

**RESPONSE TO BC GOVERNMENT
COMPREHENSIVE REVIEW OF BC HYDRO PHASE 2 INTERIM REPORT
COMMERCIAL ENERGY CONSUMERS
COMMENTS ON KEY CONCEPTS TO ADDRESS**

May 15th, 2020

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The Commercial Energy Consumer's (CEC) Association of BC has represented the Commercial Sector in BC, before the BC Utilities Commission for over 20 years. The CEC has also provided advice to the BC Government on numerous occasions, most recently in multi-billion dollar the Site C continuation decision.

The following highlight key concepts and areas not specifically addressed in the main objective discussion sections of the Phase 2 Interim Report (the "Report"), which the CEC believes could and perhaps should be of interest to the BC Government Ministry of Energy, Mines and Petroleum Resources (the "MEMPR").

1. Leveraging BC Hydro's Strengths

BC Hydro's strengths are many and significant.

The Report mentions (a) Powerex trading (b) Clean Energy (c) Capacity and Flexibility (d) public and private small-scale generation.

This assessment of strengths is hydroelectric system focused and ignores other areas of strength, which the CEC proposes be considered.

Those would be (i) Crown Corporation with Utility & Government Backed Capabilities (ii) Large Provincial Customer Base (iii) Financial Capacities, Financial Assets, Earnings & Credit (iv) Regulatory Oversight of BC Utilities Commission (v) Connections with US & Other Counterparts in Aggregate Market Power (vi) Experience with Integration of Indigenous, Community,

Social and Economic Competitiveness Issues (vii) Integration with Federal Initiatives.

The Report's scope intends to support the government's CleanBC plan, including expanding electrification of our growing economy and the province's legislated greenhouse gas reduction targets.

The Report is a significant and important document in regard to leveraging BC Hydro's strength, without question. However, the CEC believes a more robust assessment of BC Hydro's strengths could enable much greater contributions to provincial objectives.

The BC Government's CleanBC plan has a budget of \$902 million and may possibly have additional budget allocations in the future. Government programs have the advantage of strong political support but when examined over time often lack long term staying power. Whereas, BC Hydro programs can and do develop and add value over long periods of time.

BC Hydro, as of its 2020/2021 Service Plan and its Fiscal 2020 - Q3 Financial Report, December 31, 2019, has over \$30 billion in assets, anticipated total revenues of \$6.5 billion, net incomes of \$0.7 billion and equity of over \$5 billion. This is a significant financial strength.

For instance, BC Hydro has the ability to sustain \$100 million per year in supporting conservation and efficiency through its Power Smart initiatives. This demand side reduction of use has provided substantial benefits to BC and to BC customers in terms of significant bill reductions.

Acquisition of power too early and at too high a cost has used BC Hydro's financial capacities and capabilities but has resulted in significant energy surplus to needs at considerable costs.

BC Hydro's financial and other strengths could enable a doubling or better of the BC government's progress toward critical objectives.

Attracting foreign direct investment will leverage well designed initiatives. This all could be done with positive productivity impacts for the BC economy and global benefits to people and the planet.

The CEC cannot in this level of response to the Report detail all of the possible additional contributions BC Hydro could make. However, a few large concepts will be discussed below.

2. **Beyond the Meter Opportunity**

BC Hydro has for a long time invested in opportunities beyond the meter through its Power Smart programs, support for codes and standards and rate structures.

BC Hydro is currently investing \$10.7 billion in a significant energy and capacity supply project among other capital expenditure investments. In BC Hydro's most recent Revenue Requirements Application (RRA) before the BC Utilities Commission, BC Hydro disclosed that previous load forecasts made in May 2016 forecast growth of average 2%/year but the actual loads have grown at about .4%/year. The load resource balance projections show that there will likely be excess energy for the next several years but by 2038 there may be a need for energy.

A key question becomes whether or not the significant energy surpluses can be put to use over the planning time frame, through electrification initiatives.

As always, in energy planning for BC Hydro there is a choice between delivering the energy from supply projects or from demand side conservation and efficiency projects.

The CEC supports the investment in additional conservation and efficiency projects, because of the cost-effectiveness of the measures,

and BC Hydro's choices to underinvest in conservation and efficiency in the commercial sector of the economy.

The BC Hydro 2017 Annual Report to the BCUC about conservation and efficiency programs shows planned expenditures of \$113 million for a savings of about 600 GWh/year. The expenditures were 14% less than planned and the savings were achieved. The commercial sector expenditures planned were \$43 million for 102 GWh/year, which was underspent by 21% and achieved 20% less in savings. The commercial sector expenditure plans were reduced to \$18 million/year with savings of about 50 GWh/year. This is despite the benefit cost ratios being 2.3 times and the energy excess being saleable in the electricity markets. The commercial sector is also expected to generate savings of about 130 GWh/year from compliance with new codes and standards.

In order to meet future loads BC Hydro could, with little to no risk, seek additional cost-effective conservation and efficiency from all sources including the commercial sector and avoid more expensive supply resources. The potential net benefits could be one billion or more dollars for BