC Hydro's Integrated Resource Plan that will be filed with the British Columbia Utilities Commission in early 2021.

Governance

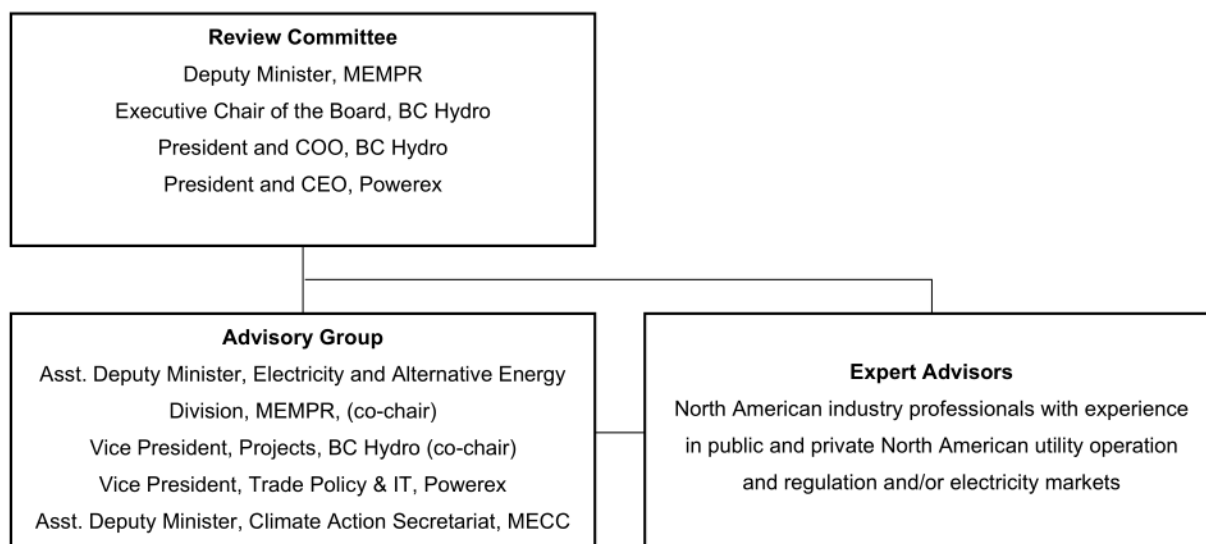
Overseeing the Phase 2 Review process will be a Review Committee consisting of:

- Deputy Minister of Energy, Mines and Petroleum Resources,
- Executive Chair of the BC Hydro Board of Directors,
- President and Chief Operating Officer of BC Hydro, and
- Chief Executive Officer of Powerex.

This Review Committee is responsible for ensuring that the objective of the second phase of the Review is met.

An Advisory Group consisting of senior staff from the Ministry of Energy, Mines and Petroleum Resources (MEMPR), Ministry of Environment and Climate Change (MECC), BC Hydro, and Powerex will provide advice to the Review Committee, draft material for their consideration and prepare a final report that includes the recommendations of the Review Committee. Industry experts that have extensive experience in public and private North American utility operation, regulation, and/or electricity markets will inform and guide Review Committee recommendations.

Governance Chart - Phase 2 Review:



Areas of Interest

The Review Committee, with the support of the Advisory Group and advice from industry experts, is tasked with addressing questions within four areas of interest, with the goal of gathering the information necessary to develop a final report with recommended actions for the utility.

1. Supporting CleanBC

CleanBC is central to reducing greenhouse gas emissions while also meeting BC's energy and economic development goals. Any recommended changes to BC Hydro must achieve the electrification goals set out in CleanBC to meet our legislated 2030 greenhouse gas reduction targets and lay the groundwork for additional greenhouse gas emissions reductions to meet the province's legislated 2040 and 2050 emissions targets. Achieving the electrification targets will support the production of lower carbon natural resources for export. The Review will identify additional opportunities to reduce greenhouse gas emissions through fuel-switching, electrification, energy efficiency and conservation and will include responses to the following questions:

- What is required to ensure that new customer demand for access to clean electricity from the grid is achieved in an efficient, cost-effective, and timely manner?
- How should the costs of this new access be allocated between existing and new customers? Is there a role for government(s) in financing the infrastructure to provide this access?

- What can/should BC Hydro do to encourage fuel switching to increase the use of clean electricity as an alternative to fossil fuels and reduce greenhouse gas emissions?
- How can BC Hydro and the Province's CleanBC Better Homes/Better Buildings program coordinate further to address climate change by reducing greenhouse gas emissions and meeting CleanBC objectives?

2. Thriving in an Evolving Electricity Sector

The Phase 2 Review final report will describe the trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities). Recommendations will address how BC Hydro must adapt to a broad range of future scenarios and evolve its existing structure, services, and assets in support of ensuring BC Hydro's sustainability for the benefit of all British Columbians. At a minimum, the Phase 2 Review final report will address the following questions:

- Which industry trends are most likely to have an impact on BC Hydro?
- What actions are needed to ensure that BC Hydro is able to benefit from new markets and integrate new technologies while keeping rates affordable?
- Are there opportunities for BC Hydro to provide customers with more energy choices and information?
- Are changes needed to BC Hydro's governance structure to allow the utility to pursue new business opportunities?

3. Leveraging Our Strengths

BC Hydro's wholly-owned subsidiary Powerex currently buys and sells electricity in other markets throughout the Western Interconnection. The Phase 2 Review will consider whether there are opportunities to enable increased participation in external markets to the benefit of BC Hydro ratepayers. The Phase 2 final report will make recommendations that consider each of the following questions:

- What constraints, if any, reduce Powerex's ability to trade electricity in the Western Interconnection today or in the future?
- Is there an opportunity or actions that can be taken that will enable Powerex to expand its business in markets outside of BC, further leveraging BC Hydro's clean generation and/or Powerex's expertise in energy markets?

- How should cost effective clean energy located outside of BC be considered in BC Hydro's planning and operations?
- Is there an opportunity to own and/or operate assets outside of BC Hydro's current service area that would benefit BC Hydro's ratepayers?

4. Opportunities for Indigenous Nations and Communities

In support of BC's commitment to reconciliation with Indigenous Peoples, the Review will consider future opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services. In relation to BC Hydro's existing business and proposed new lines of business, the Phase 2 Final Report will include recommendations to enhance Indigenous Nations' participation in the energy sector. The review will also consider how BC Hydro currently works with communities and explore alternatives.

For each of these four areas of interest, the Expert Advisors will provide advice on opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities for improved organizational readiness to enhance BC Hydro's financial and operational sustainability to keep rates affordable over the long term.

Process

The Review Committee and Advisory Group will undertake the Review June to November, 2019 utilizing the advice of the Expert Advisors as and when needed. In late fall 2019, stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results.

A final report will be completed in early 2020 and will outline the Review Committee's recommendations on policy, governance, and strategy to ensure BC Hydro's sustainability and ability to contribute to CleanBC and other Government policy objectives.

Comprehensive Review Phase II

Overview of Process and Work to Date

Diane McSherry (Co-Chair Phase 2 Comprehensive Review)

July 19, 2019

Phase 2 – Overall Objective

Phase 2 Objective

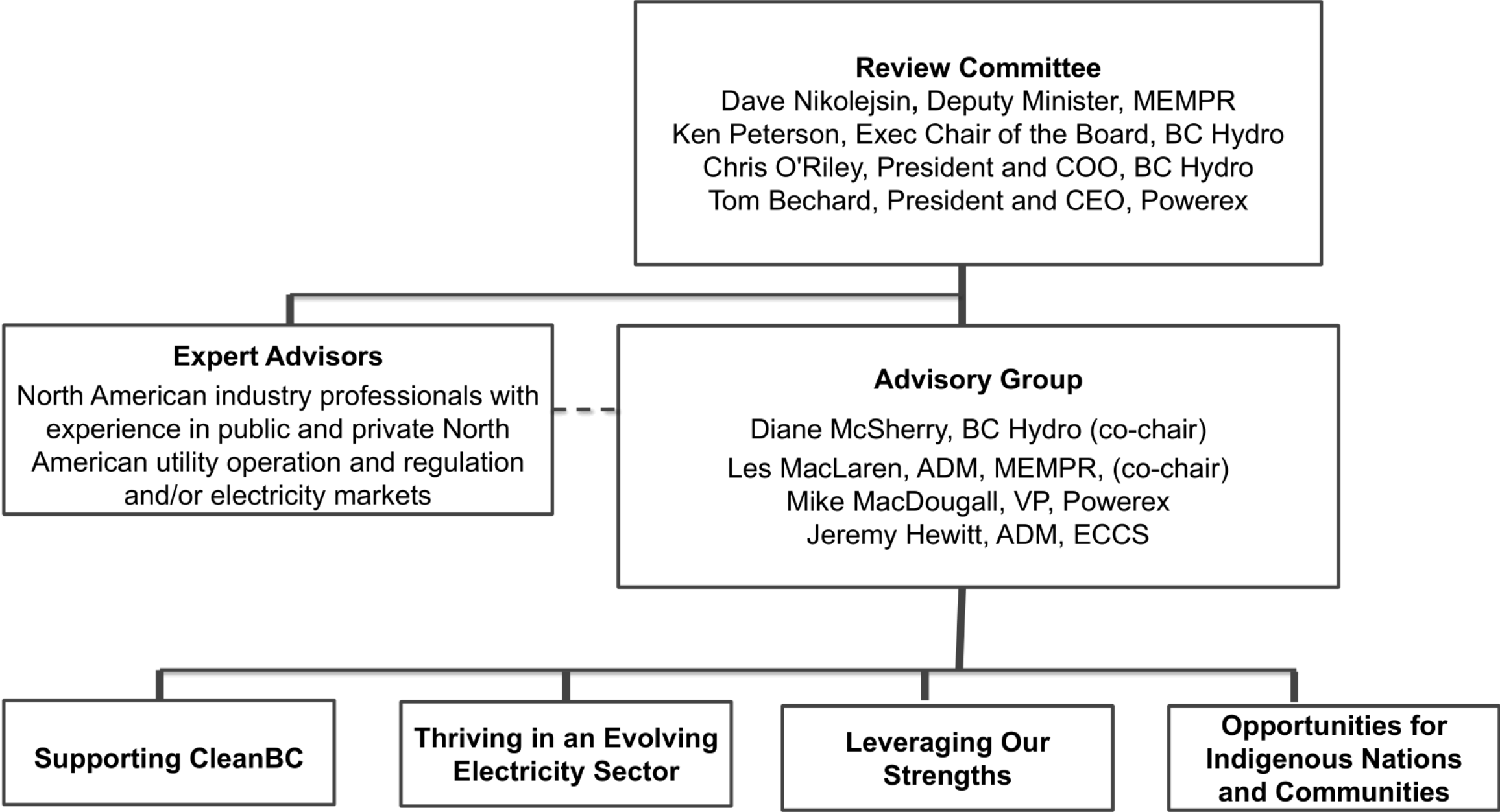
To create a strategy, for the benefit of British Columbians, for BC Hydro to continue to provide its customers with access to clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and BC’s commitment to reconciliation with Indigenous Nations.

Component Objectives

In the context of the overall strategic objective, identify and evaluate a range of ideas that will position BC Hydro to:

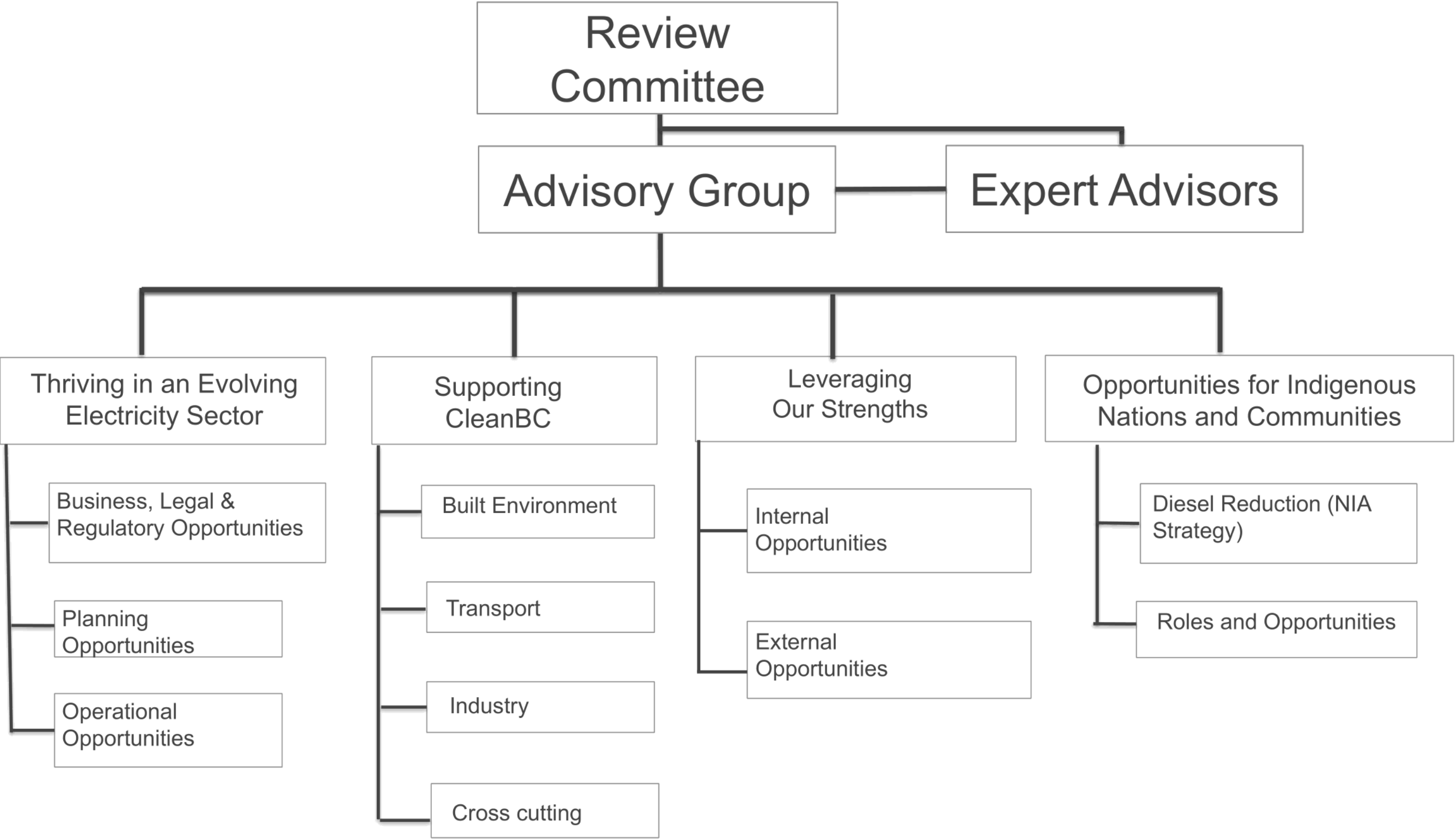
- Support provincial climate change objectives outlined in the CleanBC plan
- Adapt to a broad range of future scenarios to ensure its future sustainability
- Increase participation in external markets to the benefit of ratepayers
- Support BC’s commitment to reconciliation with indigenous people
- Identify opportunities for local communities

Governance

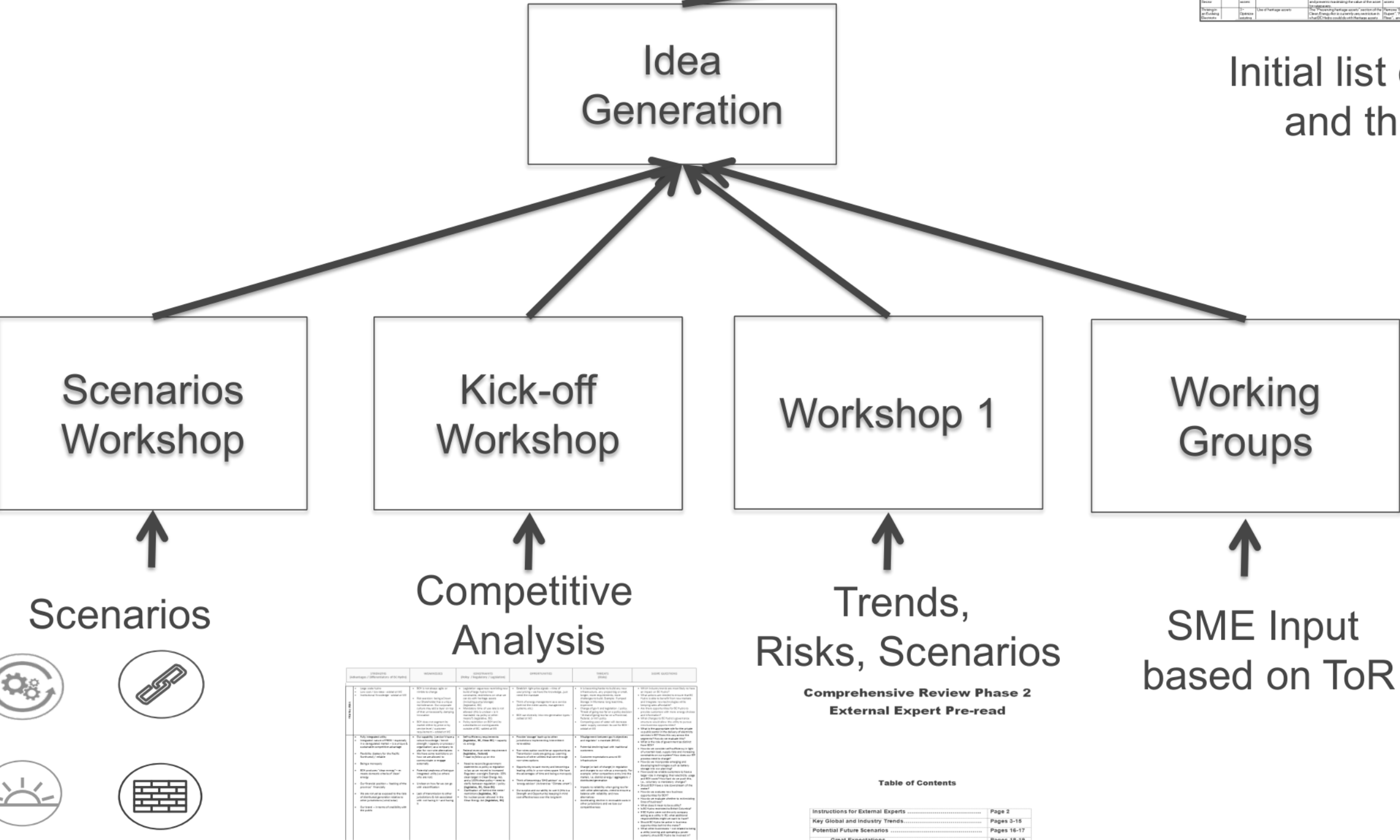
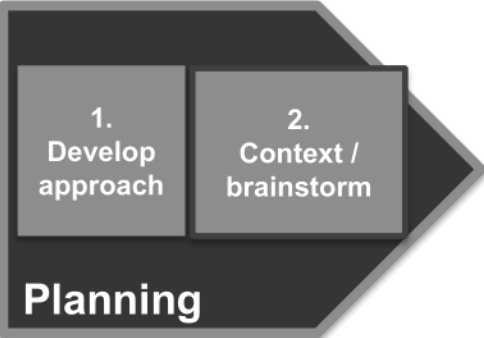


Privileged & Confidential – May include advice developed for Cabinet/Minister/Government

Working Group Structures



Planning – Context and Brainstorming



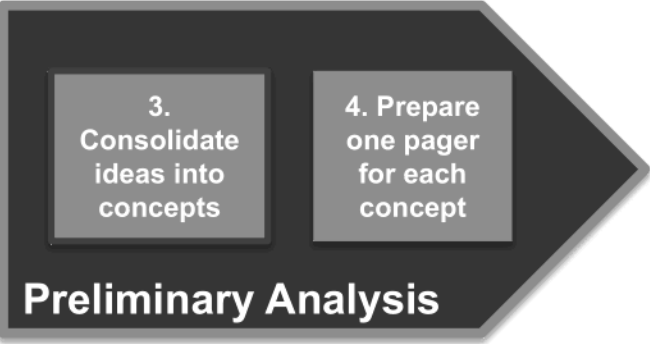
Confidential – may contain policy advice to the Province Minister/Cabinet Comprehensive Review - Phase 2 Options									
Option	Issue	Phase	Topic	Options	Options	Options	Options	Options	Options
Option 1: Energy Efficiency	Energy Efficiency	Phase 1	Energy Efficiency	Energy Efficiency	Energy Efficiency	Energy Efficiency	Energy Efficiency	Energy Efficiency	Energy Efficiency
Option 2: Renewable Energy	Renewable Energy	Phase 2	Renewable Energy	Renewable Energy	Renewable Energy	Renewable Energy	Renewable Energy	Renewable Energy	Renewable Energy
Option 3: Nuclear Energy	Nuclear Energy	Phase 3	Nuclear Energy	Nuclear Energy	Nuclear Energy	Nuclear Energy	Nuclear Energy	Nuclear Energy	Nuclear Energy
Option 4: Hydrogen Energy	Hydrogen Energy	Phase 4	Hydrogen Energy	Hydrogen Energy	Hydrogen Energy	Hydrogen Energy	Hydrogen Energy	Hydrogen Energy	Hydrogen Energy
Option 5: Geothermal Energy	Geothermal Energy	Phase 5	Geothermal Energy	Geothermal Energy	Geothermal Energy	Geothermal Energy	Geothermal Energy	Geothermal Energy	Geothermal Energy
Option 6: Wind Energy	Wind Energy	Phase 6	Wind Energy	Wind Energy	Wind Energy	Wind Energy	Wind Energy	Wind Energy	Wind Energy
Option 7: Solar Energy	Solar Energy	Phase 7	Solar Energy	Solar Energy	Solar Energy	Solar Energy	Solar Energy	Solar Energy	Solar Energy
Option 8: Biomass Energy	Biomass Energy	Phase 8	Biomass Energy	Biomass Energy	Biomass Energy	Biomass Energy	Biomass Energy	Biomass Energy	Biomass Energy
Option 9: Tidal Energy	Tidal Energy	Phase 9	Tidal Energy	Tidal Energy	Tidal Energy	Tidal Energy	Tidal Energy	Tidal Energy	Tidal Energy
Option 10: Wave Energy	Wave Energy	Phase 10	Wave Energy	Wave Energy	Wave Energy	Wave Energy	Wave Energy	Wave Energy	Wave Energy

Comprehensive Review Phase 2
External Expert Pre-read

Table of Contents

Instructions for External Experts	Page 2
Key Global and Industry Trends	Pages 3-15
Potential Future Scenarios	Pages 16-17
Great Expectations	Pages 18-19
Tech Transforms	Pages 20-21
Integrated Markets	Pages 22-23
Borders Rising	Pages 24-25

Consolidation – Initial Concepts for Review



Business Concepts

s.12; s.13; s.16; s.17

Work Stream Sponsor

Clean BC

Thriving in the
Evolving
Electricity Sector

Opportunities for
Indigenous
Nations and
Communities

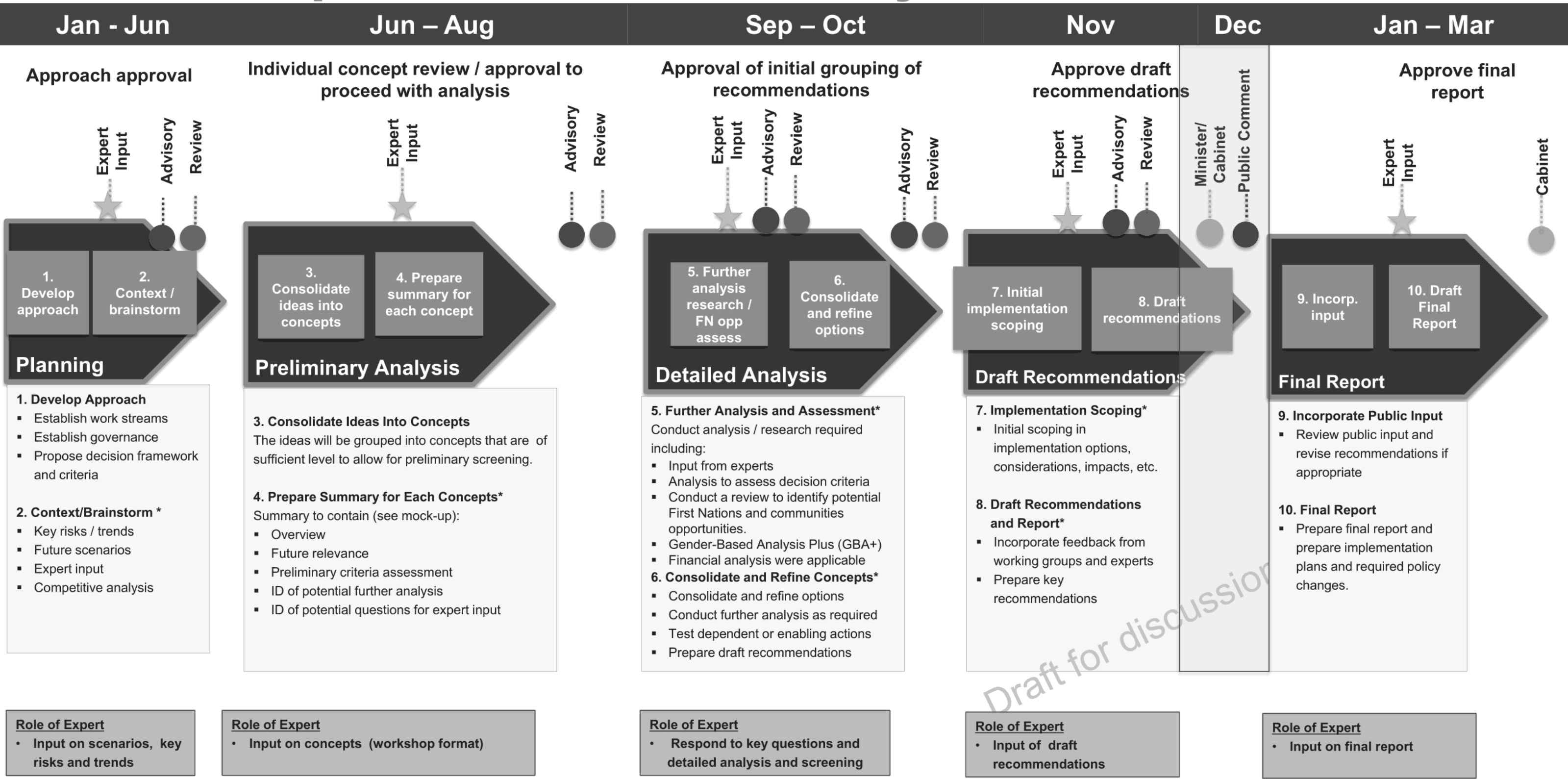
Leveraging Our
Strengths

Policy Concepts

s.12; s.13; s.16; s.17

Currently Under Development
with Work Streams some
concepts may span across work
streams

Phase II Comprehensive Review - Lifecycle



★ Multiple iterations may be required. Portfolio analysis may be used as appropriate

Privileged & Confidential – May include advice developed for Cabinet/Minister/Government

Comprehensive Review Phase 2

Potential Future Scenarios

Table of Contents

Potential Future Scenarios	Pages 2-3
Great Expectations.....	Pages 4-5
Tech Transforms.....	Pages 6-7
Integrated Markets.....	Pages 8-9
Borders Rising.....	Pages 10-11

Introduction

During the July 19, 2019 Comprehensive Review Workshop, the project team will introduce BC Hydro's **Future Potential Scenarios**. The purpose of these four 'future potential scenarios' is to help broaden thinking about what the future could hold, and what the Province of British Columbia and BC Hydro would need to do to remain relevant. The scenarios are meant to be diverse yet plausible futures.

How will technology be shaping our lives? How will society be addressing climate change? With a thirty-year time frame, there's no certain way to know the answers to questions like these, but thinking about each scenario can help think about a range of answers.

The process of developing narratives about a range of futures to inform decision making today is called "scenario planning". Many utilities and companies around the world use scenario planning in their strategy development to allow them to manage the risks associated with an uncertain future. At BC Hydro, has developed four future scenarios to help inform its long-term

planning. The scenarios are focused on how energy is used and produced in North America and allow us to think about implications for B.C. and BC Hydro.

What scenarios ARE	What scenarios are NOT
A tool to inform our planning	NOT plans
Descriptions of a range of possible futures	NOT predictions of the future
Constructed by focusing on chosen uncertainty 'drivers'	NOT constructed from feared or desired futures
Creative, with provocative names to help us remember the stories	NOT modelling exercises based on standard rules

How scenarios can help make decisions

While one cannot predict the future, the scenarios can help think about plausible and diverse ways in which the future could unfold. Constructing different future scenarios helps plan for the long-term. These scenarios can be used as a tool to:

- Stretch internal planning and thinking by considering a wide range of 'what if' questions.
- Test out new strategies so that chosen actions are sound across a number of possible scenarios.
- Identify risks that may otherwise not be seen.
- Generate new options or opportunities that might not have contemplated otherwise.

What factors are driving the scenarios?

When scenarios were developed, four factors emerged that became key determinants of the narratives. How these factors, or uncertainties, play out will have a profound impact on how energy is used and produced. These are:

- How society approaches climate change, along with the associated policies that are put in place to address climate change.
- Future customer expectations and consumer preferences.
- The global economy, key players in the global economy, and international trade.
- Technology advancements, particularly in the energy industry.

Each of the scenarios explores a range of the above factors in combination with one another. The result is four scenarios that provide a spectrum of *diverse, yet plausible* futures.

The scenarios

The next sections are brief synopses of the narratives we developed for each scenarios. While the synopses highlight important differences between the present and the future in key areas such as policy, daily life, energy production, and energy consumption, they do not necessarily capture the full diversity of experiences that customers might have. For example, rural and urban, high and low income, and small and large customers will have different experiences and expectations. It is important to keep awareness at the forefront of this analysis.



**Great
Expectations**



**Tech
Transforms**



**Integrated
Markets**



**Borders
Rising**



Great Expectations

Regional clean solutions

No lone technological breakthrough or policy change can take sole credit for GHG reductions across the industrialized world. While climbing carbon prices provided incentive for innovation and emission reduction in the utility and transportation industries, these taxes don't account for advances in the rest of the economy. In the end, a mix of policies at all government levels, such as special funding for clean solutions development and stringent energy efficiency standards, provide momentum for greenhouse gas reductions.

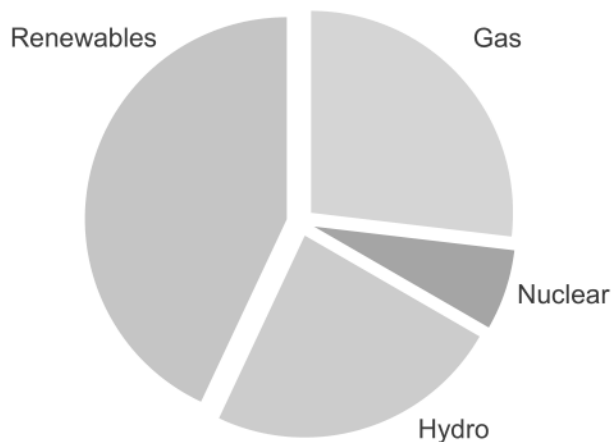


North America in a 'Great Expectations' world

"Pressure to stay a step ahead of intensifying climate change policies and growing demand for green products has translated into a sweeping change in societal attitudes. A new form of patriotism – where people are personally invested in ensuring policies for one's own jurisdiction are continually being improved upon – has taken a deep hold in North America."

– New York Times, January 25, 2039

Electricity Generation by Type in Western North America in 2050

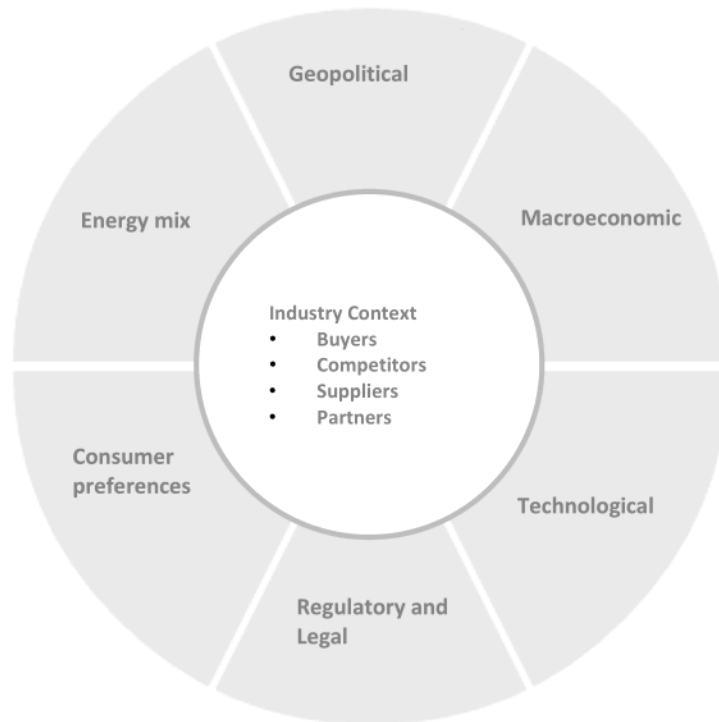


Along the path to this world, we could see:

- Strong competition for the "cleanest" or "greenest" branding among businesses and governments
- An increase of utility-scale wind and solar projects
- Small-scale energy storage technology and renewables only viable in specific applications
- Continued localized impacts of fracking as natural gas continues to play a significant role in power generation
- Strict codes and standards for efficiency, and a strong conservation culture
- Jurisdictional standards that exceed federal policy
- Expansion of electrified public transportation

Large supplies of renewable energy and advances in storage solutions enable extensive electric vehicle adoption and industry electrification.

BUSINESS CONTEXT (next 3 decades) – GREAT EXPECTATIONS



Geopolitical

- World order largely unchanged from status quo. US still the sole superpower and #1 economy
- Strong competition among jurisdictions at all levels (municipal, provincial, federal) to be branded “clean”

Macroeconomic

- The global economy continues to see robust growth
- Oil and natural gas have taken divergent paths with demand for oil continuing to shrink while LNG demand has skyrocketed.

Technological

- Solar costs have come down significantly.
- Advances in renewable natural gas and liquid biofuel technologies have resulted in notable cost declines.

Regulatory and Legal

- Climate policies are uncoordinated among jurisdictions.
- Local governments (municipalities) are vocal and influential
- Requirements for First Nations consent has continued to increase

Consumer preferences

- Strong demand for clean energy and electric vehicles.
- Consumers engaged in energy efficiency and conservation.

Energy Mix in North America

- Renewables backed up by highly efficient gas turbines are the norm.

Buyers

The industrial sector and the transportation sector drive demand growth. Focus on efficiency and conservation put a lid on the residential/commercial loads in spite of fuel switching for heating.

Competitors

Cheap solar and gas in the US has kept the retail access debate alive.

Suppliers

Independent power producers and large construction companies are needed to build the generation and transmission infrastructure required to serve the growing load.

Partners

First Nations relationships are important more than ever. Municipalities have set themselves renewable energy goals and are looking for BC Hydro for clean energy.



Tech Transforms

Technology and consumer expectations disrupt current energy market models

Early signs of massively disruptive change were already evident at the end of the 20th century. Even then, it was clear that an insatiable demand for reasonably priced products that also enable independence would drive consumerism in the following decades. By 2020, artificial intelligence, 3D printers, and virtual reality found viable applications within the mainstream market, and by 2025 important advancements in renewables and energy storage meant that electricity self-generation was now within the reach of the average household. These advancements, coupled with the rise of blockchain currency, allowed North Americans to break away from traditional institutions.



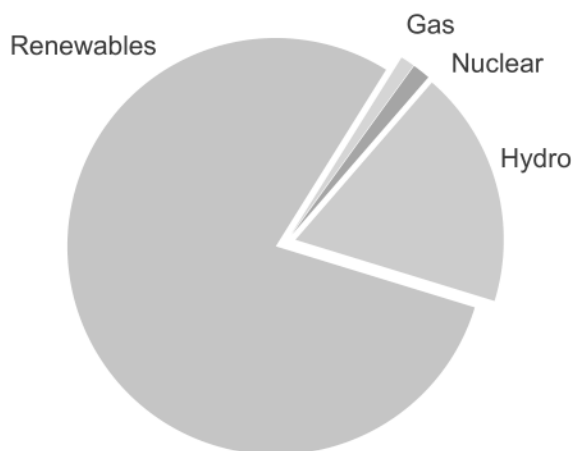
These advancements, coupled with the rise of blockchain currency, allowed North Americans to break away from traditional institutions.

North America in a 'Tech Transforms' world

"I remember watching "The Jetsons" and thinking it would be so cool to live in that world! The most futuristic thing we had back then was a remote control for the garage door. I never would have thought I'd be getting around in driverless cars and generating most of my own energy."

– Utility worker (retirement speech), May 30, 2030

Electricity Generation by Type in Western North America in 2050

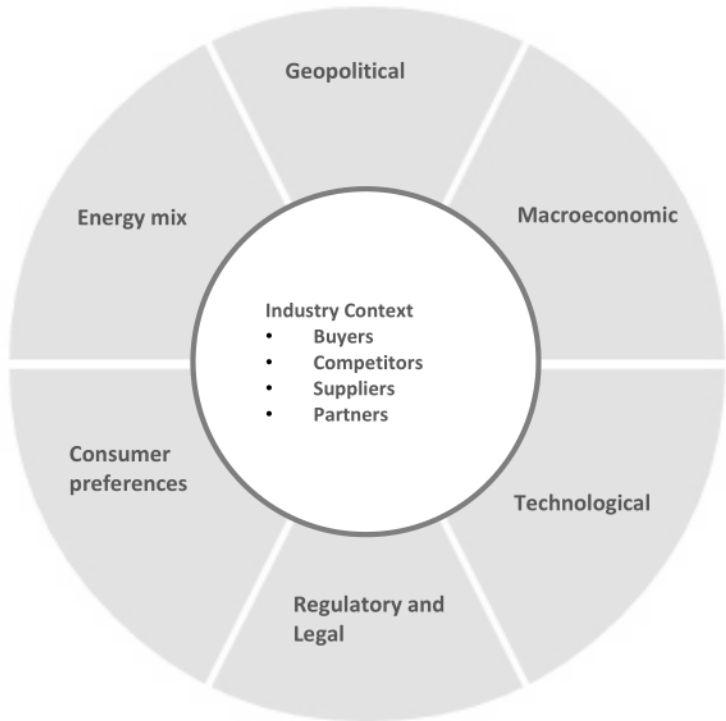


Along the path to this world, we could see:

- Very power savvy residents and businesses with changing expectations, wants, and needs
- Strong customer desire for personalized energy management services
- Shared automated electric vehicle networks
- The emergence of short-distance electrified air transportation and hyperloop technology
- Increasing disparity as communities and individuals differ in their ability or desire to adopt technology
- Businesses and residents generating their own electricity and selling it to neighbours and brokers
- A transformation of the utility model from generator to back-up energy provider

While electricity consumption is high in this world, self-generation eliminates a significant portion of electricity load supplied by the utility.

BUSINESS CONTEXT (next 3 decades) – TECH TRANSFORMS



Geopolitical

- International boundaries are blurred. Free movement of goods and people.
- Technological and political barriers to the exchange of information have diminished and the world is a global village.

Macroeconomic

- An advance in technology combined with diminished consumerism has meant that traditional industries such as oil and gas, forestry, and mining have shrunk.

Technological

- Solar and battery technologies have advanced as has the widespread use of Artificial Intelligence including the use of robots to do labor intensive, high risk work.

Regulatory and Legal

- Governments increasingly unwilling to regulate or allow monopolization

Consumer preferences

- Very savvy consumers with very discriminatory preferences who use AI to ensure they efficiently acquire products that meet their preferences.

Energy Mix in North America

- Distributed generation is prevalent aided by cost effective battery storage.

Buyers

Data centers and cloud computing clusters are a significant segment of the industrial load.

Competitors

Community choice aggregators are active throughout the continent. Large corporations such as Google are the parent companies of the CCA's.

Suppliers

Suppliers of grid-scale batteries that can be installed at distribution sub-stations. Tech companies that provide smart grid solutions and robotics.

Partners

Energy management system providers who are active behind the meter.



Integrated Markets

Inter-regional clean solutions

Repercussions of increasing incidents of drought, dropping water table levels, and increasing toxicity from fracking all came to a head in the early 2020's. The result was a global banding together to fight a common problem—climate change. Through the course of cutting fossil fuel dependency, nations decided they would be better off cooperating on mega-scale renewable energy projects that together, could serve entire continents. Around the same time, due to major advances in electricity transmission technology, infrastructure costs dropped rapidly. This would become the critical piece for North America's largest and most aggressive transmission project: the construction of a transmission line from the Pacific Northwest to Mexico City.

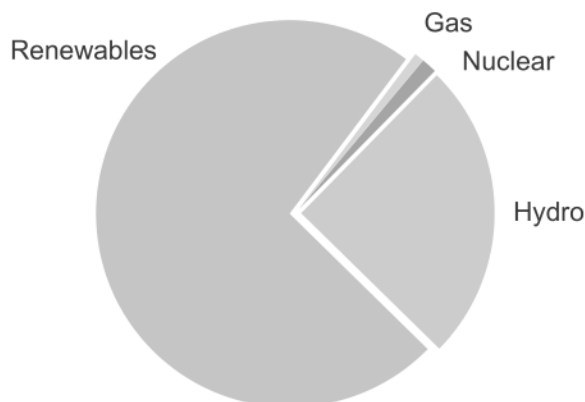


North America in an 'Integrated Markets' world

"I just got my first electricity bill since the big transmission line came into service. There's a graph with my bill that breaks down where all my energy comes from. I couldn't believe how far away some of the places were!"

— Residential electricity customer, September 21, 2035

Electricity Generation by Type in Western North America in 2050

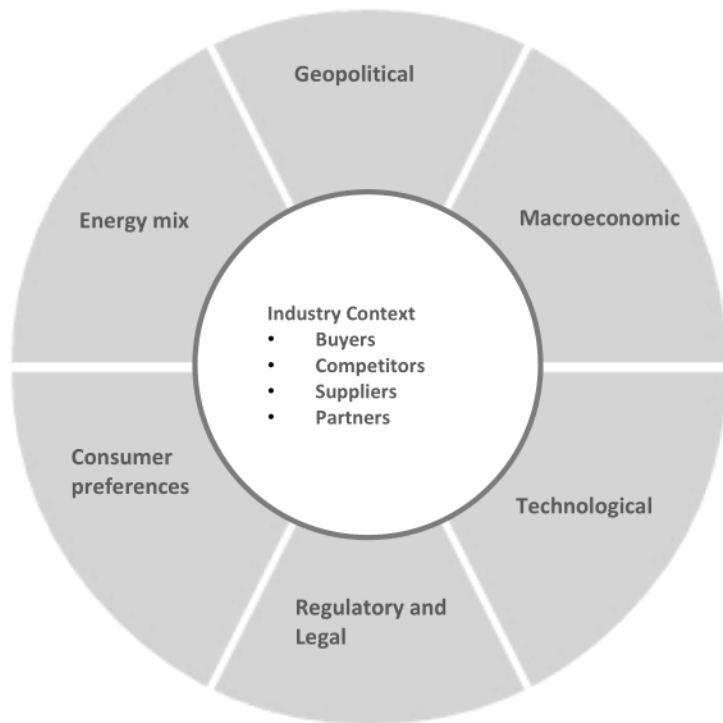


Along the path to this world, we could see:

- Customers with high confidence in their utility
- High levels of cross cultural cooperation
- Breakthroughs in conducting materials that advance transmission technology
- Solutions for integrating renewables (e.g., wind and solar) into the electricity grid
- Large-scale hydro, renewables, and energy storage projects
- Smaller scale renewables and energy storage projects remaining unpopular
- Electrification of most ground transportation
- A continental carbon-pricing program

Regional energy coordinating entities across Canada, the U.S. and Mexico join forces to promote trans-continent system reliability, further enabling a shift from day-ahead energy trading to international multi-year contracts.

BUSINESS CONTEXT (next 3 decades) – INTEGRATED MARKETS



Geopolitical

- Globalization has continued at a rapid pace. Multilateral trade agreements are commonplace.
- A renewed focus on finding cooperative solutions to issues such as climate change and immigration.

Macroeconomic

- The oil and gas industries have contracted significantly. Mining remains very strong.
- Free trade agreements have meant disparities in price of consumables have diminished. Applies to electricity as well.

Technological

- Breakthroughs in conducting materials and advances in solar and electric vehicles are some of the notable advances in technology.

Regulatory and Legal

- Very strict environmental regulations are in place resulting in very limited shale oil and gas extraction.
- Coordinated continental carbon policies.

Consumer preferences

- Strong demand for clean energy and electric vehicles.

Energy Mix in North America

- Large scale solar, wind projects, and hydro including pumped storage has resulted in a largely GHG free electricity mix.

Buyers

Electrified transportation and fuel switching has resulted in significant demand increase from residential and commercial customers. Other utilities in the WECC looking for renewable integration

Competitors

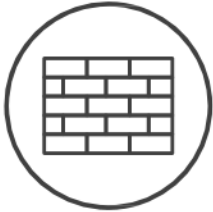
No direct competition in BC, yet state-wide cooperation has meant costs for other utilities have come down and BC Hydro can no longer boast of a significant rate advantage.

Suppliers

Independent power producers and large construction companies are needed to build the generation (storage hydro and pumped hydro) and transmission infrastructure.

Partners

First Nations relationships are important more than ever.



Borders Rising

Globalization falters—stalling agreement on global economic issues and climate action

A strong desire to bring overseas industries back home and to withdraw from global trade agreements led to deteriorating international cooperation on climate change issues. Some governments did try to transform the energy industry into a clean and renewable version. Unfortunately, they eventually realized that these plans couldn't contend with national policies that enabled traditional oil and gas industries to maintain their strong hold on the market. Renewables, such as solar and wind, simply couldn't compete with oil and gas in a world where every GHG emission reduction effort was easily met with an increasing supply of lower-priced fossil fuels.

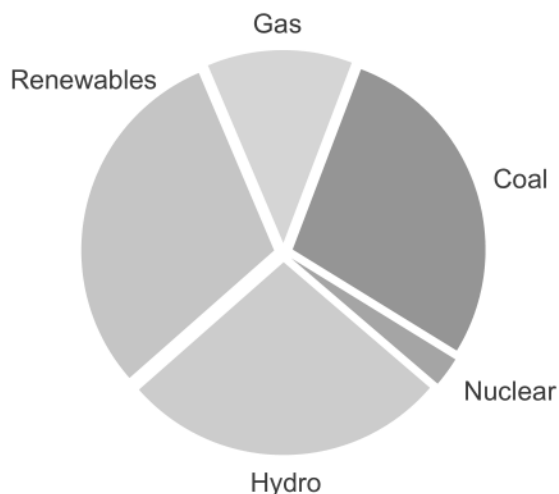


North America in a 'Borders Rising' world

"I remember back when I'd wince at gas prices, and filling up the truck was even worse – watching the dollars go up on the pump made me sick to my stomach. But now, gas is so cheap! Traffic's terrible, worse than ever, but I never think twice about getting in the car. I know it'll be cheaper than anything else."

– Vancouver Sun editorial, April 20, 2027

Electricity Generation by Type in Western North America in 2050

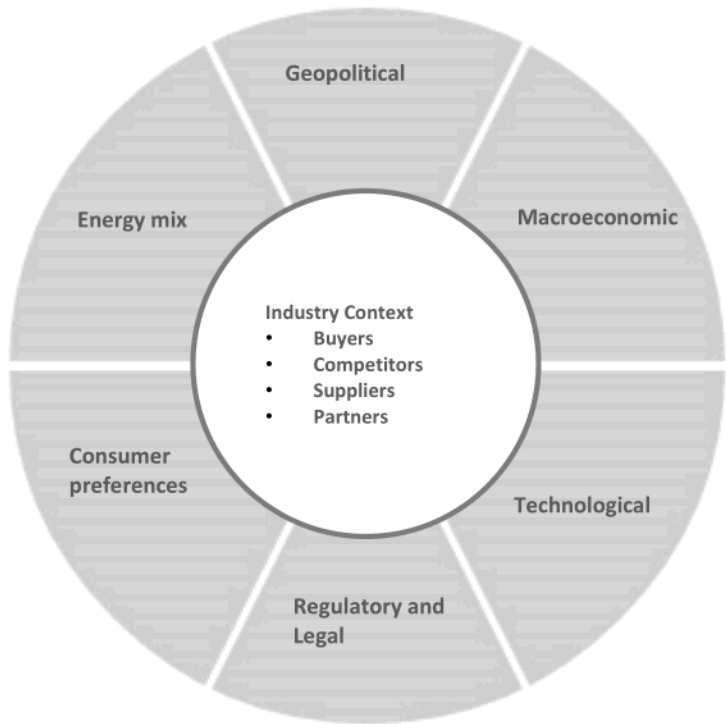


Along the path to this world, we could see:

- Continued innovations in gas extraction technologies
- Coal generation present only where affordable alternatives are lacking
- Stalled growth of renewables (e.g., solar and wind)
- Energy storage technologies only viable in limited applications
- General public distrust for government and utilities
- Stalled federal carbon programs
- Cost and security as paramount concerns for electricity customers
- Gasoline continuing to be the main type of fuel for transportation

Slow energy demand growth in North America and a lack of jurisdictional cooperation stunts the evolution of the power market.

BUSINESS CONTEXT (next 3 decades) – BORDERS RISING



Geopolitical

- Regional conflicts abound as US, China, and Russia jockey for power. The EU has been consigned to the dustbin of history.
- The western world is struggling to manage immigration including climate refugees.

Macroeconomic

- Protectionism reigns. Multiple recessions have only strengthened the resolve of many developed nations to adopt trade barriers to protect local industries.
- The oil and gas industry has remained a bright spot.

Technological

- Continued innovations in fossil fuel extraction technologies.

Regulatory and Legal

- Climate policies have stalled as other priorities such as jobs and immigration have taken priority.

Consumer preferences

- Distrust of governments and utilities.
- Least cost remains the overriding priority for consumables including energy.

Energy Mix in North America

- Coal generation still present. Gas is the default choice for dependable capacity.

Buyers

Forestry has been hit hard by tariffs. Oil and gas industry is thriving but only a few customers seek electricity service. Residential sector is growing. Low income customer number has grown significantly.

Competitors

Wholesale power prices remain low in the US and have kept the retail access debate alive. Provincial government faces increasing pressure from industrial customers to allow gas-fired self-generation.

Suppliers

Engineering companies assist in maintaining and rehabilitating heritage assets and the transmission system.

Partners

First Nations involved in refurbishment of heritage assets.

Key Themes from the Comprehensive Review – Phase 2 (as of May 2019)

The following is a summary of key themes identified to date through scenario work done in late 2018 as well as through the four workstreams preparing options for the second phase of the Government's Comprehensive Review of BC Hydro. The themes are listed with a brief explanation and examples of options that fall into that theme.

s.12; s.13; s.16; s.17

Page 063 of 285 to/à Page 064 of 285

Withheld pursuant to/removed as

s.12 ; s.13 ; s.16 ; s.17

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 11, 2019 1:12 PM
To: Norris, Nancy EMPR:EX
Subject: RE: Internet changes while I am away

Hi,
Yes I am in all next week.
Irene

From: Norris, Nancy EMPR:EX
Sent: July 11, 2019 12:54 PM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: Internet changes while I am away

Hi Irene,

Are you in the office next week? Will you be available to make changes to the EAED website? It's looking like we will need to make the changes sometime between Monday and Thursday to align with a news release about the BC Hydro Review, Phase 2.

Thanks,

Nancy

From: Wingfield, Irene EMPR:EX
Sent: July 8, 2019 11:07 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: RE: Internet changes while I am away

I should be able to.

From: Norris, Nancy EMPR:EX
Sent: July 8, 2019 10:18 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: Internet changes while I am away

Hi Irene,

How is your work load looking this week? Will you have time to make changes to the EAED website, if needed? Or should I reach out to EMPRCommunications@gov.bc.ca?

Thanks, Nancy

From: Wingfield, Irene EMPR:EX
Sent: June 14, 2019 8:36 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: Internet changes while I am away

Hi,

I am away all next week June 17-21, and flex June 28th.

Any changes or addition requests for our internet pages can be sent to EMPRCommunications@gov.bc.ca

Thanks.

Irene

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 11, 2019 4:01 PM
To: Wieringa, Paul EMLI:EX; Cutler, Scott EMLI:EX; Buchanan, Jack EMLI:EX; Norris, Nancy EMLI:EX
Subject: FW: 6959: Phase 2 BC Hydro Review
Attachments: BCHydro_Phase_Two_PPT_v02.potx

This is looking good – thoughts?

A

From: Giles, Alison GCPE:EX
Sent: July 11, 2019 3:53 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: FW: 6959: Phase 2 BC Hydro Review

From: Jones, Calvin GCPE:EX
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: RE: 6959: Phase 2 BC Hydro Review

Hi Alison:

Here is version two of the “Phase 2 BC Hydro Review” PowerPoint for your review. I’ve styled it with the cover of “Phase One” in mind while also hinting at the colours of the Crown agency. Let me know if this works for everyone. Hope this helps.

Cal
T: 250 356-8565

[B.C. Visual Identity Website](#)
[Graphic Design Requests](#)
[Graphics 411 Information and Resources](#)



BC Hydro Review Phase Two

Crockett, Janine EMLI:EX

From: Norris, Nancy EMLI:EX
Sent: July 11, 2019 4:10 PM
To: Sopinka, Amy EMLI:EX; Wieringa, Paul EMLI:EX; Cutler, Scott EMLI:EX; Buchanan, Jack EMLI:EX
Subject: RE: 6959: Phase 2 BC Hydro Review

I like it! I like that it fades from green to blue. It's emblematic of Bc Hydro and Government without directly referencing either.

From: Sopinka, Amy EMPR:EX
Sent: July 11, 2019 4:01 PM
To: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Cutler, Scott EMPR:EX <Scott.Cutler@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: FW: 6959: Phase 2 BC Hydro Review

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Sent: July 11, 2019 3:53 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: FW: 6959: Phase 2 BC Hydro Review

From: Jones, Calvin GCPE:EX
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
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Cal
T: 250 356-8565

[B.C. Visual Identity Website](#)
[Graphic Design Requests](#)
[Graphics 411 Information and Resources](#)

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 12, 2019 8:35 AM
To: Wieringa, Paul EMLI:EX; Cutler, Scott EMLI:EX; Buchanan, Jack EMLI:EX; Norris, Nancy EMLI:EX
Cc: Giles, Alison GCPE:EX
Subject: BCHydro_Phase_Two_PPT_v02 Banner.potx
Attachments: BCHydro_Phase_Two_PPT_v02 Banner.potx

To see the words across the banner – I've changed the colour to white. I think that works.

A



BC Hydro Review Phase Two

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 12, 2019 11:39 AM
To: Tally, Holly GCPE:EX
Cc: Giles, Alison GCPE:EX; Wieringa, Paul EMLI:EX
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

Hi Holly,

That's our understanding as well.

Could you ensure that 'BC Hydro' isn't split across two lines?

A

From: Tally, Holly GCPE:EX
Sent: July 12, 2019 11:21 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

That's our understanding as well.

GCPE makes changes to this page: <https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/energy-mines-and-petroleum-resources>

And program makes changes to this page: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

And this is the content that we have for the main Ministry page:

Phase 2 of the Comprehensive Review of BC Hydro

Learn more about the steps being taken to create a strategy, for the benefit of British Columbians, for BC Hydro to continue to provide its customers with clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and B.C.'s commitment to reconciliation with Indigenous Nations.

Holly

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 11:13 AM
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Cc: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

Hi Alison,

Thanks for the update. Thursday is really very close to the expert workshop. We'd **really** like to have them come out earlier than that.

In terms of the website material – our understanding is that your shop makes changes to the EMPR website. We will make the changes to the EAED webpage.

A

From: Giles, Alison GCPE:EX
Sent: July 12, 2019 11:08 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

We've decided we're just going to provide a link to the TOR on the webpage and not attach as a backgrounder – you guys are stickhandling that aspect of things right?

I think realistically Thursday for NR.

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 10:58 AM
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

Thanks -- any word on the TOR ?

A

From: Giles, Alison GCPE:EX
Sent: July 12, 2019 10:58 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

Yep – will do.

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 9:57 AM
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

I can't seem to group them so that they stay together. I have to copy and paste every time.

Can you see if Cal can do that for me?

A

From: Giles, Alison GCPE:EX
Sent: July 12, 2019 9:05 AM

To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: RE: BCHydro_Phase_Two_PPT_v02 Banner.potx

Are you locking that down?

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 8:35 AM
To: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Cutler, Scott EMPR:EX <Scott.Cutler@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: BCHydro_Phase_Two_PPT_v02 Banner.potx

To see the words across the banner – I've changed the colour to white. I think that works.

A

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 12, 2019 4:38 PM
To: Tally, Holly GCPE:EX
Cc: Wieringa, Paul EMLI:EX
Subject: FW: For review - Phase 2 BC Hydro Review IB
Attachments: IB_Phase 2_BCH Review_12 Jul 2019_1214pm as.docx

A/ADM approved.

A

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 12:53 PM
To: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Cc: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: FW: For review - Phase 2 BC Hydro Review IB

Paul,

For your review – the updated IB for Phase 2 – no mention of expert advisor bios but more cleanbc focussed.

A

From: Tally, Holly GCPE:EX
Sent: July 12, 2019 12:30 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: For review - Phase 2 BC Hydro Review IB

Hi Amy,

We've updated the IB to include more CleanBC stuff. Can you take a quick look (by 1:15pm if possible)? There is no reference to a list of advisors.

I'll send an updated QA your way this afternoon.

Holly Tally | Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
T: 778-974-3851 | C: 250-818-3081
E: Holly.Tally@gov.bc.ca

Page 076 of 285 to/à Page 077 of 285

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s.13

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 12, 2019 4:46 PM
To: Tally, Holly GCPE:EX
Cc: Giles, Alison GCPE:EX; Wieringa, Paul EMLI:EX
Subject: FW: QA_Phase 2_BC Hydro Review_12 Jul 2019_138pm as
Attachments: QA_Phase 2_BC Hydro Review_12 Jul 2019_138pm as.docx

A/ADM approved

From: Wieringa, Paul EMPR:EX
Sent: July 12, 2019 4:44 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: QA_Phase 2_BC Hydro Review_12 Jul 2019_138pm as

A few changes in the document.

Page 079 of 285 to/à Page 085 of 285

Withheld pursuant to/removed as

s.13

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMPR:EX
Sent: July 12, 2019 5:33 PM
To: MacLaren, Les EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Cutler, Scott EMPR:EX; Buchanan, Jack EMPR:EX; Norris, Nancy EMPR:EX
Subject: Updated Workshop Material + Cover note
Attachments: EnviroScan 0712 REVISED.docx; Workshop Agenda 19 July 20190712 REVISED.docx

Les,

Apologies but we have had to make a minor revisions to two Phase 2 documents:

- The EnviroScan now states that all the pre-reading material will be available on the SharePoint (shown in track changes), and
- the workshop agenda was updated to reflect the proper time allocations.

We are aiming to get the material out to the experts on Monday. To that end, I've drafted a very short email for you to send (below) to which we can append the letter signed by you and Diane. Once you're comfortable with and have signed the letter, we can add Darcy Quinn's e-sig. He will be signing on behalf of Diane.

After the letter is emailed, I will reach out to each of the experts and provide them with instructions on how to get a BCeID as well as how to access the SharePoint site.

Amy

Dear *[insert expert name here]*

Please find attached a Phase 2 introductory letter that contains information on the upcoming workshop in Vancouver on July 19th.

Amy Sopinka from my Division will be reaching out to you to provide you with logistical and technical information that will allow you to access pre-reading material that will aid in your preparation for the upcoming workshop.

Sincerely,

Comprehensive Review Phase 2

Workshop Pre-reading Material for

Expert Advisors

Table of Contents

Introductions for Expert Advisor.....	Page 2
BC Historical Context.....	Pages 3-7
EnviroScan: Key Global and Industry Trends.....	Pages 8-16

Page 088 of 285 to/à Page 102 of 285

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Phase 2 Comprehensive Review Experts Advisors Meeting Agenda

July 19, 2019

9:45 am – 4:00 pm Dunsmuir Auditorium - 333 Dunsmuir Street

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
MORNING - Expert Advisor Orientation – Dunsmuir Auditorium 2		
Invitees	Phase 2 Review Committee, Advisory Committee, Focus Area Working Group Sponsors and Leads, Experts and Government Project Support Team	<ul style="list-style-type: none"> BC Hydro office at 333 Dunsmuir, Vancouver
9:45 – 10:00 am	Registration / coffee (15 min)	
10:00 – 10:40 am	Welcome, Opening Remarks and Introductions <ul style="list-style-type: none"> Safety Procedure & First Nations Recognition – Diane McSherry (5 min) Opening remarks - Les MacLaren (7 min) Opening remarks – Ken Peterson (7 min) Agenda review – Diane McSherry (5 min) Introductions of Experts – Diane McSherry (16 min) 	<ul style="list-style-type: none"> Diane will introduce all of the experts (your name, your title), following which you will be asked to present on your background and some details about your area of expertise (2 min)
10:40 – 11:00 am	Overview of Comprehensive Review and Process and Work to Date - Diane McSherry (20 min)	<ul style="list-style-type: none"> This content will be available in advance via the SharePoint site. Please review & think of any questions you may have about your role and/or the process.
11:00 am- 11:45 am	Introduction to Scenarios – Sanjaya de Zoysa (45 min) <ul style="list-style-type: none"> Review of scenarios and the trends that could get us there 	<ul style="list-style-type: none"> Sanjay will be presenting this content at the workshop. Summary material can be found at the SharePoint site.
11:45 – 12:30 pm	Lunch (45 min)	<ul style="list-style-type: none"> Move to Dunsmuir Auditorium 1

AFTERNOON - Panel Discussion with Experts - Dunsmuir Auditorium 1

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
Invitees	Above plus invite to all focus area working group members and other interested BC Hydro / Government employees or participants	
12:30 – 12:40 pm	Brief overview of session for the benefit of new participants – Jeff Nugent (10 min) <ul style="list-style-type: none"> What the afternoon session is about What happened in the morning session 	
12:40 pm – 2:30pm	Plenary Discussion – Jeff Nugent (1 hr 50 min) <ul style="list-style-type: none"> Experts provide their thoughts on Phase 2 Comprehensive Review topics based on their expert perspective (via 'Armchair' interview setup) <ul style="list-style-type: none"> Q/A by Jeff Nugent between the Experts 	s.13

2:30 pm – 2:40 pm	BREAK <i>(10 min)</i>	
2:40 pm – 3:55 pm	Plenary Discussion continues – Jeff Nugent <i>(1 hour 15 min)</i> <ul style="list-style-type: none"> Facilitated Q/A format with audience 	<ul style="list-style-type: none"> Focus will be Q/A session with the audience
3:55 pm – 4:00 pm	Next Steps / Close – Jeff Nugent <i>(5 min)</i> <ul style="list-style-type: none"> Next steps Close 	<ul style="list-style-type: none"> Following this workshop you will be provided with a summary of the key themes and discussion points

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMLI:EX
Sent: July 15, 2019 4:19 PM
To: Wieringa, Paul EMLI:EX
Subject: FW: BCHydro_Phase_Two_PPT_v02 Banner.potx
Attachments: BCHydro_Phase_Two_PPT_v03.potx

Hopefully this works for you. You right-click on the left thumbnail to select different layouts. There are several to choose from.

A

From: Giles, Alison GCPE:EX
Sent: July 15, 2019 4:17 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: FW: BCHydro_Phase_Two_PPT_v02 Banner.potx

From: Jones, Calvin GCPE:EX
Sent: July 15, 2019 3:53 PM
To: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: Re: BCHydro_Phase_Two_PPT_v02 Banner.potx

Hi Alison:

Attached is the Phase Two PPT that contains the header. Let me know if this works for your folks and they know to right-click on the left thumbnail to select different layouts. There are several to choose from. It might make their job easier? I'll close this request off now. Once the Phase Two Review is complete and content is written, then Colin can send in a new request. I understand this is likely a couple of months out at the mo. Hope this all helps.

Cal
T: 250 356-8565

[B.C. Visual Identity Website](#)
[Graphic Design Requests](#)
[Graphics 411 Information and Resources](#)

From: "Giles, Alison GCPE:EX" <Alison.Giles@gov.bc.ca>
Date: Friday, July 12, 2019 at 11:52 AM
To: "Jones, Calvin GCPE:EX" <Calvin.Jones@gov.bc.ca>
Subject: FW: BCHydro_Phase_Two_PPT_v02 Banner.potx

Cal – this is what they're after.

Can you lock it down for us?



BC Hydro Review Phase Two

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 16, 2019 10:20 AM
To: Norris, Nancy EMPR:EX
Subject: RE: EAED website changes/updates

Ok

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 10:18 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: EAED website changes/updates

Ok, I'll mosey over around 10:30

From: Wingfield, Irene EMPR:EX
Sent: July 16, 2019 10:15 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: RE: EAED website changes/updates

Hi,
Sure, whenever you are free.
Thanks.
Irene

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 9:49 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: EAED website changes/updates

Hi Irene,

It's looking like the go live date for the attached updates to the EAED website is this Thursday. We are responsible for making Update #2 in the attached document. GCPE will arrange for Update #1.

When Jackie helped me with website changes in the past, she would make changes in the "test" site and send me the link so I can review them before they went live. Could you please do the same?

Would you like me to drop by and walk through these changes?

Thanks,

Nancy

Crockett, Janine EMLI:EX

From: Sopinka, Amy EMPR:EX
Sent: July 16, 2019 11:46 AM
To: MacLaren, Les EMPR:EX; Wieringa, Paul EMPR:EX; Buchanan, Jack EMPR:EX; Norris, Nancy EMPR:EX
Subject: Workshop Materials
Attachments: BCH Review Phase II TOR.pdf; EnviroScan.pdf; Key Themes (May 2019).pdf; Overview of Process and Work to Date_July152019.pdf; Potential Future Scenarios.pdf; Workshop Agenda 19 July.pdf; Workshop Logistical Information.pdf

Good morning,

Attached are the Phase 2 July 19 Workshop Agenda and associated supporting materials.

Amy

Terms of Reference

Comprehensive Review of BC Hydro – Phase 2

Context

The 2017 Mandate Letter to the Minister of Energy, Mines and Petroleum Resources directs the ministry to undertake a Comprehensive Review of BC Hydro and to work with BC Hydro to develop a refreshed plan to keep rates affordable over the long-term.

In June 2018, Government announced a two-phase approach for carrying out the Minister's mandate:

- Phase 1 - examine opportunities to keep BC Hydro's rates affordable by increasing BC Hydro's revenues, reducing its costs and protecting ratepayer interests by re-empowering the British Columbia Utilities Commission to oversee BC Hydro's costs and activities; and
- Phase 2 - explore global energy sector shifts and provincial strategies that could transform the way BC Hydro does business.

Phase 1 of the Comprehensive Review of BC Hydro is now complete. On February 14, 2019 the Province released a final report on this first phase, which details actions to ensure sound financial and regulatory oversight of BC Hydro, and a five-year rate forecast reflecting cost and revenue strategies to keep rates affordable.

In December 2018, Government released its CleanBC plan, a combined economic development, energy and climate strategy. CleanBC offers a pathway that will enable our province to seize opportunities for innovation and growth. To meet the goals in CleanBC, we must increase our use of cleaner energy, including electricity generated from renewable sources, to shift away from our reliance on fossil fuels for transportation, industry, and buildings. CleanBC's actions will get British Columbia approximately 75% of the way to legislated 2030 greenhouse gas reduction targets. Achieving the remaining 25%, and ultimately the 2040 and 2050 targets, will require additional clean energy.

Objective

The objective of the Comprehensive Review's second phase is to develop recommendations for how BC Hydro can accomplish the provincial policy objectives laid out in the CleanBC plan, including how BC Hydro can support meeting British Columbia's legislated 2030, 2040, and 2050 greenhouse gas reduction targets in a manner that ensures BC Hydro sustainability in the future for the benefit of British Columbians.

The Review will consider the potential impacts of North American energy and market trends, the needs of current and future BC Hydro customers, evolving technologies and utility structures, the affordability of electricity to consumers, and opportunities to involve indigenous peoples and communities.

The recommendations from the Phase 2 Review will be used to inform BC Hydro's Integrated Resource Plan that will be filed with the British Columbia Utilities Commission in early 2021.

Governance

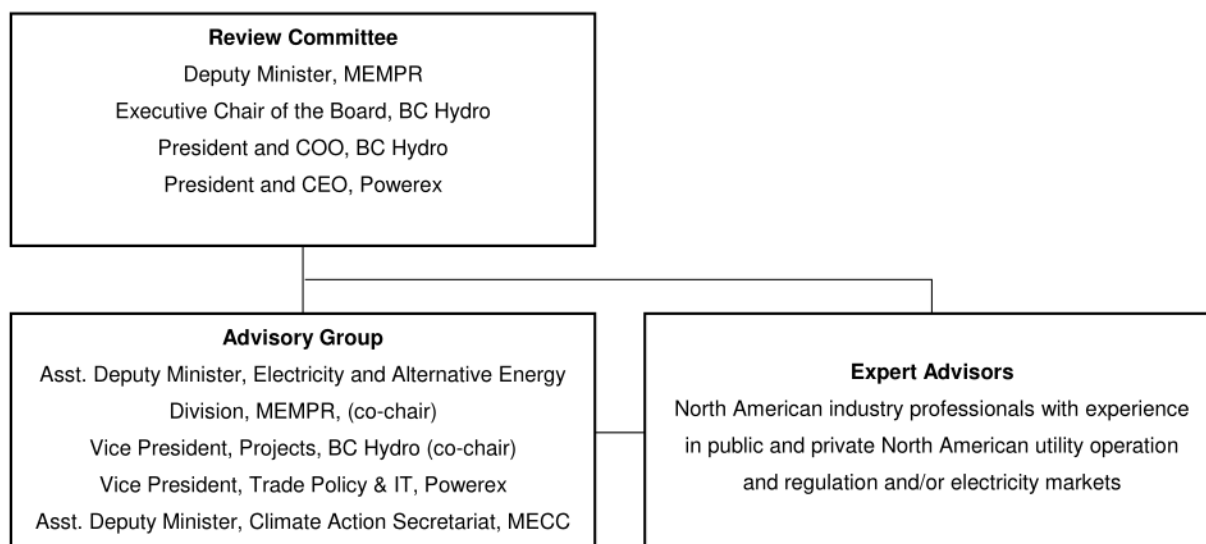
Overseeing the Phase 2 Review process will be a Review Committee consisting of:

- Deputy Minister of Energy, Mines and Petroleum Resources,
- Executive Chair of the BC Hydro Board of Directors,
- President and Chief Operating Officer of BC Hydro, and
- Chief Executive Officer of Powerex.

This Review Committee is responsible for ensuring that the objective of the second phase of the Review is met.

An Advisory Group consisting of senior staff from the Ministry of Energy, Mines and Petroleum Resources (MEMPR), Ministry of Environment and Climate Change (MECC), BC Hydro, and Powerex will provide advice to the Review Committee, draft material for their consideration and prepare a final report that includes the recommendations of the Review Committee. Industry experts that have extensive experience in public and private North American utility operation, regulation, and/or electricity markets will inform and guide Review Committee recommendations.

Governance Chart - Phase 2 Review:



Areas of Interest

The Review Committee, with the support of the Advisory Group and advice from industry experts, is tasked with addressing questions within four areas of interest, with the goal of gathering the information necessary to develop a final report with recommended actions for the utility.

1. Supporting CleanBC

CleanBC is central to reducing greenhouse gas emissions while also meeting BC's energy and economic development goals. Any recommended changes to BC Hydro must achieve the electrification goals set out in CleanBC to meet our legislated 2030 greenhouse gas reduction targets and lay the groundwork for additional greenhouse gas emissions reductions to meet the province's legislated 2040 and 2050 emissions targets. Achieving the electrification targets will support the production of lower carbon natural resources for export. The Review will identify additional opportunities to reduce greenhouse gas emissions through fuel-switching, electrification, energy efficiency and conservation and will include responses to the following questions:

- What is required to ensure that new customer demand for access to clean electricity from the grid is achieved in an efficient, cost-effective, and timely manner?
- How should the costs of this new access be allocated between existing and new customers? Is there a role for government(s) in financing the infrastructure to provide this access?

- What can/should BC Hydro do to encourage fuel switching to increase the use of clean electricity as an alternative to fossil fuels and reduce greenhouse gas emissions?
- How can BC Hydro and the Province's CleanBC Better Homes/Better Buildings program coordinate further to address climate change by reducing greenhouse gas emissions and meeting CleanBC objectives?

2. Thriving in an Evolving Electricity Sector

The Phase 2 Review final report will describe the trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities). Recommendations will address how BC Hydro must adapt to a broad range of future scenarios and evolve its existing structure, services, and assets in support of ensuring BC Hydro's sustainability for the benefit of all British Columbians. At a minimum, the Phase 2 Review final report will address the following questions:

- Which industry trends are most likely to have an impact on BC Hydro?
- What actions are needed to ensure that BC Hydro is able to benefit from new markets and integrate new technologies while keeping rates affordable?
- Are there opportunities for BC Hydro to provide customers with more energy choices and information?
- Are changes needed to BC Hydro's governance structure to allow the utility to pursue new business opportunities?

3. Leveraging Our Strengths

BC Hydro's wholly-owned subsidiary Powerex currently buys and sells electricity in other markets throughout the Western Interconnection. The Phase 2 Review will consider whether there are opportunities to enable increased participation in external markets to the benefit of BC Hydro ratepayers. The Phase 2 final report will make recommendations that consider each of the following questions:

- What constraints, if any, reduce Powerex's ability to trade electricity in the Western Interconnection today or in the future?
- Is there an opportunity or actions that can be taken that will enable Powerex to expand its business in markets outside of BC, further leveraging BC Hydro's clean generation and/or Powerex's expertise in energy markets?

- How should cost effective clean energy located outside of BC be considered in BC Hydro's planning and operations?
- Is there an opportunity to own and/or operate assets outside of BC Hydro's current service area that would benefit BC Hydro's ratepayers?

4. Opportunities for Indigenous Nations and Communities

In support of BC's commitment to reconciliation with Indigenous Peoples, the Review will consider future opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services. In relation to BC Hydro's existing business and proposed new lines of business, the Phase 2 Final Report will include recommendations to enhance Indigenous Nations' participation in the energy sector. The review will also consider how BC Hydro currently works with communities and explore alternatives.

For each of these four areas of interest, the Expert Advisors will provide advice on opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities for improved organizational readiness to enhance BC Hydro's financial and operational sustainability to keep rates affordable over the long term.

Process

The Review Committee and Advisory Group will undertake the Review June to November, 2019 utilizing the advice of the Expert Advisors as and when needed. In late fall 2019, stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results.

A final report will be completed in early 2020 and will outline the Review Committee's recommendations on policy, governance, and strategy to ensure BC Hydro's sustainability and ability to contribute to CleanBC and other Government policy objectives.

Comprehensive Review Phase 2

Workshop Pre-reading Material for

Expert Advisors

Table of Contents

Introductions for Expert Advisor.....	Page 2
BC Historical Context.....	Pages 3-7
EnviroScan: Key Global and Industry Trends.....	Pages 8-16

Introduction for External Experts:

This document is intended to solicit your input on key global and industry trends that are relevant to BC Hydro in the future.

Please review the **July 19 Workshop Agenda**, the **EnviroScan: Key Global and Industry Trends** including the **BC Historical Context**, the **four Planning Scenarios and Key Themes** and the **Phase 2 Terms of Reference**.

For the July 19 workshop, in addition to providing a brief introduction, advisors will be asked to share their knowledge in an 'armchair session' with a moderator provoking discussion with the following questions:

- Given your experience and knowledge of the trends that are emerging, can you provide your views on what you think are the most important issues that BC Hydro will need to address in the future?
- What are your thoughts on how BC Hydro should prepare to meet the objectives outlined in the CleanBC plan (see www.cleanbc.gov.bc.ca)?
- What are your general comments on the trends outlined in the pre-read and other trends you are seeing that could inform the Phase 2 Review? Which of these trends are most relevant / impactful when considering the future of BC Hydro, and why?
- Are there any other trends, actions, risks or themes that should be considered / explored within each of the four areas of focus?

Reflecting on the four Planning Scenarios, please be prepared to address the following questions:

- Please comment on the four planning scenarios in terms of providing a basis for considering a broad range of possible futures, and whether there are additional distinct scenarios that should be included for thinking of future uncertainty.
- For each of the scenarios (and any additional futures you have identified) please comment briefly on the key implications for BC Hydro and the key risks and opportunities for BC Hydro to remain relevant.

About BC Hydro

BC Hydro's mission is to safely provide our customers with reliable, affordable and clean electricity throughout British Columbia. BC Hydro is one of the largest energy suppliers in Canada, generating and delivering electricity to 95 per cent of the population of British Columbia. BC Hydro operates an integrated system backed by 30 hydroelectric plants and two thermal generating stations, as well as approximately 79,000 kilometres of transmission and distribution lines. BC Hydro's electricity generation is 98 per cent clean.

As a provincial Crown Corporation, the owner and sole shareholder of BC Hydro is the Province of British Columbia. BC Hydro reports to the Provincial Government through the Minister of Energy, Mines and Petroleum Resources and the Government's expectations are expressed through the following legislation, policy and instructions:

- The Hydro and Power Authority Act (gives BC Hydro its mandate to generate, manufacture, conserve, supply, acquire, and dispose of power and related products).
- The Utilities Commission Act
- The BC Hydro Public Power Legacy and Heritage Contract Act
- The 2010 Clean Energy Act (CEA)
- The Province's 2007 BC Energy Plan

Powerex Corp. (Powerex) and Powertech Labs Inc. (Powertech) are two wholly-owned subsidiaries of BC Hydro.

Powerex is a key participant in energy markets across North America, buying and selling wholesale power, renewable and low-carbon energy and products, natural gas, ancillary services and financial energy products.

Powertech is internationally recognized for providing research and development, testing, technical services and advanced technology services to clients around the world, including BC Hydro.

Page 118 of 285 to/à Page 130 of 285

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Key Themes from the Comprehensive Review – Phase 2 (as of May 2019)

The following is a summary of key themes identified to date through scenario work done in late 2018 as well as through the four workstreams preparing options for the second phase of the Government's Comprehensive Review of BC Hydro. The themes are listed with a brief explanation and examples of options that fall into that theme.

s.12; s.13; s.16; s.17

Page 132 of 285 to/à Page 133 of 285

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s.12 ; s.13 ; s.16 ; s.17



Comprehensive Review Phase II

Overview of Process and Work to Date

Diane McSherry (Co-Chair Phase 2 Comprehensive Review)
July 19, 2019



Phase 2 – Overall Objectives

Phase 2 Objective

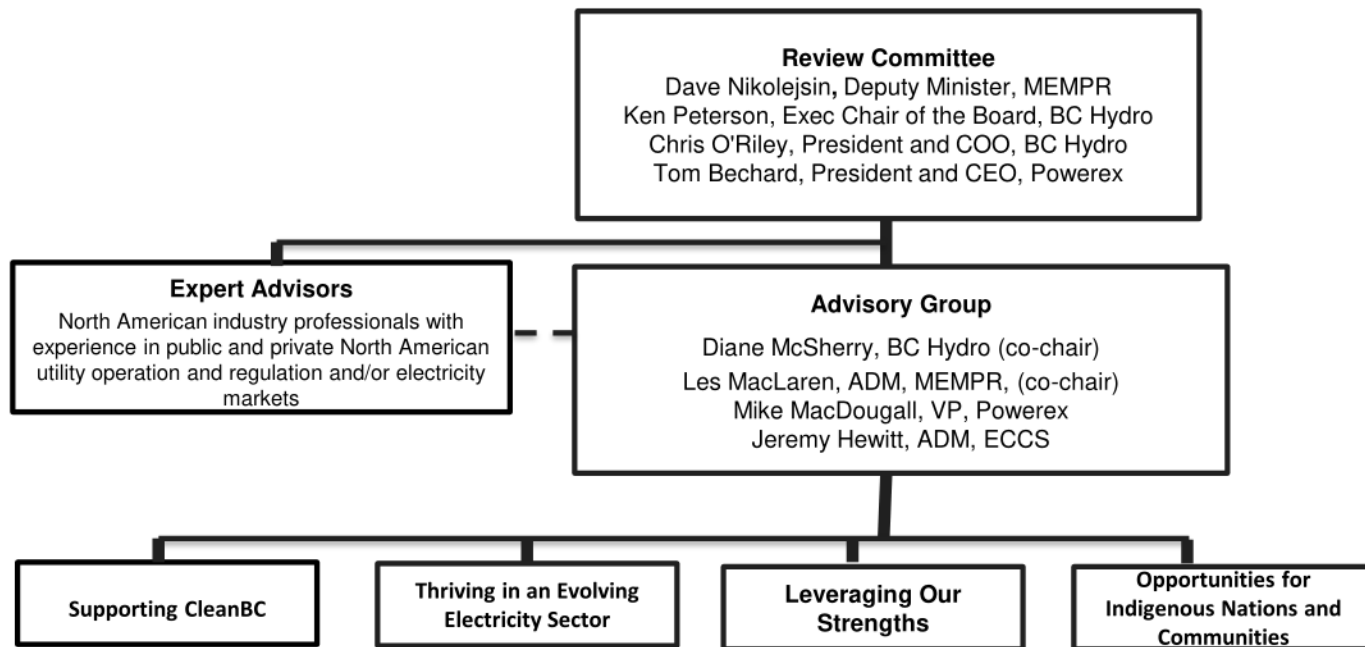
To create a strategy, for the benefit of British Columbians, for BC Hydro to continue to provide its customers with access to clean energy at competitive rates through the continuing evolution of BC Hydro in response to changes in climate, consumer demand, technology and BC's commitment to reconciliation with Indigenous Nations.

Component Objectives

In the context of the overall strategic objective, identify and evaluate a range of ideas that will position BC Hydro to:

- Support provincial climate change objectives outlined in the CleanBC plan
- Adapt to a broad range of future scenarios to ensure its future sustainability
- Increase participation in external markets to the benefit of ratepayers
- Support BC's commitment to reconciliation with indigenous people
- Identify opportunities for local communities

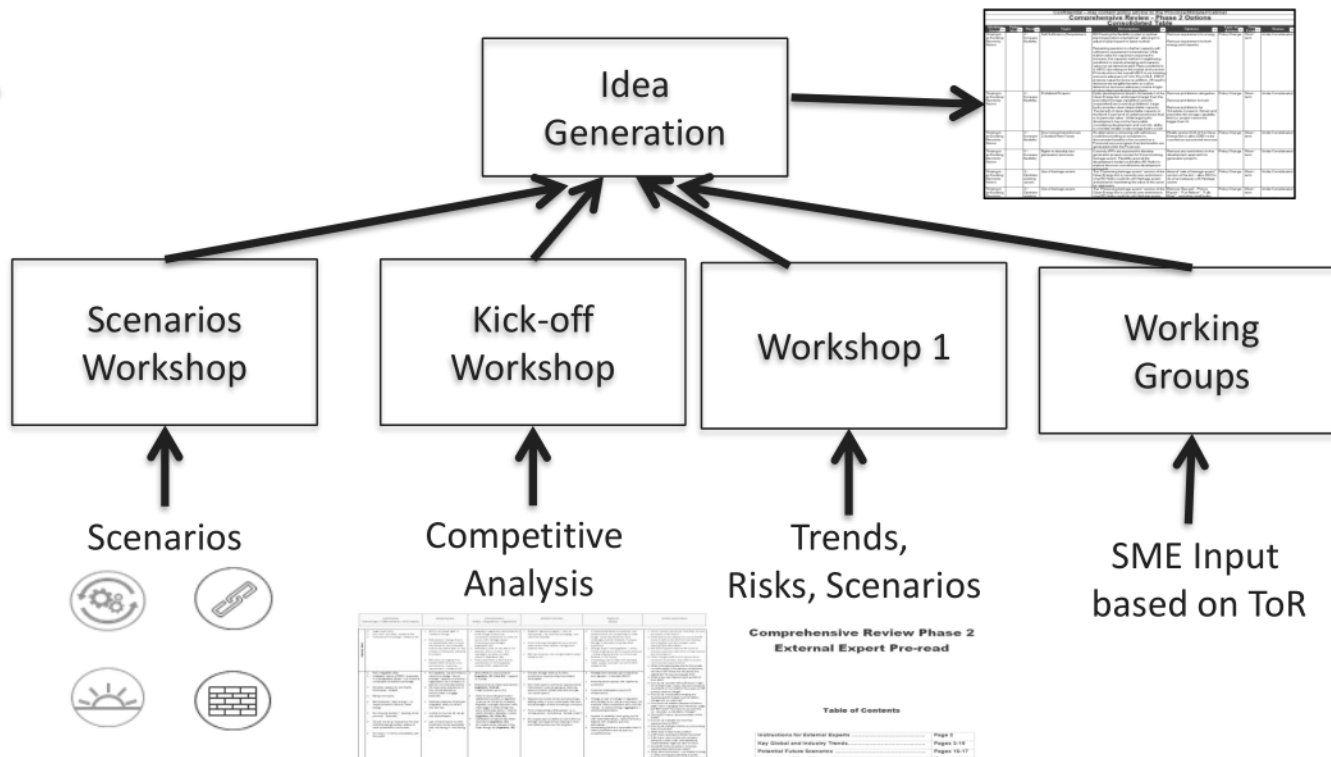
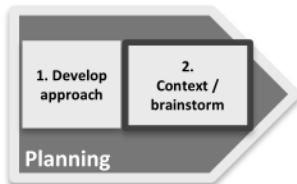
Governance



Working Group Structures



Planning – Context and Brainstorming



Initial list of Ideas and themes



Consolidation – Initial Concepts for Review

3. Consolidate
ideas into
concepts

4. Prepare
one pager for
each concept

Preliminary Analysis

Business Concepts

s.12; s.13; s.16; s.17

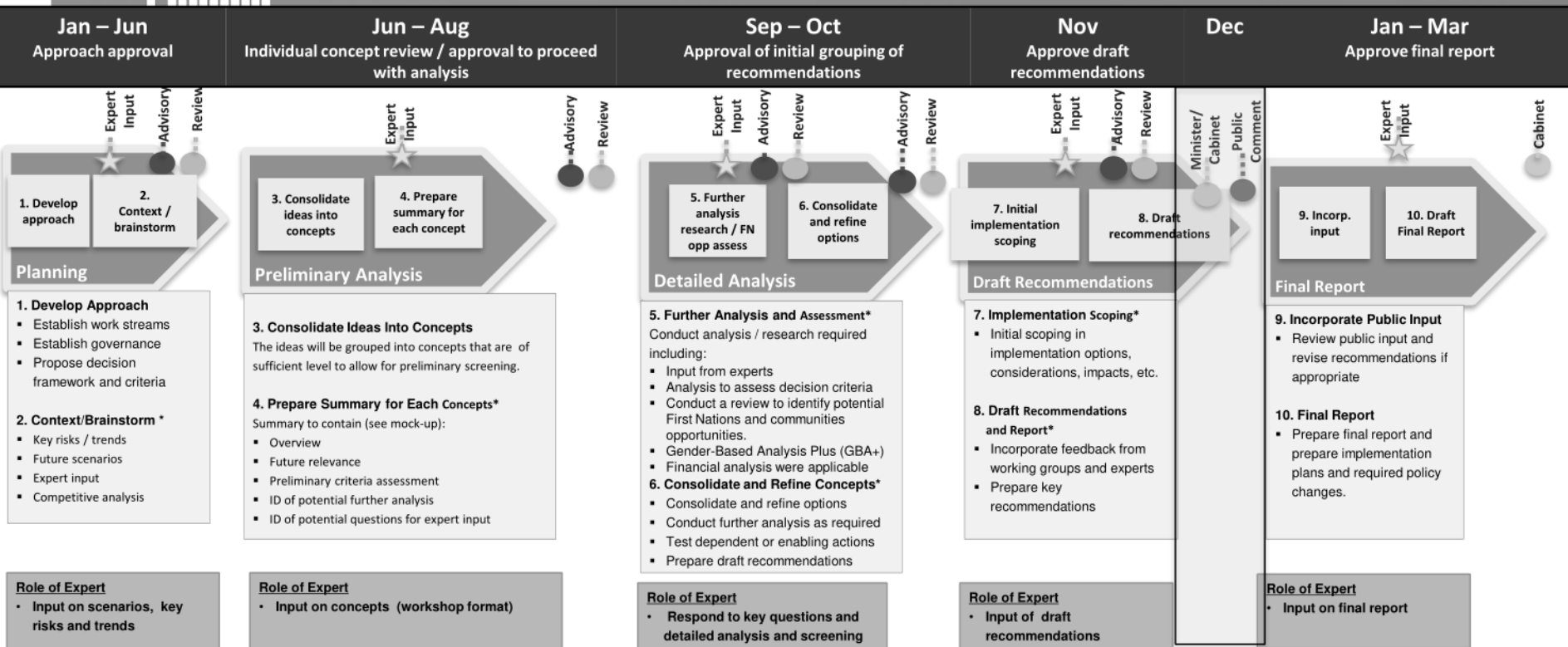
Work Stream Sponsor

Currently Under Development
with Work Streams some concepts
may span across work streams

Policy Concepts

s.12; s.13; s.16; s.17

Project Lifecycle and Timeline



Comprehensive Review Phase 2

Potential Future Scenarios

Table of Contents

Potential Future Scenarios	Pages 2-3
Great Expectations.....	Pages 4-5
Tech Transforms.....	Pages 6-7
Integrated Markets.....	Pages 8-9
Borders Rising.....	Pages 10-11

Introduction

During the July 19, 2019 Comprehensive Review Workshop, the project team will introduce BC Hydro's **Future Potential Scenarios**. The purpose of these four 'future potential scenarios' is to help broaden thinking about what the future could hold, and what the Province of British Columbia and BC Hydro would need to do to remain relevant. The scenarios are meant to be diverse yet plausible futures.

How will technology be shaping our lives? How will society be addressing climate change? With a thirty-year time frame, there's no certain way to know the answers to questions like these, but thinking about each scenario can help think about a range of answers.

The process of developing narratives about a range of futures to inform decision making today is called "scenario planning". Many utilities and companies around the world use scenario planning in their strategy development to allow them to manage the risks associated with an uncertain future. At BC Hydro, has developed four future scenarios to help inform its long-term

planning. The scenarios are focused on how energy is used and produced in North America and allow us to think about implications for B.C. and BC Hydro.

What scenarios ARE	What scenarios are NOT
A tool to inform our planning	NOT plans
Descriptions of a range of possible futures	NOT predictions of the future
Constructed by focusing on chosen uncertainty 'drivers'	NOT constructed from feared or desired futures
Creative, with provocative names to help us remember the stories	NOT modelling exercises based on standard rules

How scenarios can help make decisions

While one cannot predict the future, the scenarios can help think about plausible and diverse ways in which the future could unfold. Constructing different future scenarios helps plan for the long-term. These scenarios can be used as a tool to:

- Stretch internal planning and thinking by considering a wide range of 'what if' questions.
- Test out new strategies so that chosen actions are sound across a number of possible scenarios.
- Identify risks that may otherwise not be seen.
- Generate new options or opportunities that might not have contemplated otherwise.

What factors are driving the scenarios?

When scenarios were developed, four factors emerged that became key determinants of the narratives. How these factors, or uncertainties, play out will have a profound impact on how energy is used and produced. These are:

- How society approaches climate change, along with the associated policies that are put in place to address climate change.
- Future customer expectations and consumer preferences.
- The global economy, key players in the global economy, and international trade.
- Technology advancements, particularly in the energy industry.

Each of the scenarios explores a range of the above factors in combination with one another. The result is four scenarios that provide a spectrum of *diverse, yet plausible* futures.

The scenarios

The next sections are brief synopses of the narratives we developed for each scenarios. While the synopses highlight important differences between the present and the future in key areas such as policy, daily life, energy production, and energy consumption, they do not necessarily capture the full diversity of experiences that customers might have. For example, rural and urban, high and low income, and small and large customers will have different experiences and expectations. It is important to keep awareness at the forefront of this analysis.



**Great
Expectations**



**Tech
Transforms**



**Integrated
Markets**



**Borders
Rising**



Great Expectations

Regional clean solutions

No lone technological breakthrough or policy change can take sole credit for GHG reductions across the industrialized world. While climbing carbon prices provided incentive for innovation and emission reduction in the utility and transportation industries, these taxes don't account for advances in the rest of the economy. In the end, a mix of policies at all government levels, such as special funding for clean solutions development and stringent energy efficiency standards, provide momentum for greenhouse gas reductions.

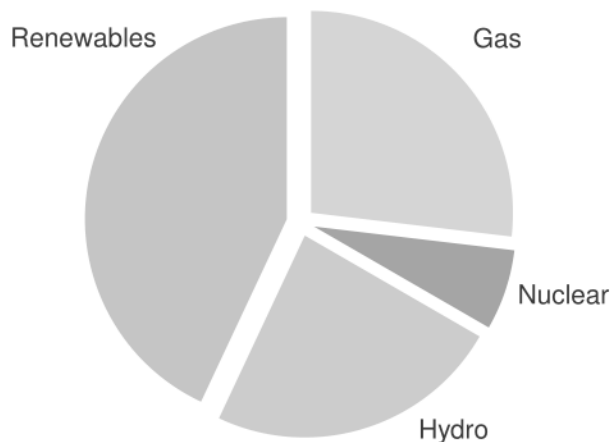


North America in a 'Great Expectations' world

"Pressure to stay a step ahead of intensifying climate change policies and growing demand for green products has translated into a sweeping change in societal attitudes. A new form of patriotism – where people are personally invested in ensuring policies for one's own jurisdiction are continually being improved upon – has taken a deep hold in North America."

– New York Times, January 25, 2039

Electricity Generation by Type in Western North America in 2050

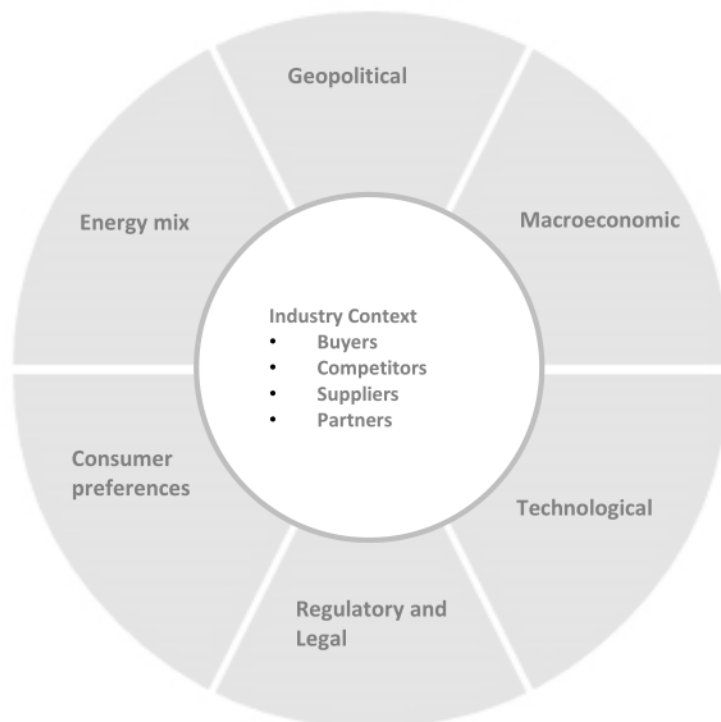


Along the path to this world, we could see:

- Strong competition for the "cleanest" or "greenest" branding among businesses and governments
- An increase of utility-scale wind and solar projects
- Small-scale energy storage technology and renewables only viable in specific applications
- Continued localized impacts of fracking as natural gas continues to play a significant role in power generation
- Strict codes and standards for efficiency, and a strong conservation culture
- Jurisdictional standards that exceed federal policy
- Expansion of electrified public transportation

Large supplies of renewable energy and advances in storage solutions enable extensive electric vehicle adoption and industry electrification.

BUSINESS CONTEXT (next 3 decades) – GREAT EXPECTATIONS



Geopolitical

- World order largely unchanged from status quo. US still the sole superpower and #1 economy
- Strong competition among jurisdictions at all levels (municipal, provincial, federal) to be branded “clean”

Macroeconomic

- The global economy continues to see robust growth
- Oil and natural gas have taken divergent paths with demand for oil continuing to shrink while LNG demand has skyrocketed.

Technological

- Solar costs have come down significantly.
- Advances in renewable natural gas and liquid biofuel technologies have resulted in notable cost declines.

Regulatory and Legal

- Climate policies are uncoordinated among jurisdictions.
- Local governments (municipalities) are vocal and influential
- Requirements for First Nations consent has continued to increase

Consumer preferences

- Strong demand for clean energy and electric vehicles.
- Consumers engaged in energy efficiency and conservation.

Energy Mix in North America

- Renewables backed up by highly efficient gas turbines are the norm.

Buyers

The industrial sector and the transportation sector drive demand growth. Focus on efficiency and conservation put a lid on the residential/commercial loads in spite of fuel switching for heating.

Competitors

Cheap solar and gas in the US has kept the retail access debate alive.

Suppliers

Independent power producers and large construction companies are needed to build the generation and transmission infrastructure required to serve the growing load.

Partners

First Nations relationships are important more than ever. Municipalities have set themselves renewable energy goals and are looking for BC Hydro for clean energy.



Tech Transforms

Technology and consumer expectations disrupt current energy market models

Early signs of massively disruptive change were already evident at the end of the 20th century. Even then, it was clear that an insatiable demand for reasonably priced products that also enable independence would drive consumerism in the following decades. By 2020, artificial intelligence, 3D printers, and virtual reality found viable applications within the mainstream market, and by 2025 important advancements in renewables and energy storage meant that electricity self-generation was now within the reach of the average household. These advancements, coupled with the rise of blockchain currency, allowed North Americans to break away from traditional institutions.



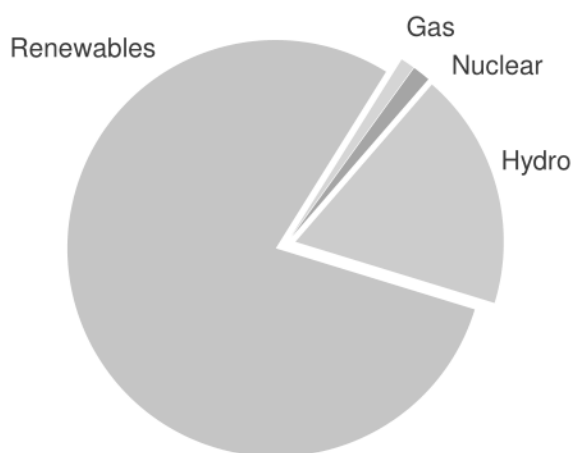
These advancements, coupled with the rise of blockchain currency, allowed North Americans to break away from traditional institutions.

North America in a 'Tech Transforms' world

"I remember watching "The Jetsons" and thinking it would be so cool to live in that world! The most futuristic thing we had back then was a remote control for the garage door. I never would have thought I'd be getting around in driverless cars and generating most of my own energy."

– Utility worker (retirement speech), May 30, 2030

Electricity Generation by Type in Western North America in 2050

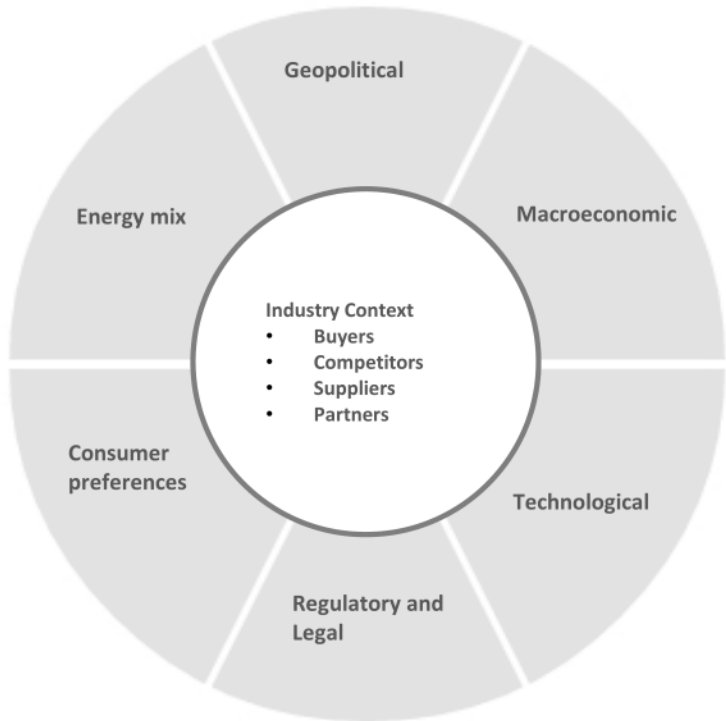


Along the path to this world, we could see:

- Very power savvy residents and businesses with changing expectations, wants, and needs
- Strong customer desire for personalized energy management services
- Shared automated electric vehicle networks
- The emergence of short-distance electrified air transportation and hyperloop technology
- Increasing disparity as communities and individuals differ in their ability or desire to adopt technology
- Businesses and residents generating their own electricity and selling it to neighbours and brokers
- A transformation of the utility model from generator to back-up energy provider

While electricity consumption is high in this world, self-generation eliminates a significant portion of electricity load supplied by the utility.

BUSINESS CONTEXT (next 3 decades) – TECH TRANSFORMS



Geopolitical

- International boundaries are blurred. Free movement of goods and people.
- Technological and political barriers to the exchange of information have diminished and the world is a global village.

Macroeconomic

- An advance in technology combined with diminished consumerism has meant that traditional industries such as oil and gas, forestry, and mining have shrunk.

Technological

- Solar and battery technologies have advanced as has the widespread use of Artificial Intelligence including the use of robots to do labor intensive, high risk work.

Regulatory and Legal

- Governments increasingly unwilling to regulate or allow monopolization

Consumer preferences

- Very savvy consumers with very discriminatory preferences who use AI to ensure they efficiently acquire products that meet their preferences.

Energy Mix in North America

- Distributed generation is prevalent aided by cost effective battery storage.

Buyers

Data centers and cloud computing clusters are a significant segment of the industrial load.

Competitors

Community choice aggregators are active throughout the continent. Large corporations such as Google are the parent companies of the CCA's.

Suppliers

Suppliers of grid-scale batteries that can be installed at distribution sub-stations. Tech companies that provide smart grid solutions and robotics.

Partners

Energy management system providers who are active behind the meter.



Integrated Markets

Inter-regional clean solutions

Repercussions of increasing incidents of drought, dropping water table levels, and increasing toxicity from fracking all came to a head in the early 2020's. The result was a global banding together to fight a common problem—climate change. Through the course of cutting fossil fuel dependency, nations decided they would be better off cooperating on mega-scale renewable energy projects that together, could serve entire continents. Around the same time, due to major advances in electricity transmission technology, infrastructure costs dropped rapidly. This would become the critical piece for North America's largest and most aggressive transmission project: the construction of a transmission line from the Pacific Northwest to Mexico City.

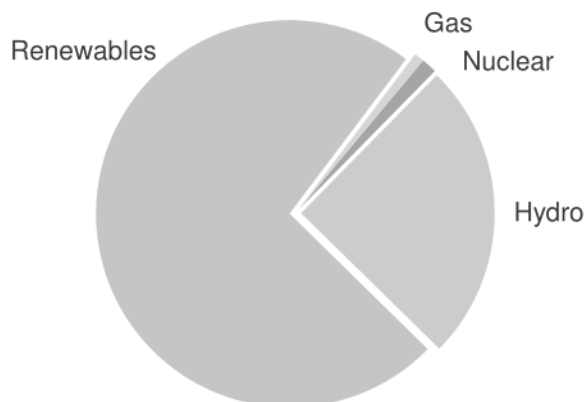


North America in an 'Integrated Markets' world

"I just got my first electricity bill since the big transmission line came into service. There's a graph with my bill that breaks down where all my energy comes from. I couldn't believe how far away some of the places were!"

– Residential electricity customer, September 21, 2035

Electricity Generation by Type in Western North America in 2050

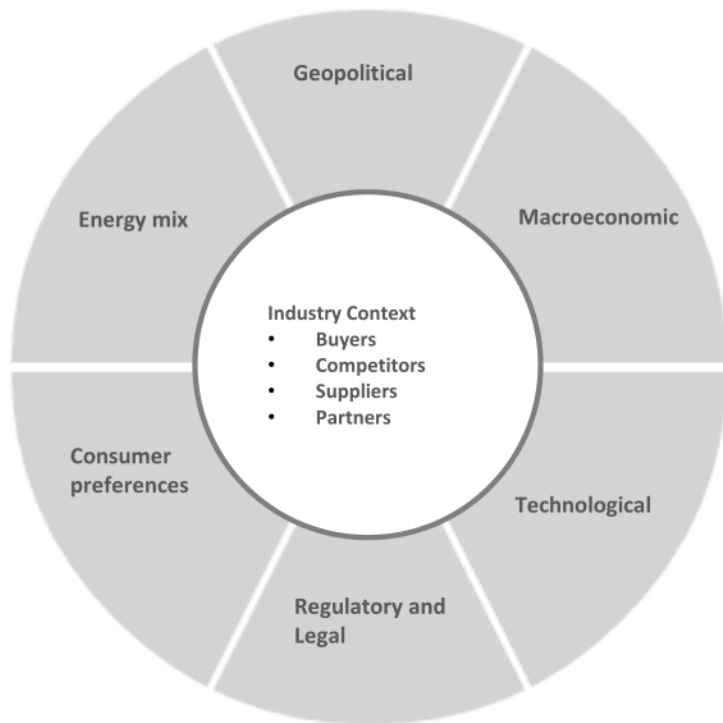


Along the path to this world, we could see:

- Customers with high confidence in their utility
- High levels of cross cultural cooperation
- Breakthroughs in conducting materials that advance transmission technology
- Solutions for integrating renewables (e.g., wind and solar) into the electricity grid
- Large-scale hydro, renewables, and energy storage projects
- Smaller scale renewables and energy storage projects remaining unpopular
- Electrification of most ground transportation
- A continental carbon-pricing program

Regional energy coordinating entities across Canada, the U.S. and Mexico join forces to promote trans-continent system reliability, further enabling a shift from day-ahead energy trading to international multi-year contracts.

BUSINESS CONTEXT (next 3 decades) – INTEGRATED MARKETS



Geopolitical

- Globalization has continued at a rapid pace. Multilateral trade agreements are commonplace.
- A renewed focus on finding cooperative solutions to issues such as climate change and immigration.

Macroeconomic

- The oil and gas industries have contracted significantly. Mining remains very strong.
- Free trade agreements have meant disparities in price of consumables have diminished. Applies to electricity as well.

Technological

- Breakthroughs in conducting materials and advances in solar and electric vehicles are some of the notable advances in technology.

Regulatory and Legal

- Very strict environmental regulations are in place resulting in very limited shale oil and gas extraction.
- Coordinated continental carbon policies.

Consumer preferences

- Strong demand for clean energy and electric vehicles.

Energy Mix in North America

- Large scale solar, wind projects, and hydro including pumped storage has resulted in a largely GHG free electricity mix.

Buyers

Electrified transportation and fuel switching has resulted in significant demand increase from residential and commercial customers. Other utilities in the WECC looking for renewable integration.

Competitors

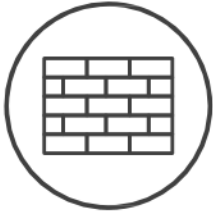
No direct competition in BC, yet state-wide cooperation has meant costs for other utilities have come down and BC Hydro can no longer boast of a significant rate advantage.

Suppliers

Independent power producers and large construction companies are needed to build the generation (storage hydro and pumped hydro) and transmission infrastructure.

Partners

First Nations relationships are important more than ever.



Borders Rising

Globalization falters—stalling agreement on global economic issues and climate action

A strong desire to bring overseas industries back home and to withdraw from global trade agreements led to deteriorating international cooperation on climate change issues. Some governments did try to transform the energy industry into a clean and renewable version. Unfortunately, they eventually realized that these plans couldn't contend with national policies that enabled traditional oil and gas industries to maintain their strong hold on the market. Renewables, such as solar and wind, simply couldn't compete with oil and gas in a world where every GHG emission reduction effort was easily met with an increasing supply of lower-priced fossil fuels.

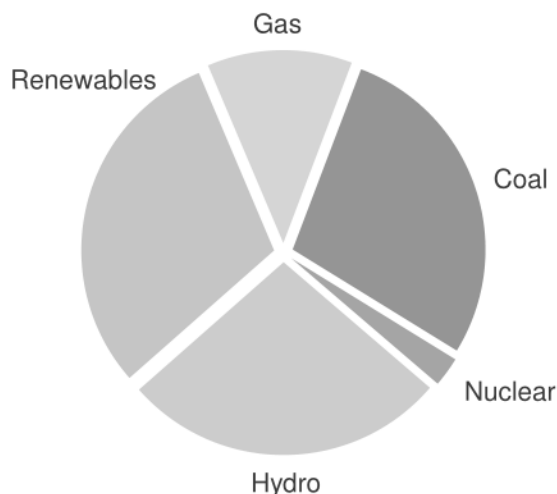


North America in a 'Borders Rising' world

"I remember back when I'd wince at gas prices, and filling up the truck was even worse – watching the dollars go up on the pump made me sick to my stomach. But now, gas is so cheap! Traffic's terrible, worse than ever, but I never think twice about getting in the car. I know it'll be cheaper than anything else."

– Vancouver Sun editorial, April 20, 2027

Electricity Generation by Type in Western North America in 2050

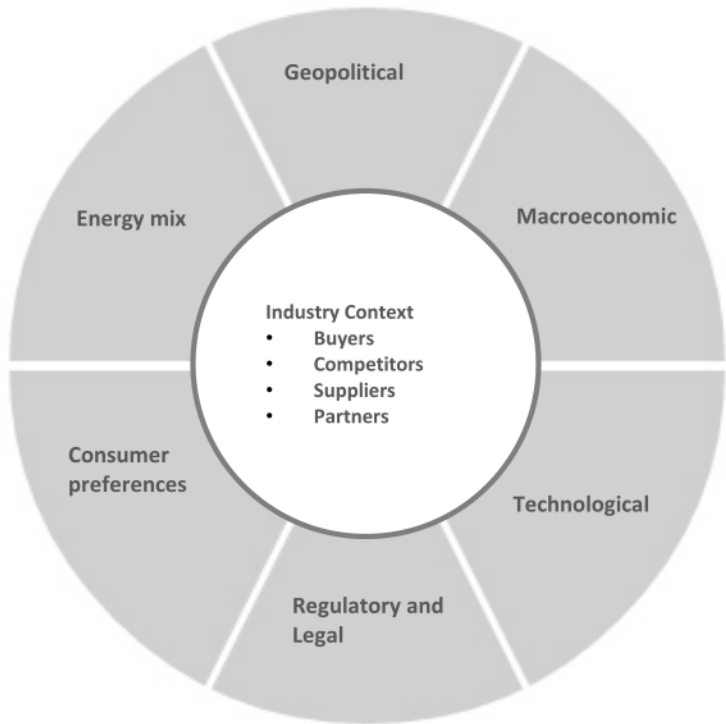


Along the path to this world, we could see:

- Continued innovations in gas extraction technologies
- Coal generation present only where affordable alternatives are lacking
- Stalled growth of renewables (e.g., solar and wind)
- Energy storage technologies only viable in limited applications
- General public distrust for government and utilities
- Stalled federal carbon programs
- Cost and security as paramount concerns for electricity customers
- Gasoline continuing to be the main type of fuel for transportation

Slow energy demand growth in North America and a lack of jurisdictional cooperation stunts the evolution of the power market.

BUSINESS CONTEXT (next 3 decades) – BORDERS RISING



Geopolitical

- Regional conflicts abound as US, China, and Russia jockey for power. The EU has been consigned to the dustbin of history.
- The western world is struggling to manage immigration including climate refugees.

Macroeconomic

- Protectionism reigns. Multiple recessions have only strengthened the resolve of many developed nations to adopt trade barriers to protect local industries.
- The oil and gas industry has remained a bright spot.

Technological

- Continued innovations in fossil fuel extraction technologies.

Regulatory and Legal

- Climate policies have stalled as other priorities such as jobs and immigration have taken priority.

Consumer preferences

- Distrust of governments and utilities.
- Least cost remains the overriding priority for consumables including energy.

Energy Mix in North America

- Coal generation still present. Gas is the default choice for dependable capacity.

Buyers

Forestry has been hit hard by tariffs. Oil and gas industry is thriving but only a few customers seek electricity service. Residential sector is growing. Low income customer number has grown significantly.

Competitors

Wholesale power prices remain low in the US and have kept the retail access debate alive. Provincial government faces increasing pressure from industrial customers to allow gas-fired self-generation.

Suppliers

Engineering companies assist in maintaining and rehabilitating heritage assets and the transmission system.

Partners

First Nations involved in refurbishment of heritage assets.

Phase 2 Comprehensive Review - Experts Advisors Meeting Agenda

July 19, 2019

9:45 am – 4:00 pm Dunsmuir Auditorium - 333 Dunsmuir Street

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
MORNING - Expert Advisor Orientation – Dunsmuir Auditorium 2		
Invitees	Phase 2 Review Committee, Advisory Committee, Focus Area Working Group Sponsors and Leads, Experts and Government Project Support Team	<ul style="list-style-type: none"> BC Hydro office at 333 Dunsmuir, Vancouver
9:45 am – 10:00 am	Registration / coffee (15 min)	
10:00 am – 10:40 am	Welcome, Opening Remarks and Introductions <ul style="list-style-type: none"> Safety Procedure & First Nations Recognition – Diane McSherry (5 min) Opening remarks - Les MacLaren (7 min) Opening remarks – Ken Peterson (7 min) Agenda review – Diane McSherry (5 min) Introductions of Experts – Diane McSherry (16 min) 	<ul style="list-style-type: none"> Diane will introduce all of the experts (your name, your title), following which you will be asked to present on your background and some details about your area of expertise (2 min)
10:40 am – 11:00 am	Overview of Comprehensive Review and Process and Work to Date - Diane McSherry (20 min)	<ul style="list-style-type: none"> This content will be available in advance via the SharePoint site. Please review & think of any questions you may have about your role and/or the process.
11:00 am- 11:45 am	Introduction to Scenarios – Sanjaya de Zoysa (45 min) <ul style="list-style-type: none"> Review of scenarios and the trends that could get us there 	Sanjay will be presenting this content at the workshop. Summary material can be found at the SharePoint site. Please review & think of any comments or questions you may have about the scenarios.
11:45 am – 12:30 pm	Lunch (45 min)	<ul style="list-style-type: none"> Move to Dunsmuir Auditorium 1

AFTERNOON - Panel Discussion with Experts - Dunsmuir Auditorium 1

Time	Agenda Item	INSTRUCTIONS AND QUESTIONS TO POSE TO EXPERTS
Invitees	Above plus invite to all focus area working group members and other interested BC Hydro / Government employees or participants	
12:30 pm– 12:40 pm	Brief overview of session for the benefit of new participants – Jeff Nugent (10 min) <ul style="list-style-type: none"> • What the afternoon session is about • What happened in the morning session 	
12:40 pm – 2:30pm	Plenary Discussion – Jeff Nugent (1 hr 50 min) <ul style="list-style-type: none"> • Experts provide their thoughts on Phase 2 Comprehensive Review topics based on their expert perspective (via ‘Armchair’ interview setup) <ul style="list-style-type: none"> ○ Q/A by Jeff Nugent between the Experts 	s.13

2:30 pm – 2:40 pm	BREAK (10 min)	
2:40 pm – 3:55 pm	Plenary Discussion continues – Jeff Nugent (1 hour 15 min) <ul style="list-style-type: none"> Facilitated Q/A format with audience 	<ul style="list-style-type: none"> Focus will be Q/A session with the audience Experts can ask questions of Workstream members
3:55 pm – 4:00 pm	Next Steps / Close – Jeff Nugent (5 min) <ul style="list-style-type: none"> Next steps Close 	<ul style="list-style-type: none"> Following this workshop you will be provided with a summary of the key themes and discussion points

Phase 2 Comprehensive Review – Expert Advisor Workshop – July 19, 2019

Please arrive at the BC Hydro office at 333 Dunsmuir Street by 8:50 am. Enter the building and go to the security desk located on the main floor. A BC Hydro representative with signage will sign you into the building and bring you to the meeting rooms.

You will have received invitations to three sessions:

Meeting	Time	Location	Details
Pre-meeting	9:00 am – 9:30 am	Floor - DUN 02 TBA	
Expert Advisor Orientation	9:45 am– 11:45 am	Floor - DUN 02 Auditorium	Agenda and materials are available on BC Hydro Review Phase 2 SharePoint
Panel Discussion with Expert Advisors	11:45 am to 4:00 pm	Floor - DUN 01 Auditorium	Agenda and materials are available on BC Hydro Review Phase 2 SharePoint Lunch will be provided.

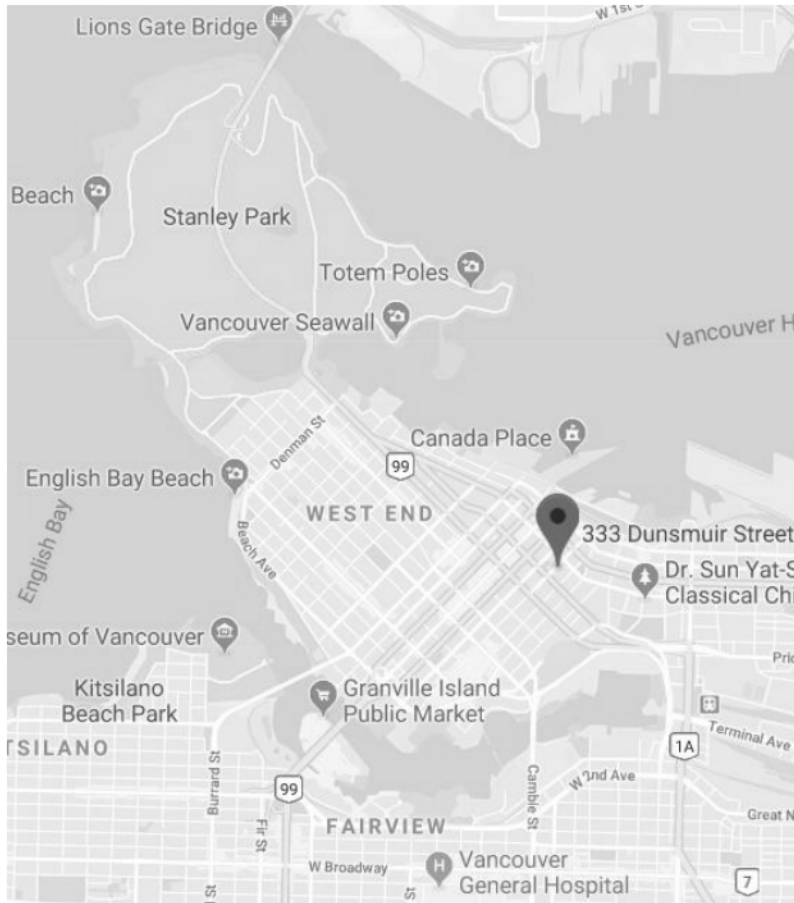
The building is easily accessible by transit and is close to the Stadium-Chinatown Expo line station. There is no visitor parking in the BC Hydro offices at 333 Dunsmuir, so if you need to park, you can find public pay parking near-by. This link outlines some parking options:

https://www.google.com/search?q=downtown+parking+in+vancouver+near+333+dunsmuir&sourceid=ie7&rls=com.microsoft:en-US:IE-Address&ie=&oe=&gws_rd=ssl

Please contact Darcy Quinn s.17
reaching the BC Hydro offices.

or Greg Arnold s.17

if you have any difficulties in



BC Hydro Office
333 Dunsmuir Street,
Vancouver



Crockett, Janine EMLI:EX

From: MacLaren, Les EMLI:EX
Sent: July 16, 2019 12:33 PM
To: Wieringa, Paul EMLI:EX; Sopinka, Amy EMLI:EX
Cc: Norris, Nancy EMLI:EX
Subject: RE: TOR - one minor change?

Agreed

From: Wieringa, Paul EMPR:EX
Sent: Tuesday, July 16, 2019 11:08 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; MacLaren, Les EMPR:EX <Les.MacLaren@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: Re: TOR - one minor change?

See you request on date

Paul Wieringa
Electricity and Alternative Energy Division
BC Ministry of Energy and Mines

Energizing BC--clean, sustainable and productive

On Jul 16, 2019, at 10:10 AM, Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca> wrote:

I would strike out June to November. Paul?

A

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 9:34 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: RE: TOR - one minor change?

With attachment

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 9:33 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: TOR - one minor change?

Hi Amy,

I was reviewing the TOR to make sure I had the most up-to-date version for the EAED website. I noticed in the final section about process the TOR says we are undertaking the review from June to November 2019. I was wondering whether we should update "June" to "July". Is this something we need to run by Paul and Les?

Thanks,

N

<BCH Review Phase II TOR 190618 Public.docx>

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 16, 2019 12:37 PM
To: MacLaren, Les EMPR:EX; Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX
Subject: FW: BCH Review Phase 2

I will send the bios to Colin. It looks like the IB will go out tomorrow.

A

From: Grewar, Colin GCPE:EX
Sent: July 16, 2019 12:36 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: BCH Review Phase 2

Hi Amy: Further to our phone conversation this morning, if you could include a few lines of bio info along with the names of the expert advisors that would be great. Once you send them along we can insert in the QA and share the latest QA and IB with you.

Direction just received is that the IB go out tomorrow instead of Thursday.

Thanks,
Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 16, 2019 12:54 PM
To: Grewar, Colin GCPE:EX
Cc: Wieringa, Paul EMPR:EX; Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX
Subject: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK
Attachments: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK.docx

Colin,

Attached are the experts bios. Nancy, can you send Colin the most recent version of the TOR that includes the most recent change?

A

Comprehensive Review of BC Hydro – Phase 2

Biographies of Expert Advisors

David Bibby

David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the Vice President, Information Technology, at Vancity Savings and the Senior Vice President of Technology at Canaccord Genuity Corporation.

Gwenne Farrell

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Prior to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union.

Mark Jaccard

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as Chair and Chief Executive Officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.

Stephen Koch

Stephen Koch is the Director of Emerging Issues at the Canadian Electricity Association (CEA), the National Voice of Electricity in Canada. As Director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously President of the Canadian Heat Oil Association and held other leadership roles which included Chairperson of Envirocentre and Canadian Energy Efficiency Alliance. Stephen is also a guest lecturer at Carleton University.

Caitlin Liotiris

Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into modeling tools. She is a Principal at Energy Strategies.

Liisa O'Hara

After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as Commissioner to the B.C. Utilities Commission (BCUC) for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions.

Blake Shaffer

Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake's 15-year career has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and Director of Energy Trading at Transalta Corporation in Calgary, Alberta. He is currently an Adjunct Assistant Professor at the University of Calgary, Department of Economics.

Dan Woynillowicz

Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as Policy Director.

West, Michele L EMPR:EX

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 1:11 PM
To: Grewar, Colin GCPE:EX; Sopinka, Amy EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Buchanan, Jack EMPR:EX; Wingfield, Irene EMPR:EX; Tally, Holly GCPE:EX; Giles, Alison GCPE:EX
Subject: TOR and changes to EMPR and EAED websites
Attachments: BCH Review Phase II TOR 190716 Public (Clean).docx; BHP2_EAED_Website_Content_20190704_UPDATED_approved LM.docx

Hi Colin,

Here is the most up-to-date version of the TOR.

I have Irene Wingfield from our shop updating the EAED website. The QA should be ready by the end of today.

I know Holly and Alison in your group had figured out the process for updating the EMPR homepage to reflect the launch of Phase 2. Is that underway now? I will need to send you the link to the updated EAED page once Irene has it ready, as that will be a component of the update needed to the EMPR homepage.

For your reference, I've attached a document outlining the changes needed to both EMPR and EAED webpages.

Thanks,

Nancy

From: Grewar, Colin GCPE:EX
Sent: July 16, 2019 12:58 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>
Subject: RE: IB_Backgrounders_Biographies of Expert Advisors_20190716 wo MK

Thanks Amy.



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Sopinka, Amy EMPR:EX
Sent: July 16, 2019 12:54 PM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan,

Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>

Subject: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK

Colin,

Attached are the experts bios. Nancy, can you send Colin the most recent version of the TOR that includes the most recent change?

A

Terms of Reference

Comprehensive Review of BC Hydro – Phase 2

Context

The 2017 Mandate Letter to the Minister of Energy, Mines and Petroleum Resources directs the ministry to undertake a Comprehensive Review of BC Hydro and to work with BC Hydro to develop a refreshed plan to keep rates affordable over the long-term.

In June 2018, Government announced a two-phase approach for carrying out the Minister's mandate:

- Phase 1 - examine opportunities to keep BC Hydro's rates affordable by increasing BC Hydro's revenues, reducing its costs and protecting ratepayer interests by re-empowering the British Columbia Utilities Commission to oversee BC Hydro's costs and activities; and
- Phase 2 - explore global energy sector shifts and provincial strategies that could transform the way BC Hydro does business.

Phase 1 of the Comprehensive Review of BC Hydro is now complete. On February 14, 2019 the Province released a final report on this first phase, which details actions to ensure sound financial and regulatory oversight of BC Hydro, and a five-year rate forecast reflecting cost and revenue strategies to keep rates affordable.

In December 2018, Government released its CleanBC plan, a combined economic development, energy and climate strategy. CleanBC offers a pathway that will enable our province to seize opportunities for innovation and growth. To meet the goals in CleanBC, we must increase our use of cleaner energy, including electricity generated from renewable sources, to shift away from our reliance on fossil fuels for transportation, industry, and buildings. CleanBC's actions will get British Columbia approximately 75% of the way to legislated 2030 greenhouse gas reduction targets. Achieving the remaining 25%, and ultimately the 2040 and 2050 targets, will require additional clean energy.

Objective

The objective of the Comprehensive Review's second phase is to develop recommendations for how BC Hydro can accomplish the provincial policy objectives laid out in the CleanBC plan, including how BC Hydro can support meeting British Columbia's legislated 2030, 2040, and 2050 greenhouse gas reduction targets in a manner that ensures BC Hydro sustainability in the future for the benefit of British Columbians.

The Review will consider the potential impacts of North American energy and market trends, the needs of current and future BC Hydro customers, evolving technologies and utility structures, the affordability of electricity to consumers, and opportunities to involve indigenous peoples and communities.

The recommendations from the Phase 2 Review will be used to inform BC Hydro's Integrated Resource Plan that will be filed with the British Columbia Utilities Commission in early 2021.

Governance

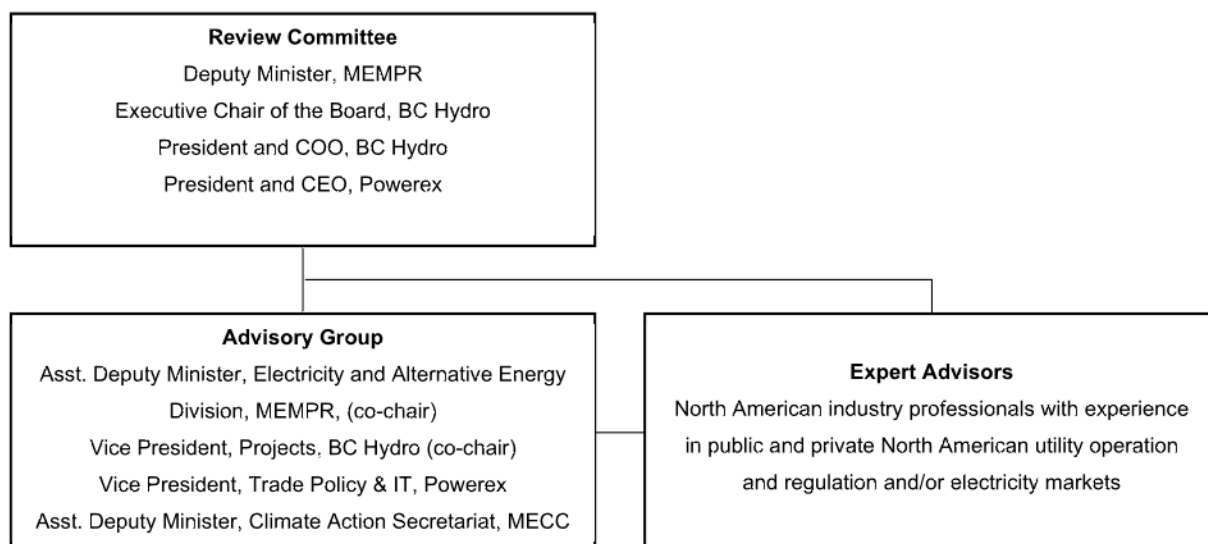
Overseeing the Phase 2 Review process will be a Review Committee consisting of:

- Deputy Minister of Energy, Mines and Petroleum Resources,
- Executive Chair of the BC Hydro Board of Directors,
- President and Chief Operating Officer of BC Hydro, and
- Chief Executive Officer of Powerex.

This Review Committee is responsible for ensuring that the objective of the second phase of the Review is met.

An Advisory Group consisting of senior staff from the Ministry of Energy, Mines and Petroleum Resources (MEMPR), Ministry of Environment and Climate Change (MECC), BC Hydro, and Powerex will provide advice to the Review Committee, draft material for their consideration and prepare a final report that includes the recommendations of the Review Committee. Industry experts that have extensive experience in public and private North American utility operation, regulation, and/or electricity markets will inform and guide Review Committee recommendations.

Governance Chart - Phase 2 Review:



Areas of Interest

The Review Committee, with the support of the Advisory Group and advice from industry experts, is tasked with addressing questions within four areas of interest, with the goal of gathering the information necessary to develop a final report with recommended actions for the utility.

1. Supporting CleanBC

CleanBC is central to reducing greenhouse gas emissions while also meeting BC's energy and economic development goals. Any recommended changes to BC Hydro must achieve the electrification goals set out in CleanBC to meet our legislated 2030 greenhouse gas reduction targets and lay the groundwork for additional greenhouse gas emissions reductions to meet the province's legislated 2040 and 2050 emissions targets. Achieving the electrification targets will support the production of lower carbon natural resources for export. The Review will identify additional opportunities to reduce greenhouse gas emissions through fuel-switching, electrification, energy efficiency and conservation and will include responses to the following questions:

- What is required to ensure that new customer demand for access to clean electricity from the grid is achieved in an efficient, cost-effective, and timely manner?
- How should the costs of this new access be allocated between existing and new customers? Is there a role for government(s) in financing the infrastructure to provide this access?

- What can/should BC Hydro do to encourage fuel switching to increase the use of clean electricity as an alternative to fossil fuels and reduce greenhouse gas emissions?
- How can BC Hydro and the Province's CleanBC Better Homes/Better Buildings program coordinate further to address climate change by reducing greenhouse gas emissions and meeting CleanBC objectives?

2. Thriving in an Evolving Electricity Sector

The Phase 2 Review final report will describe the trends in technology, changes in electricity markets and transformative approaches used by other electric utilities (e.g. distributed generation, microgrid and digital utilities). Recommendations will address how BC Hydro must adapt to a broad range of future scenarios and evolve its existing structure, services, and assets in support of ensuring BC Hydro's sustainability for the benefit of all British Columbians. At a minimum, the Phase 2 Review final report will address the following questions:

- Which industry trends are most likely to have an impact on BC Hydro?
- What actions are needed to ensure that BC Hydro is able to benefit from new markets and integrate new technologies while keeping rates affordable?
- Are there opportunities for BC Hydro to provide customers with more energy choices and information?
- Are changes needed to BC Hydro's governance structure to allow the utility to pursue new business opportunities?

3. Leveraging Our Strengths

BC Hydro's wholly-owned subsidiary Powerex currently buys and sells electricity in other markets throughout the Western Interconnection. The Phase 2 Review will consider whether there are opportunities to enable increased participation in external markets to the benefit of BC Hydro ratepayers. The Phase 2 final report will make recommendations that consider each of the following questions:

- What constraints, if any, reduce Powerex's ability to trade electricity in the Western Interconnection today or in the future?
- Is there an opportunity or actions that can be taken that will enable Powerex to expand its business in markets outside of BC, further leveraging BC Hydro's clean generation and/or Powerex's expertise in energy markets?

- How should cost effective clean energy located outside of BC be considered in BC Hydro's planning and operations?
- Is there an opportunity to own and/or operate assets outside of BC Hydro's current service area that would benefit BC Hydro's ratepayers?

4. Opportunities for Indigenous Nations and Communities

In support of BC's commitment to reconciliation with Indigenous Peoples, the Review will consider future opportunities or new roles for Indigenous Nations in the development, ownership, or operation of electrical infrastructure or services. In relation to BC Hydro's existing business and proposed new lines of business, the Phase 2 Final Report will include recommendations to enhance Indigenous Nations' participation in the energy sector. The review will also consider how BC Hydro currently works with communities and explore alternatives.

For each of these four areas of interest, the Expert Advisors will provide advice on opportunities for program and rate design, changes to BC Hydro's governance structure and regulatory framework, and other opportunities for improved organizational readiness to enhance BC Hydro's financial and operational sustainability to keep rates affordable over the long term.

Process

The Review Committee and Advisory Group will undertake the Review utilizing the advice of the Expert Advisors as and when needed. In late fall 2019, stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results.

A final report will be completed in early 2020 and will outline the Review Committee's recommendations on policy, governance, and strategy to ensure BC Hydro's sustainability and ability to contribute to CleanBC and other Government policy objectives.

Page 170 of 285 to/à Page 172 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 16, 2019 1:54 PM
To: Norris, Nancy EMPR:EX; Sopinka, Amy EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Buchanan, Jack EMPR:EX; Wingfield, Irene EMPR:EX; Tally, Holly GCPE:EX; Giles, Alison GCPE:EX
Subject: RE: TOR and changes to EMPR and EAED websites

Thanks Nancy.

Yes, Holly and Alison have been working with Ashlea Wilson in our digital communications department on changes to the home page and all is in hand.

Do please send the link to the updated EAED page when you can and we can pass that along to Ashlea.

Still waiting to confirm release time and day, but expecting tomorrow sometime.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 1:11 PM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: TOR and changes to EMPR and EAED websites

Hi Colin,

Here is the most up-to-date version of the TOR.

I have Irene Wingfield from our shop updating the EAED website. The QA should be ready by the end of today.

I know Holly and Alison in your group had figured out the process for updating the EMPR homepage to reflect the launch of Phase 2. Is that underway now? I will need to send you the link to the updated EAED page once Irene has it ready, as that will be a component of the update needed to the EMPR homepage.

For your reference, I've attached a document outlining the changes needed to both EMPR and EAED webpages.

Thanks,

Nancy

From: Grewar, Colin GCPE:EX

Sent: July 16, 2019 12:58 PM

To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>

Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>

Subject: RE: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK

Thanks Amy.



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Ministry of Energy, Mines and Petroleum Resources
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Colin,

Attached are the experts bios. Nancy, can you send Colin the most recent version of the TOR that includes the most recent change?

A

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 16, 2019 2:27 PM
To: Darcy Quinn; 'Magre, Leela'; MacLaren, Les EMPR:EX
Cc: Wieringa, Paul EMPR:EX; Norris, Nancy EMPR:EX
Subject: FW: Review Phase 2

Good afternoon,

It appears that the direction is to issue the Phase 2 IB on Friday morning now.

A

From: Grewar, Colin GCPE:EX
Sent: July 16, 2019 2:12 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
Subject: Review Phase 2

Hi Amy: Latest direction is to issue the IB on the review early on Friday morning – before 8am – to keep the deck clear for a joint provincial/federal communique or release from the EMMC which is planned for release tomorrow. Thursday's off limits due to public accounts release.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
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Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 17, 2019 9:11 AM
To: Sopinka, Amy EMPR:EX
Cc: Norris, Nancy EMPR:EX; 'Quinn, Darcy'
Subject: RE: IB_Backgrounder_Biographies of Expert Advisors_20190717 wo MK

Thanks Amy.

Colin



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Colin.Grewar@gov.bc.ca

From: Sopinka, Amy EMPR:EX
Sent: July 17, 2019 9:00 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Darcy Quinn <darcy.quinn@bchydro.com>
Subject: IB_Backgrounder_Biographies of Expert Advisors_20190717 wo MK

Last minute bio change from Steven Koch .

Amy

West, Michele L EMPR:EX

From: Tally, Holly GCPE:EX
Sent: July 17, 2019 10:03 AM
To: Norris, Nancy EMPR:EX
Cc: Wingfield, Irene EMPR:EX
Subject: RE: TOR and changes to EMPR and EAED websites

Thank you!

From: Norris, Nancy EMPR:EX
Sent: July 17, 2019 10:02 AM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Cc: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: TOR and changes to EMPR and EAED websites

Hi holly! Irene in our group is working on getting the new link developed. I will send it to you ASAP.

Nancy

From: Tally, Holly GCPE:EX
Sent: July 16, 2019 3:26 PM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: RE: TOR and changes to EMPR and EAED websites

Hi Nancy,

Is it possible to get the new link for the EAED page? I'm confirming with GCPE digital services that they will have the home page updated for 7:30am on Friday.

Thanks!
Holly

From: Norris, Nancy EMPR:EX
Sent: July 16, 2019 1:11 PM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>
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I have Irene Wingfield from our shop updating the EAED website. The QA should be ready by the end of today.

I know Holly and Alison in your group had figured out the process for updating the EMPR homepage to reflect the launch of Phase 2. Is that underway now? I will need to send you the link to the updated EAED page once Irene has it ready, as that will be a component of the update needed to the EMPR homepage.

For your reference, I've attached a document outlining the changes needed to both EMPR and EAED webpages.

Thanks,

Nancy

From: Grewar, Colin GCPE:EX
Sent: July 16, 2019 12:58 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>
Subject: RE: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK

Thanks Amy.



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Sent: July 17, 2019 10:20 AM
To: Sopinka, Amy EMPR:EX
Cc: Norris, Nancy EMPR:EX; Tally, Holly GCPE:EX; Giles, Alison GCPE:EX
Subject: Review
Attachments: IB_Phase 2_BCH Review_17 July 2019_BCHedits.docx

Hi Amy: Here's the latest version of the IB. This is now with the MO for approval. As tracked, the gang at BCH has suggested three minor edits for consideration. Are you ok with their suggestions?

We're still touching up the QA and will send it along soon.

Colin



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Colin.Grewar@gov.bc.ca

Page 180 of 285 to/à Page 181 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 17, 2019 10:26 AM
To: Norris, Nancy EMPR:EX; Tally, Holly GCPE:EX
Subject: Update - RE: TOR and changes to EMPR and EAED websites

Hi,

Here is what I have so far, Nancy take a look.

<https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/residential-electricity/residential-electricity>

We are still working on retrieving Phase 1 page, when it is back we will move this page to go underneath it.

Thanks.
Irene

From: Norris, Nancy EMPR:EX
Sent: July 17, 2019 10:02 AM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Cc: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
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To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>

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Subject: RE: IB_Backgrounder_Biographies of Expert Advisors_20190716 wo MK

Thanks Amy.



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Colin.Grewar@gov.bc.ca

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Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>

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Sent: July 17, 2019 10:42 AM
To: Grewar, Colin GCPE:EX; Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: FW: Review
Attachments: IB_Phase 2_BCH Review_17 July 2019_BCHedits.docx

I'm ok with them but would like Paul's opinion on the removing the date of the interim report.

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Page 185 of 285 to/à Page 186 of 285

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To: Grewar, Colin GCPE:EX; Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: RE: Review

I agree – sorry I meant take out the timeline that was originally proposed.

A

From: Grewar, Colin GCPE:EX
Sent: July 17, 2019 10:48 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: RE: Review

Thanks Amy. I think need to provide some timeline for delivery of the interim report.

Colin



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West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 17, 2019 11:39 AM
To: Sopinka, Amy EMPR:EX
Cc: Norris, Nancy EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: Review
Attachments: QA_Phase 2_BC Hydro Review_Jul17_2019.docx

Hi Amy: Here's the latest version of the QA.

Colin



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Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

Page 190 of 285 to/à Page 196 of 285

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s.13

Comprehensive Review of BC Hydro – Phase 2

Biographies of Expert Advisors

(The following have confirmed participation as of July 17, 2019)

David Bibby

David Bibby has over 25 years of experience in strategic technology leadership within growth-oriented global organizations. He has been the Head of Global Digital Services at Finning International since January 2016. Prior to this, he held positions as the Vice President, Information Technology, at Vancity Savings and the Senior Vice President of Technology at Canaccord Genuity Corporation.

Gwenne Farrell

Gwenne Farrell worked as a Vice-President of MoveUp from May 2005 until November 2018. Prior to that she worked as a Financial Analyst with BC Hydro. In the spring of 2007, Gwenne was also elected to the office of Secretary-Treasurer of Canadian Office and Professional Employees Union (COPE), Local 378's National Union.

Mark Jaccard

Mark Jaccard has been a professor since 1986 in the School of Resource and Environmental Management at Vancouver's Simon Fraser University. From 1992 to 1997 he served as Chair and Chief Executive Officer of the B.C. Utilities Commission. He has published over 100 academic papers, most of these related to his principal research focus: the design and application of energy-economy models that assess the effectiveness of sustainable energy and climate policies.

Stephen Koch

Stephen Koch is the Director of Emerging Issues at the Canadian Electricity Association (CEA), the National Voice of Electricity in Canada. As Director of the National Emerging Issues Committee, Stephen works with senior CEA members and industry experts to identify, predict, and prepare for technological innovations and potentially disruptive market changes across the energy sector. Stephen was previously President of the Oil Heat Association, Executive Director of NAIMA Canada and held other leadership roles which included Chairperson of Envirocentre.

Caitlin Liotiris

Caitlin Liotiris has expertise in electricity market development, regional transmission planning and policy, and energy procurement arenas. Her work includes advocacy at regional forums, performing market and regulatory evaluations, and facilitating the incorporation of new policies and market structures into modeling tools. She is a Principal at Energy Strategies.

Liisa O'Hara

After a lengthy career as an executive in the energy transportation business, Liisa O'Hara served as Commissioner to the B.C. Utilities Commission (BCUC) for 10 years. As BCUC Commissioner, Liisa participated in oversight of the Province's natural gas and electricity utilities, the regulation of rates, and the development of new facilities. As Commissioner, she also developed a strong interest in clean energy solutions.

Blake Shaffer

Blake Shaffer has extensive experience in the energy sector, with a specific focus on electricity markets. Blake's 15-year career has taken him from the trading arm of BC Hydro, to Lehman Brothers and Barclays Capital in New York as a senior energy trader, and Director of Energy Trading at Transalta Corporation in Calgary, Alberta. He is currently an Adjunct Assistant Professor at the University of Calgary, Department of Economics.

Dan Woynillowicz

Dan Woynillowicz is an accomplished non-profit leader working to identify and implement climate solutions. An experienced analyst, strategist and advocate, he has significant knowledge and experience in the fields of energy and environmental policy. He joined Clean Energy Canada in December 2012 as Policy Director.

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 17, 2019 1:25 PM
To: Grewar, Colin GCPE:EX; Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: RE: Review

We should update the EAED website as well. Colin, will you be sending this material to Les for his review (IB, QA)

A

From: Grewar, Colin GCPE:EX
Sent: July 17, 2019 10:48 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: RE: Review

Thanks Amy. I think need to provide some timeline for delivery of the interim report.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Sopinka, Amy EMPR:EX
Sent: July 17, 2019 10:42 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: FW: Review

I'm ok with them but would like Paul's opinion on the removing the date of the interim report.

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Sent: July 17, 2019 10:20 AM
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Hi Amy: Here's the latest version of the IB. This is now with the MO for approval. As tracked, the gang at BCH has suggested three minor edits for consideration. Are you ok with their suggestions?

We're still touching up the QA and will send it along soon.

Colin



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Colin.Grewar@gov.bc.ca

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 17, 2019 1:27 PM
To: Grewar, Colin GCPE:EX; Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX
Subject: RE: Review

The TOR also say that there will be late fall feedback on the interim report.

These should all be reconciled.

A

From: Grewar, Colin GCPE:EX
Sent: July 17, 2019 10:48 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Buchanan, Jack EMPR:EX <Jack.Buchanan@gov.bc.ca>; Giles, Alison GCPE:EX <Alison.Giles@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: RE: Review

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Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Giles, Alison

GCPE:EX <Alison.Giles@gov.bc.ca>

Subject: Review

Hi Amy: Here's the latest version of the IB. This is now with the MO for approval. As tracked, the gang at BCH has suggested three minor edits for consideration. Are you ok with their suggestions?

We're still touching up the QA and will send it along soon.

Colin



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Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 17, 2019 4:17 PM
To: Wieringa, Paul EMPR:EX
Cc: Grewar, Colin GCPE:EX; Norris, Nancy EMPR:EX
Subject: Changing Dates to the TOR and EAED website
Attachments: IB_Phase 2_BCH Review_Jul17_2019_tracked.docx

Hi Paul,

Colin is wondering if we should change the TOR and the wording on the EAED website. BC Hydro's preference is to say that the interim report will be out by early 2020. His proposed language is highlighted in the attached. If we don't want to make those changes we can stick with the current wording that has,

The Review Committee and Advisory Group will undertake the Review utilizing the advice of the Expert Advisors as and when needed. In late fall 2019, stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results.

A final report will be completed in early 2020 and will outline the Review Committee's recommendations on policy, governance, and strategy to ensure BC Hydro's sustainability and ability to contribute to CleanBC and other Government policy objectives.

The IB and QA are updated with the new dates, the EAED website and the TOR have the older dates. We need to reconcile them all.

Thoughts?

A

Page 204 of 285 to/à Page 205 of 285

Withheld pursuant to/removed as

s.13

Crockett, Janine EMLI:EX

From: Grewar, Colin GCPE:EX
Sent: July 18, 2019 10:42 AM
To: MacLaren, Les EMPR:EX
Cc: Sopinka, Amy EMPR:EX; Wieringa, Paul EMPR:EX; Giles, Alison GCPE:EX; Tally, Holly GCPE:EX; McRae, Meghan GCPE:EX
Subject: Review Timeline
Attachments: IB_Phase 2_BCH Review_Jul17_2019_tracked.docx

Hi Les: BC Hydro was concerned that the timeline for delivery of the interim report on phase 2 of the review “may be ambitious” and suggested “perhaps late 2019/early 2020”.

As such, I have proposed changing the wording in the IB as tracked in the attached. Could you please review. The rest of the IB is the same as the latest version you have already approved.

Amy and Paul are aware and note that if we make the change to the timelines we’d need to change the wording on the website and in the Terms of Reference as well.

Thanks,
Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

Page 207 of 285 to/à Page 208 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Tally, Holly GCPE:EX
Sent: July 18, 2019 2:42 PM
To: Norris, Nancy EMPR:EX; Grewar, Colin GCPE:EX; Sopinka, Amy EMPR:EX
Cc: Wingfield, Irene EMPR:EX; Thind, Herman GCPE:EX
Subject: RE: EAED website changes timing tomorrow

Hello,

I'm copying Herman on this email, as he is the one who will be making the Ministry website changes for us. I'm sure waiting until 8am to publish the page should be no problem.

Herman: Irene and Nancy are who I have been coordinating with for the EAED page.

Thanks,
Holly

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 2:28 PM
To: Tally, Holly GCPE:EX ; Grewar, Colin GCPE:EX ; Sopinka, Amy EMPR:EX
Cc: Wingfield, Irene EMPR:EX
Subject: EAED website changes timing tomorrow

Hi all,

I wanted to check in with you regarding the sequencing of the IB release and EAED website changes tomorrow. I understand the IB is going out at 7:30am. Is it necessary for the EAED website changes to be published at 7:30am, or can they wait until 8am, when Irene gets in? If not, we will need to find someone who is in the office at 7:30am to publish the changes.

Thanks in advance for your advice.

Nancy

From: [Giles, Alison GCPE:EX](#)
To: [MacLaren, Les EMPR:EX](#)
Cc: [Sopinka, Amy EMPR:EX](#); [Grewar, Colin GCPE:EX](#); [Tally, Holly GCPE:EX](#)
Subject: FW: BCH Review
Date: July 18, 2019 3:13:38 PM

Hi Les,

We're adding one more Amy-approved Q to the QA for Phase 2 review as follows (Colin's at an appt so I said I'd forward):

Will the public get a chance to participate in the review?

In order to complete the second phase of the review in time to inform the development of BC Hydro's next Integrated Resource Plan, we are not planning any public engagement on the second phase of the review.

To provide transparency, the Ministry of Energy, Mines and Petroleum Resources, working with BC Hydro, energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, and the Ministry of Environment and Climate Change Strategy will produce an interim report before the end of the year, which will be publicly available. Key Indigenous organizations and stakeholders will be asked to provide feedback on the interim report.

The final report and recommendations will also be made public.

The public will have a further opportunity to see and comment on the outcomes of the second phase of the review during the BCUC's open and transparent review of BC Hydro's Integrated Resource Plan, which will be filed in early 2021.

Crockett, Janine EMLI:EX

From: Giles, Alison GCPE:EX
Sent: July 18, 2019 3:14 PM
To: MacLaren, Les EMPR:EX
Cc: Sopinka, Amy EMPR:EX; Grewar, Colin GCPE:EX; Tally, Holly GCPE:EX
Subject: FW: BCH Review

Hi Les,

We're adding one more Amy-approved Q to the QA for Phase 2 review as follows (Colin's at an appt so I said I'd forward):

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In order to complete the second phase of the review in time to inform the development of BC Hydro's next Integrated Resource Plan, we are not planning any public engagement on the second phase of the review.

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The public will have a further opportunity to see and comment on the outcomes of the second phase of the review during the BCUC's open and transparent review of BC Hydro's Integrated Resource Plan, which will be filed in early 2021.

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 18, 2019 3:32 PM
To: MacLaren, Les EMPR:EX; Wieringa, Paul EMPR:EX; Norris, Nancy EMPR:EX; Buchanan, Jack EMPR:EX
Cc: 'Magre, Leela'; Nugent, Jeff (Jeff.Nugent@bchydro.com); Darcy Quinn; Diane McSherry (diane.mcsherry@bchydro.com)
Subject: IB release

Good afternoon,

GCPE folks just called to say that HQ has pushed back the Phase 2 Review IB release until 11:45 a.m. tomorrow.

Amy

West, Michele L EMPR:EX

From: Thind, Herman GCPE:EX
Sent: July 18, 2019 3:41 PM
To: Tally, Holly GCPE:EX; Wingfield, Irene EMPR:EX; Norris, Nancy EMPR:EX
Cc: Grewar, Colin GCPE:EX
Subject: Re: Tomorrow's Phase 2 IB

Thanks – I'll reschedule that page update.

From: "Tally, Holly GCPE:EX" <Holly.Tally@gov.bc.ca>
Date: Thursday, July 18, 2019 at 3:34 PM
To: "Thind, Herman GCPE:EX" <Herman.Thind@gov.bc.ca>, "Wingfield, Irene EMPR:EX" <Irene.Wingfield@gov.bc.ca>, "Norris, Nancy EMPR:EX" <Nancy.Norris@gov.bc.ca>
Cc: "Grewar, Colin GCPE:EX" <Colin.Grewar@gov.bc.ca>
Subject: Tomorrow's Phase 2 IB

Hi all,

An update that the IB for the BC Hydro Phase 2 launch will not be going out until 11:45am tomorrow. Page updates can wait until then.

Thanks!

Holly Tally | Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
T: 778-974-3851 | **C:** 250-818-3081
E: Holly.Tally@gov.bc.ca

West, Michele L EMPR:EX

From: Thind, Herman GCPE:EX
Sent: July 18, 2019 3:45 PM
To: Tally, Holly GCPE:EX; Wingfield, Irene EMPR:EX; Norris, Nancy EMPR:EX
Cc: Grewar, Colin GCPE:EX
Subject: Re: Tomorrow's Phase 2 IB

Hi Holly,

I've changed it to 11:45am:

Workflow Status ^

Owner: IDIR\HTHIND

<input type="checkbox"/> Job ID	<input type="checkbox"/> Owner	<input type="checkbox"/> State	<input type="checkbox"/> Details	<input type="checkbox"/> File Size of Assets	<input type="checkbox"/> Schedule Date	
<input type="checkbox"/> 9AB67B768C2E46709433DFDEB0097847	IDIR\HTHIND	PENDING_PUBLISH	1	N/A	2019-07-19 11:45 AM	<input type="button" value="Messages"/>

Thanks.

From: "Tally, Holly GCPE:EX" <Holly.Tally@gov.bc.ca>
Date: Thursday, July 18, 2019 at 3:34 PM
To: "Thind, Herman GCPE:EX" <Herman.Thind@gov.bc.ca>, "Wingfield, Irene EMPR:EX" <Irene.Wingfield@gov.bc.ca>, "Norris, Nancy EMPR:EX" <Nancy.Norris@gov.bc.ca>
Cc: "Grewar, Colin GCPE:EX" <Colin.Grewar@gov.bc.ca>
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E: Holly.Tally@gov.bc.ca

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 18, 2019 4:37 PM
To: Norris, Nancy EMPR:EX; Sopinka, Amy EMPR:EX
Cc: Wieringa, Paul EMPR:EX
Subject: RE: IB QA PHase 2
Attachments: BCHP2_EAED_Website_Content_20190704_UPDATED_approved LM.docx

Hi Nancy: There was some back and forth about changing the wording regarding the timing but we've ended up back with the same language so no changes needed to the TOR.

Amy may have mentioned to you that we have removed the reference to "the public" related to feedback on the interim report, so you'll need to remove that reference from the EAED website (as highlighted at the top of page 2 in the attached).

Thanks,
Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 3:48 PM
To: Sopinka, Amy EMPR:EX ; Grewar, Colin GCPE:EX
Cc: Wieringa, Paul EMPR:EX
Subject: RE: IB QA PHase 2

Hi there,

Did I miss the response to this? Is there an updated version of the TOR? I need to provide a PDF of the final TOR to Irene prior to 11:45am tomorrow so she can post it on the EAED website.

Thanks, N

From: Sopinka, Amy EMPR:EX
Sent: July 18, 2019 9:26 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: IB QA PHase 2

Hi Colin,

Where did we land with the IB and including the timing for the interim and final reports? We need to ensure that the public TOR and EAED website include the same information as the IB.

For Phase 2 – there is a word missing in the second paragraph. And the review did not start in June. Take of the “in June 2019”. Please make those changes before this goes live.

Amy

From: Wingfield, Irene EMPR:EX

Sent: July 19, 2019 10:25 AM

To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>

Subject: QR for Phase 1 and 2 revisions

These are now set to publish live at 11:45am today:

Phase 2 : <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Phase 1: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-1>

Thanks.

Irene Wingfield

Senior Writer

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

Work: (778) 698-7169

Page 217 of 285 to/à Page 219 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 18, 2019 7:49 PM
To: Wieringa, Paul EMPR:EX
Cc: Norris, Nancy EMPR:EX
Subject: FW: EAED website changes

The semi-colons seem odd. They make more sense in a bulleted list.

Phase 2 will be guided by the Comprehensive Review of BC Hydro Phase 2 – Terms of Reference. The Ministry of Energy, Mines and Petroleum Resources will work with BC Hydro; energy industry experts with extensive experience in North American utility operation, technology, regulation and electricity markets; and the Ministry of Environment and Climate Change Strategy, to produce an interim report before the end of the year.

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 4:03 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: EAED website changes

Hi Amy,

Below are the links to the draft EAED website pages for your review. The language is the same as what was approved by Les.

The only outstanding item is the language around when the interim and final reports will be released.

N

From: Wingfield, Irene EMPR:EX
Sent: July 18, 2019 3:05 PM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: QA's

Phase 1: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-1>

Phase 2: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 2:28 PM
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Cc: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: EAED website changes timing tomorrow

Hi all,

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Thanks in advance for your advice.

Nancy

West, Michele L EMPR:EX

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 8:23 PM
To: Grewar, Colin GCPE:EX; Sopinka, Amy EMPR:EX
Cc: Wieringa, Paul EMPR:EX
Subject: RE: IB QA PHase 2

Thanks Colin! I'll make sure that change is made to the EAED website.

From: Grewar, Colin GCPE:EX
Sent: July 18, 2019 4:37 PM
To: Norris, Nancy EMPR:EX ; Sopinka, Amy EMPR:EX
Cc: Wieringa, Paul EMPR:EX
Subject: RE: IB QA PHase 2

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Thanks,
Colin



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Ministry of Energy, Mines and Petroleum Resources
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Colin.Grewar@gov.bc.ca

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 3:48 PM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: RE: IB QA PHase 2

Hi there,

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Thanks, N

From: Sopinka, Amy EMPR:EX
Sent: July 18, 2019 9:26 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>

Cc: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>

Subject: IB QA PHase 2

Hi Colin,

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A

Page 224 of 285 to/à Page 226 of 285

Withheld pursuant to/removed as

s.13

West, Michele L EMPR:EX

From: McRae, Meghan GCPE:EX
Sent: July 19, 2019 8:49 AM
To: Sopinka, Amy EMPR:EX
Cc: Giles, Alison GCPE:EX; Grewar, Colin GCPE:EX
Subject: Re: IB release today

That's correct Amy. We'll flip you the final PDF'd version shortly if you haven't already received it.
Meghan

Sent from my iPhone

On Jul 19, 2019, at 8:46 AM, Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca> wrote:

Good morning Meghan

Just wanted to confirm that the IB for the Phase 2 Review will be released at 11:45 this morning.
Amy

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:14 AM
To: Norris, Nancy EMPR:EX
Subject: RE: Changes to the EAED website - BC Hydro Phase 2

This is done. Did you want to see the QR? And/or should I send the QR to anyone else to see?
Irene

From: Norris, Nancy EMPR:EX
Sent: July 18, 2019 8:48 PM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: Changes to the EAED website - BC Hydro Phase 2

Hi Irene,

Here is the PDF of the Terms of Reference for Phase 2 of the BC Hydro Review. Please add the link to this PDF on the EAED website page for Phase 2.

Also, could you please change the second to last sentence on the Phase 2 QA page from "Indigenous Nations, organizations, and stakeholders will have the opportunity to provide ideas and feedback on an interim report." to "Stakeholders and Indigenous Peoples will be asked to provide feedback on interim Phase 2 results."

Thanks!

Nancy

West, Michele L EMPR:EX

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:39 AM
To: Wingfield, Irene EMPR:EX; Norris, Nancy EMPR:EX
Cc: Grewar, Colin GCPE:EX
Subject: RE: QR for Phase 1 and 2 revisions

You could use July 2019. Instead of eliminating the date.

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:35 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Will do.

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:34 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions
Importance: High

For Phase 2 – there is a word missing in the second paragraph. And the review did not start in June. Take of the “in June 2019”. Please make those changes before this goes live.

Amy

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:25 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: QR for Phase 1 and 2 revisions

These are now set to publish live at 11:45am today:

Phase 2 : <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Phase 1: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-1>

Thanks.

Irene Wingfield

Senior Writer

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

Work: (778) 698-7169

West, Michele L EMPR:EX

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 10:44 AM
To: Wingfield, Irene EMPR:EX; Sopinka, Amy EMPR:EX
Cc: Grewar, Colin GCPE:EX
Subject: RE: QR for Phase 1 and 2 revisions

Hi Irene,

The linked TOR needs to be changed. I will send you the correct version ASAP.

Nancy

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:40 AM
To: Sopinka, Amy EMPR:EX ; Norris, Nancy EMPR:EX
Cc: Grewar, Colin GCPE:EX
Subject: RE: QR for Phase 1 and 2 revisions

Phase 2: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Here is the revision.
Irene

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:34 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions
Importance: High

For Phase 2 – there is a word missing in the second paragraph. And the review did not start in June. Take of the “in June 2019”. Please make those changes before this goes live.

Amy

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:25 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: QR for Phase 1 and 2 revisions

These are now set to publish live at 11:45am today:

Phase 2 : <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

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Thanks.

Irene Wingfield

Senior Writer

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

Work: (778) 698-7169

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 19, 2019 10:49 AM
To: Sopinka, Amy EMPR:EX
Cc: Norris, Nancy EMPR:EX; McRae, Meghan GCPE:EX; Tally, Holly GCPE:EX
Subject: Final IB
Attachments: 2019EMPR0082-001488.pdf

Hi Amy: As promised, final IB on phase 2 of the BCH Review attached and below.

This is embargoed until it goes out at 11:45am today, so please do not share before that time.

Thanks,
Colin

For Immediate Release
2019EMPR0082-001488
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

INFORMATION BULLETIN

Next phase of BC Hydro review to focus on climate goals, new opportunities

VICTORIA - To ensure BC Hydro is working for British Columbians, government is launching Phase 2 of the BC Hydro review, focusing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

Phase 2 of the BC Hydro review will leverage BC Hydro's strengths and focus on:

- * BC Hydro's role in supporting CleanBC and meeting British Columbia's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
- * future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
- * integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
- * new opportunities for BC Hydro to expand its business in markets outside B.C. for the benefit of ratepayers.

The Ministry of Energy, Mines and Petroleum Resources will work with energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, BC Hydro and the Ministry of Environment and Climate Change Strategy to produce an interim report before the end of this year.

Indigenous peoples and organizations, and stakeholders will have the opportunity to provide feedback on the interim report.

A final report with recommendations will be completed in early 2020.

CleanBC is a pathway to a more prosperous, balanced and sustainable future. CleanBC was developed in collaboration with the BC Green Party caucus, and supports the commitment in the Confidence and Supply Agreement to implement climate action to meet B.C.'s emission targets.

Quick Facts:

- * About 98% of BC Hydro's electricity generation comes from clean and renewable resources.
- * In December 2018, government released its CleanBC plan.
- * To achieve greenhouse gas reduction targets, the plan calls for increasing the use of B.C.'s renewable hydroelectricity and shifting away from a reliance on fossil fuels for transportation, industry and buildings.
- * In February 2019, government announced the results of Phase 1 of the BC Hydro review, including:
 - * a new rate forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years; and
 - * regulatory and legislative changes to enhance the BCUC's power to make decisions on rate increases, deferral accounts and capital projects, as well as other decisions that affect British Columbians.
- * Phase 2 of the BC Hydro review will support BC Hydro's development of its Integrated Resource Plan (IRP) to be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs now and into the future.

Learn More:

To view the terms of reference for Phase 2 of the BC Hydro review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker
Media Relations
Ministry of Energy, Mines and Petroleum Resources
250 952-0628

Connect with the Province of B.C. at: <http://news.gov.bc.ca/connect>

INFORMATION BULLETIN

For Immediate Release
2019EMPR0082-001488
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

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- a new rate forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years; and
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Learn More:

To view the terms of reference for Phase 2 of the BC Hydro review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker
Media Relations
Ministry of Energy, Mines and Petroleum
Resources
250 952-0628

Connect with the Province of B.C. at: news.gov.bc.ca/connect

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 19, 2019 10:53 AM
To: Sopinka, Amy EMPR:EX
Subject: RE: QR for Phase 1 and 2 revisions

Looks great. Thanks Amy to you, Nancy and Irene for your work on the website.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:49 AM
To: Grewar, Colin GCPE:EX
Subject: FW: QR for Phase 1 and 2 revisions

Can you review the link below and see if it matches what you are anticipating?

A

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:47 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Done.

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:44 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Can you putGovernment initiated Phase 2 in July 2019. Sorry.

A

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:40 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Phase 2: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Here is the revision.
Irene

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:34 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions
Importance: High

For Phase 2 – there is a word missing in the second paragraph. And the review did not start in June. Take of the “in June 2019”. Please make those changes before this goes live.

Amy

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:25 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: QR for Phase 1 and 2 revisions

These are now set to publish live at 11:45am today:

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Phase 1: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-1>

Thanks.

Irene Wingfield

Senior Writer

Electricity and Alternative Energy Division

Ministry of Energy, Mines and Petroleum Resources

Work: (778) 698-7169

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 11:37 AM
To: Norris, Nancy EMPR:EX
Subject: RE: QR for Phase 1 and 2 revisions

Done.

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 11:27 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Hi Irene,

I found a couple of small typos that need to be corrected:

- Phase 2 page, first sentence needs to be changed to “for the benefit of British Columbians”. At the moment it reads “for the benefit of British Columbia”
- Phase 1 page, first sentence of paragraph 5 needs to be changed to “The key outcomes of Phase 1 are:” At the moment it reads “The key outcomes of the review are:”

Thanks!

Nancy

From: Wingfield, Irene EMPR:EX
Sent: July 19, 2019 10:40 AM
To: Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions

Phase 2: <https://www2.qa.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Here is the revision.
Irene

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 10:34 AM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: QR for Phase 1 and 2 revisions
Importance: High

A

West, Michele L EMPR:EX

From: Tally, Holly GCPE:EX
Sent: July 19, 2019 2:31 PM
To: Norris, Nancy EMPR:EX; Grewar, Colin GCPE:EX
Cc: McRae, Meghan GCPE:EX; Sopinka, Amy EMPR:EX; Wingfield, Irene EMPR:EX
Subject: RE: EMPR/EAED link to Phase 2

The link has been updated.

If it doesn't work for you, try clearing your cache.

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 2:27 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Thanks!!

From: Tally, Holly GCPE:EX
Sent: July 19, 2019 2:26 PM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

I've heard back from digital services and they will be making the change this afternoon. Will keep you updated.

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 1:00 PM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Thanks Colin and Holly!

Just so you know, the link on the EMPR page still needs to be updated:
<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/energy-mines-and-petroleum-resources>. At the moment, the link on that page still goes to the Phase 1 page.

Here is the correct link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

From: Grewar, Colin GCPE:EX
Sent: July 19, 2019 12:54 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Change has been made.



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Tally, Holly GCPE:EX
Sent: July 19, 2019 12:42 PM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Hi Nancy,

Colin is already in touch with the editors to get that changed!

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 12:42 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Hi Holly,

The link at the bottom of this page also needs to be updated: <https://news.gov.bc.ca/releases/2019EMPR0082-001488>

Here is the correct link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Thanks!

Nancy

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 12:12 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>

Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>

Subject: RE: EMPR/EAED link to Phase 2

Thanks Holly. Please let me know this change needs to be made ASAP.

Here is the correct link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

From: Tally, Holly GCPE:EX

Sent: July 19, 2019 11:53 AM

To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>

Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>

Subject: RE: EMPR/EAED link to Phase 2

Hi,

I've asked Herman to make that change.

Thanks,
Holly

From: Norris, Nancy EMPR:EX

Sent: July 19, 2019 11:50 AM

To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>

Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>

Subject: EMPR/EAED link to Phase 2

Hi all,

The Featured Topics paragraph on Phase 2 on the EMPR homepage currently links to the Phase 1 page on the EAED site. Could you please change this so it links to the Phase 2 page on the EAED site.

Thanks

Nancy

West, Michele L EMPR:EX

From: Tally, Holly GCPE:EX
Sent: July 19, 2019 2:35 PM
To: Sopinka, Amy EMPR:EX
Cc: Norris, Nancy EMPR:EX; Grewar, Colin GCPE:EX; Wingfield, Irene EMPR:EX; McRae, Meghan GCPE:EX
Subject: RE: EMPR/EAED link to Phase 2

Yup!

From: Sopinka, Amy EMPR:EX
Sent: July 19, 2019 2:34 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Cc: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>; McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: Re: EMPR/EAED link to Phase 2

Was that all fixed?

A

Amy Sopinka
Director, Transmission and Interjurisdictional Branch
P: 778-698-7280
M: 250-888-5183

On Jul 19, 2019, at 12:42 PM, Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca> wrote:

Hi Nancy,

Colin is already in touch with the editors to get that changed!

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 12:42 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

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Here is the correct link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

Thanks!

Nancy

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 12:12 PM
To: Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Thanks Holly. Please let me know this change needs to be made ASAP.

Here is the correct link: <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>

From: Tally, Holly GCPE:EX
Sent: July 19, 2019 11:53 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>; Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>
Subject: RE: EMPR/EAED link to Phase 2

Hi,

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Thanks,
Holly

From: Norris, Nancy EMPR:EX
Sent: July 19, 2019 11:50 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>; Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Cc: McRae, Meghan GCPE:EX <Meghan.McRae@gov.bc.ca>; Tally, Holly GCPE:EX <Holly.Tally@gov.bc.ca>
Subject: EMPR/EAED link to Phase 2

Hi all,

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Thanks

Nancy

West, Michele L EMPR:EX

From: Wingfield, Irene EMPR:EX
Sent: July 22, 2019 4:11 PM
To: Norris, Nancy EMPR:EX
Subject: RE: Updating Content in the government Internet and ministry Intranet environments

Laska Paré

A/Communications Manager
Executive Operations Branch / Deputy Minister's Office
Ministry of Energy, Mines and Petroleum Resources
Phone: 778-698-1839

From: Norris, Nancy EMPR:EX
Sent: July 22, 2019 3:41 PM
To: Wingfield, Irene EMPR:EX <Irene.Wingfield@gov.bc.ca>
Subject: RE: Updating Content in the government Internet and ministry Intranet environments

Thanks. Who sent that to you?

From: Wingfield, Irene EMPR:EX
Sent: July 22, 2019 3:23 PM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: Updating Content in the government Internet and ministry Intranet environments

Hi this is the part I received from our EMPR Communications in regards to updating Content.

Updating Content

As a content updater, you can make updates to pages in the QA environment. However, prior to this public facing content (reviews the changes).

Thanks.

Irene Wingfield

Senior Writer
Electricity and Alternative Energy Division
Ministry of Energy, Mines and Petroleum Resources
Work: (778) 698-7169

Crockett, Janine EMLI:EX

From: Colleen Sweet <Colleen.Sweet@BCLNGA.CA>
Sent: July 22, 2019 8:10 PM
To: Wieringa, Paul EMLI:EX
Subject: Re: Terms of Reference for Review

Will do Paul.

Thanks

From: "Wieringa, Paul EMPR:EX" <Paul.Wieringa@gov.bc.ca>
Date: Monday, July 22, 2019 at 8:09 PM
To: Colleen Sweet <Colleen.Sweet@BCLNGA.CA>
Subject: RE: Terms of Reference for Review

Sorry, I was tied up this afternoon. Try me tomorrow morning, as I head out to speak at a conference in Portland.

From: Colleen Sweet <Colleen.Sweet@BCLNGA.CA>
Sent: July 22, 2019 12:17 PM
To: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: Re: Terms of Reference for Review

Paul –

Can you talk this afternoon – brief call? Terms of Reference look really good – btw.

From: "Wieringa, Paul EMPR:EX" <Paul.Wieringa@gov.bc.ca>
Date: Friday, July 19, 2019 at 5:18 PM
To: Colleen Sweet <Colleen.Sweet@BCLNGA.CA>
Subject: RE: Terms of Reference for Review

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2?keyword=bc&keyword=hydro&keyword=comprehensive&keyword=review&keyword=phase&keyword=2>

I think the server was down for a bit around noon. You can try me on my mobile at s.22

From: Colleen Sweet <Colleen.Sweet@BCLNGA.CA>
Sent: July 19, 2019 12:14 PM
To: Wieringa, Paul EMPR:EX <Paul.Wieringa@gov.bc.ca>
Subject: Terms of Reference for Review

Hi Paul –

Can you send me the Terms of Reference for the BCH review? The link online doesn't work.

Do you have time for a call to discuss?

West, Michele L EMPR:EX

From: Grewar, Colin GCPE:EX
Sent: July 23, 2019 9:58 AM
To: Norris, Nancy EMPR:EX; Sopinka, Amy EMPR:EX
Cc: Tally, Holly GCPE:EX
Subject: RE: dead link: old BC Hydro Review webpage - ISSUE RESOLVED

Great. Glad to hear Nancy.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Norris, Nancy EMPR:EX
Sent: July 23, 2019 9:45 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>; Sopinka, Amy EMPR:EX <Amy.Sopinka@gov.bc.ca>
Subject: RE: dead link: old BC Hydro Review webpage - ISSUE RESOLVED

Hi Colin,

I did a google search this morning for "BC Hydro Review" and all the links worked. I wanted to thank you for looking into the issue!

Thanks,

Nancy

From: Norris, Nancy EMPR:EX
Sent: July 22, 2019 10:50 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: RE: dead link: old BC Hydro Review webpage

Thank you 😊

From: Grewar, Colin GCPE:EX
Sent: July 22, 2019 10:49 AM
To: Norris, Nancy EMPR:EX <Nancy.Norris@gov.bc.ca>
Subject: RE: dead link: old BC Hydro Review webpage

Hi Nancy: We're checking into this with our digital shop. Will let you know.

Colin



Colin Grewar
Senior Public Affairs Officer
Government Communications and Public Engagement
Ministry of Energy, Mines and Petroleum Resources
Phone: 250-952-0650
Colin.Grewar@gov.bc.ca

From: Norris, Nancy EMPR:EX
Sent: July 22, 2019 9:09 AM
To: Grewar, Colin GCPE:EX <Colin.Grewar@gov.bc.ca>
Subject: dead link: old BC Hydro Review webpage

Hi Colin,

When I google "BC Hydro Review", the first couple of hits that are listed (see below) direct me to this link:
<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

As that link is now dead, I get an error message when I click on it. I'm wondering if there's a way to set things up so the old BC Hydro Review webpage forwards to the new one (i.e. <https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review-phase-2>).

Is this something I should be pursuing? I'm not sure about the protocol on this.

Thanks in advance for your input.

Nancy

Google

bc hydro review



🔍 All 📰 News 🖼️ Images 📺 Videos 🛒 Shopping ⋮ More ⚙️ Settings 🛠️ Tools

About 11,200,000 results (0.62 seconds)

The first phase of the **review** is now complete. Government has worked with **BC Hydro** to identify cost savings, efficiencies, new revenue streams and other changes to keep electricity rates low, while ensuring sound regulatory and financial oversight of **BC Hydro** and enabling implementation of government policy priorities.

Comprehensive Review of BC Hydro - Province of British Columbia

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative.../bc-hydro-review>

🔍 About this result 🗉 Feedback

Comprehensive Review of BC Hydro - Province of British Columbia

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative.../bc-hydro-review> ▼

West, Michele L EMPR:EX

From: Bell, Warren <Warren.Bell@bchydro.com>
Sent: July 27, 2019 11:53 AM
To: Jubb, Anthea; Heminsley, Chris; Magre, Leela; Jones, Samuel; Ward, Amanda; Hanlon, Kristin; Stanciulescu, Giuseppe; Sauer, Darwin; Buchanan, Jack EMPR:EX; Ianniciello, Christina EMPR:EX; Gosman, Nat EMPR:EX; Gilmore, Christopher ENV:EX; Wieringa, Paul EMPR:EX; Savidant, Michael; Van Huizen, Danielle; Rich, John; Popoff, Karen; Hobson, Stephen; Jackson, Siobhan; Nelson, Jim; Muncaster, Katherine EMPR:EX; Jones, Matthew; Horacek, Philip; XT:Weiler, Charlie IRR:IN; Berkey, Marianne; Sopinka, Amy EMPR:EX; Blackstock, Michael; Simmons, Gregory; Storzer, Mary EMPR:EX; Curll, Cynthia; Marques, Jorge; Hargreaves, Dave; Dyck, Lester
Cc: Anderson, Keith; McSherry, Diane; Cutler, Scott EMPR:EX; Quinn, Darcy; Nugent, Jeff; Nelson, Tera; Douglas, Bruce
Subject: RE: Update on Comprehensive Review - CleanBC
Attachments: 2019EMPR0082-001488.pdf

Also, in case you haven't seen it, attached is the Information Bulletin on Phase 2 that was released on July 19.

From: Bell, Warren
Sent: 2019, July 26 9:45 AM
To: Jubb, Anthea; Heminsley, Chris; Magre, Leela; Jones, Samuel; Ward, Amanda; Hanlon, Kristin; Stanciulescu, Giuseppe; Sauer, Darwin; Buchanan, Jack MEM:EX (Jack.Buchanan@gov.bc.ca); Ianniciello, Christina EMPR:EX; Nathaniel.Gosman@gov.bc.ca; Gilmore, Christopher ENV:EX (Christopher.Gilmore@gov.bc.ca); 'Wieringa, Paul EMPR:EX'; Savidant, Michael; Van Huizen, Danielle; Rich, John; Popoff, Karen; Hobson, Stephen; Jackson, Siobhan; Nelson, Jim; Muncaster, Katherine EMPR:EX; Jones, Matthew; Horacek, Philip; Weiler, Charlie; Berkey, Marianne; 'Sopinka, Amy EMPR:EX'; Blackstock, Michael; Simmons, Gregory; Mary.Storzer@gov.bc.ca; Curll, Cynthia; Marques, Jorge; Hargreaves, Dave; Dyck, Lester
Cc: Anderson, Keith; McSherry, Diane; 'Cutler, Scott EMPR:EX'; Quinn, Darcy; Nugent, Jeff; Nelson, Tera; Douglas, Bruce
Subject: Update on Comprehensive Review - CleanBC

Good morning,

This is an update for the folks who have been involved in the Supporting CleanBC workstream of the Comprehensive Review of BC Hydro – Phase 2

Four concept papers have been drafted and will undergo an initial review by the Advisory Committee later today:

- Policy Framework for Electrification/climate change
- Remove Barriers for Customers to Connect
- New Electrification Policy/Programs/Regulations
- Flexibility on new rates options

The current drafts are saved to the Review Sharepoint at:

s.15

A concept paper on hydrogen was reviewed by the Advisory Committee in late June, and the papers prepared by the other workstreams are scheduled for Advisory Committee review in early August.

The Advisory Committee is expected to provide direction on further work on the concept papers over the next few weeks, before another round of review in September. I'll provide an update to the group once we have direction.

If you have any comments on the papers or see any big/worth pursuing opportunities that have been missed, please let me know and we'll make sure they are considered in the next round.

And if there is a paper that you are interested in getting more involved in, please let me know. We have been working with small subgroups to get the initial papers drafted. As we move to the next phase of detailed analysis, we'll need to look at each concept in more detail and include more perspectives.

Thanks for your support and contributions through this process

Warren

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-BCHydroDisclaimerID5.2.8.1541

INFORMATION BULLETIN

For Immediate Release
2019EMPR0082-001488
July 19, 2019

Ministry of Energy, Mines and Petroleum Resources

Next phase of BC Hydro review to focus on climate goals, new opportunities

VICTORIA – To ensure BC Hydro is working for British Columbians, government is launching Phase 2 of the BC Hydro review, focusing on CleanBC electrification targets, new technologies, new roles for Indigenous Nations and examining future market opportunities.

Phase 2 of the BC Hydro review will leverage BC Hydro's strengths and focus on:

- BC Hydro's role in supporting CleanBC and meeting British Columbia's legislated 2030, 2040 and 2050 greenhouse gas reduction targets;
- future opportunities or new roles for Indigenous Nations and for communities in the energy sector;
- integrating new technologies and electricity market trends into BC Hydro's structure, services and assets while keeping rates affordable; and
- new opportunities for BC Hydro to expand its business in markets outside B.C. for the benefit of ratepayers.

The Ministry of Energy, Mines and Petroleum Resources will work with energy industry experts with extensive experience in North American utility operation, regulation and electricity markets, BC Hydro and the Ministry of Environment and Climate Change Strategy to produce an interim report before the end of this year.

Indigenous peoples and organizations, and stakeholders will have the opportunity to provide feedback on the interim report.

A final report with recommendations will be completed in early 2020.

CleanBC is a pathway to a more prosperous, balanced and sustainable future. CleanBC was developed in collaboration with the BC Green Party caucus, and supports the commitment in the Confidence and Supply Agreement to implement climate action to meet B.C.'s emission targets.

Quick Facts:

- About 98% of BC Hydro's electricity generation comes from clean and renewable resources.
- In December 2018, government released its CleanBC plan.
 - To achieve greenhouse gas reduction targets, the plan calls for increasing the use of B.C.'s renewable hydroelectricity and shifting away from a reliance on fossil fuels for transportation, industry and buildings.
- In February 2019, government announced the results of Phase 1 of the BC Hydro review, including:

- a new rate forecast that, subject to final approval from the B.C. Utilities Commission (BCUC), will limit bill increases to 1.8% in 2019 and 0.7% in 2020, and keep cumulative increases 20% below the forecast rate of B.C. inflation for the next five years; and
- regulatory and legislative changes to enhance the BCUC's power to make decisions on rate increases, deferral accounts and capital projects, as well as other decisions that affect British Columbians.
- Phase 2 of the BC Hydro review will support BC Hydro's development of its Integrated Resource Plan (IRP) to be filed with the BCUC in early 2021. The IRP outlines how BC Hydro plans to safely provide reliable, affordable, clean electricity to meet customers' needs now and into the future.

Learn More:

To view the terms of reference for Phase 2 of the BC Hydro review, visit:

<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/electricity/bc-hydro-review>

Contact:

Kent Karemaker
Media Relations
Ministry of Energy, Mines and Petroleum
Resources
250 952-0628

Connect with the Province of B.C. at: news.gov.bc.ca/connect

Crockett, Janine EMLI:EX

From: Mohamed, Shelina <Shelina.Mohamed@bchydro.com>
Sent: July 29, 2019 2:35 PM
To: Peterson, Ken; Ken Peterson (kgpeterson@telus.net); Bechard, Thomas; Wong, David; MacDougall, Mike; Nikolejsin, Dave EMPR:EX; Hewitt, Jeremy ENV:EX; MacLaren, Les EMPR:EX; Sopinka, Amy EMPR:EX; Wieringa, Paul EMPR:EX; McSherry, Diane; Nugent, Jeff; Quinn, Darcy; O'Riley, Christopher
Subject: Materials For Comp Review Phase 2 - Review Committee Meeting July 30
Attachments: Materials For Review Committee Meeting 30July19.pdf
Importance: High

Hello all,

Attached material for Comp Review Phase 2 meeting on Tuesday, July 30 at 2:30pm.

Thank-you,
Shelina

Shelina Mohamed | Executive Assistant
Office of the President & Chief Operating Officer

BC Hydro
333 Dunsmuir St, 18th floor
Vancouver, BC V6B 5R3

P 604 623 4410
M 604 230 3076
E shelina.mohamed@bchydro.com

bchydro.com

Smart about power in all we do.

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BC Hydro Review Phase Two

Review Committee Meeting

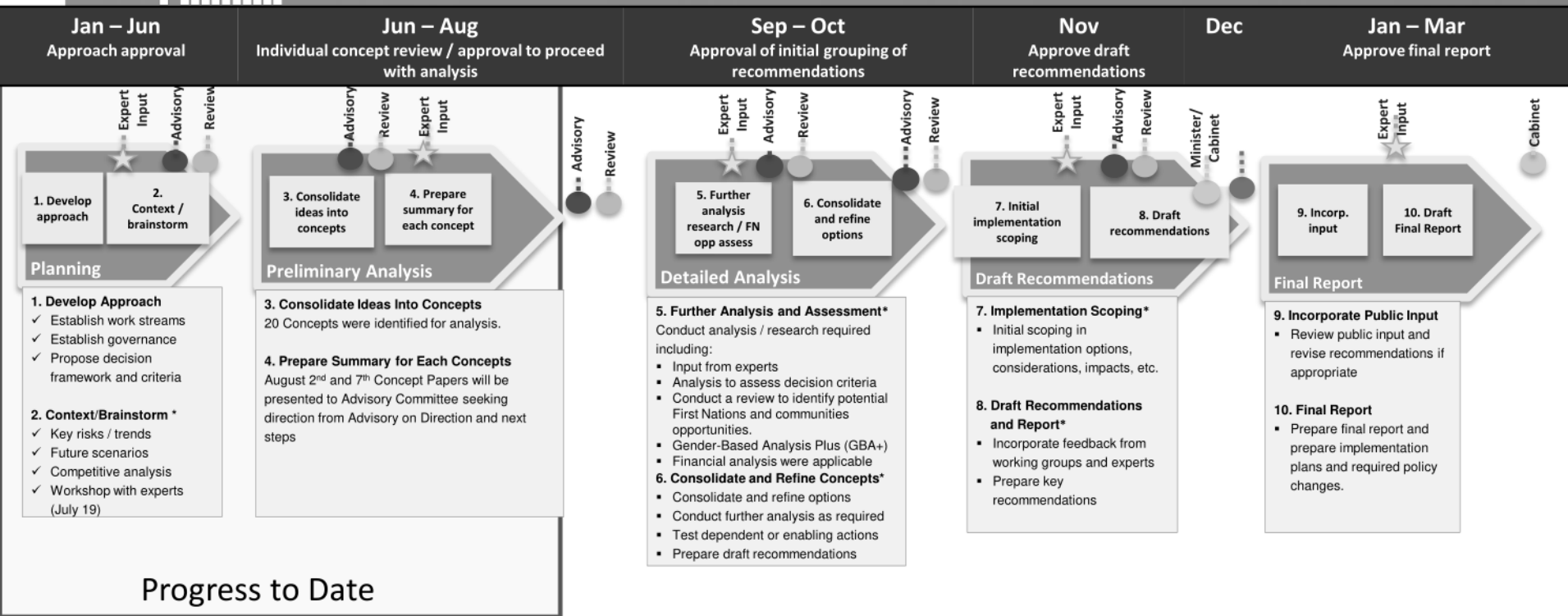
July 30, 2019



Agenda

- Oversight/Schedule Update
- Expert Advisors Update
- Progress of Working Groups
- Stakeholder and Indigenous Engagement approach
- Next steps

Project Update





Current Concept Papers

Business Concepts

Work Stream Sponsor

s.12; s.13; s.16; s.17

Policy Concepts

s.12; s.13; s.16; s.17



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October 30	10:00 am – 11:00 am
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November 28	2:00 pm – 3:00 pm
December 12	10:30 pm – 11:30 am



Expert Advisor Update

- Contracted with eight expert advisors:
 - David Bibby (Industry Disruption)
 - Gwenne Farrell (Project Labour and Management)
 - Mark Jaccard (Energy Economics and Policy)
 - Stephen Koch (Technological Innovation)
 - Caitlin Liotiris (Electricity Market Development)
 - Liisa O'Hara (Energy Regulation and Policy)
 - Blake Schaffer (Climate Policy and Electricity Markets)
 - Dan Woynillowicz (Energy and Climate Policy)
- * Awaiting Minister direction on Indigenous Expert

Expert Advisor Workshop (July 19)

- Experts were engaged and demonstrated good understanding and insight of relevant issues for the review
- Planning scenarios were seen as useful
- Experts commended the time spent on thinking openly about the future – thought this was a leading practice



Expert Panel Discussion – July 19



Expert Discussion Highlights

- Climate change adaptation and impact on electricity demand
- Technological change
- Organizational readiness for change
- Changing customer expectations
- Competitive dynamics
- Regulatory uncertainty
- Changing labour dynamics



Stakeholder and Indigenous Engagement

- Two 2-hour meetings at BC Hydro to meet with stakeholders (industry, non-governmental organizations, labour and municipalities)
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- Update to Clean Growth Advisory Council – October 8 (TBC).

**Comprehensive Review Phase 2
Proposed Stakeholders**

Stakeholder / Organization	Contact Name	Contact Information	Notes
Assembly of First Nations	Jaime Sanchez (main contact), Special Advisor to Regional Chief Teegee Patricia Rojas Caro, Regional Climate Change Coordinator	jaime.sanchez@bcfn.ca patricia.rojas@bcfn.ca	s.16
First Nations Summit	Colin Braker, Communications Director	cbraker@fns.bc.ca	See above
Union of BC Indian Chiefs (UBCIC)	Andrea Glickman, Senior Policy Advisor	andrea@ubcic.bc.ca	See above
Modern Treaty Alliance	Dillon Johnson, Coordinator	djohnson@temixw.com	604.603.9629
Nisga'a Nation	Collier Azak, CEO, Nisga'a Lisims Government	colliera@nisga.net	250.633.3041
Business Council of British Columbia	Jock Finlayson, Executive VP and Chief Policy Officer	jock.finlayson@bccbc.com	
FortisBC	Brent Graham, Government Relations and Public Policy Mike Hopkins, Senior Manager, Price Risk & Resource Planning	Brent.Graham@fortisbc.com Mike.hopkins@fortisbc.com	
Columbia Power Corp. / Columbia Basin Trust	Johnny Strilaeff, President	jstrilaeff@cbt.org	
Clean Energy BC	Martin Mullany, Interim Executive Director	martin.mullany@cleanenergybc.org	
City of Vancouver	Matt Horne, Climate Policy Manager	Matt.Horne@vancouver.ca	

**Comprehensive Review Phase 2
Proposed Stakeholders**

Stakeholder / Organization	Contact Name	Contact Information	Notes
City of Victoria	Fraser Work, Chief Sustainability Officer	fworks@victoria.ca	
	Andrea Hudson, Assistant Director, Community Planning	ahudson@victoria.ca	
	Steve Young, Senior GIS Specialist	syoung@victoria.ca	
Association of Major Power Customers (AMPC)	Carlo Dal Monte, Chair	carlo.dalmonete@catalystpaper.com	
Mining Association of BC (MABC)	Michael Goehring, President & CEO	mgoehring@mining.bc.ca	
Commercial Energy Consumers (CEC)	Chris Weafer, Council	cweafer@owenbird.com	
Council of Forest Industries (COFI)	Susan Yurkovich, President & CEO	yurkovich@cofi.org	
BC LNG Alliance	Bryan Cox, President & CEO	Bryan.cox@bclnga.ca	
Canadian Association of Petroleum Producers (CAPP)	Geoff Morrison, Manager of BC Operations	Geoff.morrison@capp.ca	Phone: 778-265-3819
Pembina Institute	Karen Tam Wu, Regional Director	karentw@pembina.org	604-874-8558 x228
BC Sustainable Energy Association / Sierra Club	Hannah Askew, Executive Director	Hannah@sierraclub.bc.ca	
	Bill Andrews, Lawyer	wjandrews@shaw.ca	
	Tom Hackney, Policy Advisor	tom.hackney@bcsea.org	
Suzuki Foundation	Lindsay Coulter, Senior Public Engagement Specialist	lcoulter@davidsuzuki.org	

**Comprehensive Review Phase 2
Proposed Stakeholders**

Stakeholder / Organization	Contact Name	Contact Information	Notes
Movement of United Professionals (MoveUp)	Rysa Kronebusch, Vice-President	RKronebusch@moveuptogether.ca	
International Brotherhood of Electrical Workers (IBEW)	Doug McKay, Business Manager/ Financial Secretary	dmckay@ibew258.bc.ca	
British Columbia Old Age Pensioners' Organization (BCOAPO) / BC Public Interest Advocacy Centre	Leigha Worth, Executive Director	lworth@bcpiac.com	
Low Income Advisory Council	Iris Mis, Staff Lawyer	imis@bcpiac.com	604.687.3017

Crockett, Janine EMLI:EX

From: McSherry, Diane <diane.mcsherry@bchydro.com>
Sent: July 30, 2019 9:30 AM
To: MacLaren, Les EMPR:EX
Cc: Sopinka, Amy EMPR:EX
Subject: FW: Materials For Comp Review Phase 2 - Review Committee Meeting July 30
Attachments: Materials For Review Committee Meeting 30July19.pdf

Importance: High

Les

For the meeting this afternoon, I suggest we split the presentation as follows:

Diane: Slides 1-6 – high level update on progress

Les: Slides 7-10 Expert Advisors and Stakeholder and Indigenous Engagement. For the highlights on the expert discussion, below are some more detailed notes we included in the notes section of the PowerPoint presentation.

Diane: slide 11 Next steps.

Let me know if this works for you.

Thanks Diane.

Climate change adaptation and impact on electricity demand – The experts identified climate change adaptation as the largest driver that BC Hydro needs to manage. From an adaptation perspective, the experts predicted that electrical demand would increase as new technologies used electricity. Furthermore from a resilience perspective, the experts thought BC Hydro needs to plan to ensure that change in weather conditions does not impact its operations.

Technological change – the experts identified technologies that were going to be consumers (distributed generation, advances in renewables, behind the meter, artificial intelligence) and utilities (energy storage, artificial intelligence). The acceptance, adoption and impacts will be different and should be thought of differently.

Organizational readiness for change – Given the likely change in the industry, the experts emphasized the need to be nimble in response to the changes.

Changing customer expectations – Customers' relationship with their utilities are going to change. Customers are developing the power to transition away from a specific utility and potentially consider self-generation. Understanding the customer needs and what they value will be increasingly important.

Competitive dynamics – Utilities are seeing potential threats from new non-traditional competitors. Experts stated that the company that best delivers value to the customer and who knows their customer best and can offer effective rate designs is going to be most successful.

Regulatory uncertainty – Given recent political volatility throughout North America the experts raised the issue of regulatory uncertainty and impacts on a long-term planning needs for a utility. Furthermore, the experts noted that

increased regulatory uncertainty may drive customers to look for distributed generation solutions which further weakens the utility.

Changing labour dynamics – The experts highlighted how technology could change or eliminate certain jobs and the obligations of BC Hydro and government to support training of these individuals. The experts also highlighted potential knowledge losses due to retirements

From: Mohamed, Shelina

Sent: 2019, July 29 2:35 PM

To: Peterson, Ken; Ken Peterson (kgpeterson@telus.net); Bechard, Thomas; Wong, David; MacDougall, Mike; Nikolejsin, Dave EMPR:EX; Jeremy.Hewitt@gov.bc.ca; MacLaren, Les MEM:EX; Amy.Sopinka@gov.bc.ca; Wieringa, Paul EMPR:EX; McSherry, Diane; Nugent, Jeff; Quinn, Darcy; O'Riley, Christopher

Subject: Materials For Comp Review Phase 2 - Review Committee Meeting July 30

Importance: High

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Thank-you,
Shelina

Shelina Mohamed | Executive Assistant
Office of the President & Chief Operating Officer

BC Hydro
333 Dunsmuir St, 18th floor
Vancouver, BC V6B 5R3

P 604 623 4410

M 604 230 3076

E shelina.mohamed@bchydro.com

bchydro.com

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BC Hydro Review Phase Two

Review Committee Meeting

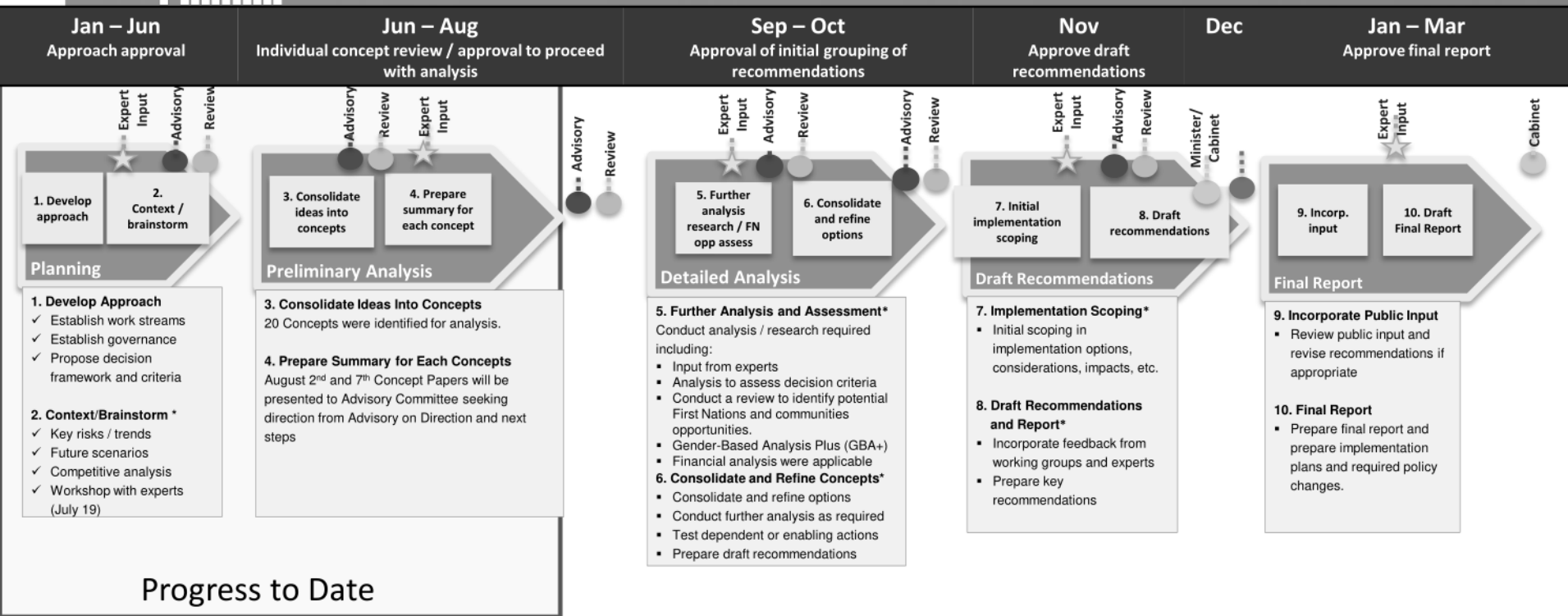
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First Nations Summit	Colin Braker, Communications Director	cbraker@fns.bc.ca	See above
Union of BC Indian Chiefs (UBCIC)	Andrea Glickman, Senior Policy Advisor	andrea@ubcic.bc.ca	See above
Modern Treaty Alliance	Dillon Johnson, Coordinator	djohnson@temixw.com	604.603.9629
Nisga'a Nation	Collier Azak, CEO, Nisga'a Lisims Government	colliera@nisga.net	250.633.3041
Business Council of British Columbia	Jock Finlayson, Executive VP and Chief Policy Officer	jock.finlayson@bccbc.com	
FortisBC	Brent Graham, Government Relations and Public Policy Mike Hopkins, Senior Manager, Price Risk & Resource Planning	Brent.Graham@fortisbc.com Mike.hopkins@fortisbc.com	
Columbia Power Corp. / Columbia Basin Trust	Johnny Strilaeff, President	jstrilaeff@cbt.org	
Clean Energy BC	Martin Mullany, Interim Executive Director	martin.mullany@cleanenergybc.org	
City of Vancouver	Matt Horne, Climate Policy Manager	Matt.Horne@vancouver.ca	

**Comprehensive Review Phase 2
Proposed Stakeholders**

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City of Victoria	Fraser Work, Chief Sustainability Officer	fworks@victoria.ca	
	Andrea Hudson, Assistant Director, Community Planning	ahudson@victoria.ca	
	Steve Young, Senior GIS Specialist	syoung@victoria.ca	
Association of Major Power Customers (AMPC)	Carlo Dal Monte, Chair	carlo.dalmonete@catalystpaper.com	
Mining Association of BC (MABC)	Michael Goehring, President & CEO	mgoehring@mining.bc.ca	
Commercial Energy Consumers (CEC)	Chris Weafer, Council	cweafer@owenbird.com	
Council of Forest Industries (COFI)	Susan Yurkovich, President & CEO	yurkovich@cofi.org	
BC LNG Alliance	Bryan Cox, President & CEO	Bryan.cox@bclnga.ca	
Canadian Association of Petroleum Producers (CAPP)	Geoff Morrison, Manager of BC Operations	Geoff.morrison@capp.ca	Phone: 778-265-3819
Pembina Institute	Karen Tam Wu, Regional Director	karentw@pembina.org	604-874-8558 x228
BC Sustainable Energy Association / Sierra Club	Hannah Askew, Executive Director	Hannah@sierraclub.bc.ca	
	Bill Andrews, Lawyer	wjandrews@shaw.ca	
	Tom Hackney, Policy Advisor	tom.hackney@bcsea.org	
Suzuki Foundation	Lindsay Coulter, Senior Public Engagement Specialist	lcoulter@davidsuzuki.org	

**Comprehensive Review Phase 2
Proposed Stakeholders**

Stakeholder / Organization	Contact Name	Contact Information	Notes
Movement of United Professionals (MoveUp)	Rysa Kronebusch, Vice-President	RKronebusch@moveuptogether.ca	
International Brotherhood of Electrical Workers (IBEW)	Doug McKay, Business Manager/ Financial Secretary	dmckay@ibew258.bc.ca	
British Columbia Old Age Pensioners' Organization (BCOAPO) / BC Public Interest Advocacy Centre	Leigha Worth, Executive Director	lworth@bcpiac.com	
Low Income Advisory Council	Iris Mis, Staff Lawyer	imis@bcpiac.com	604.687.3017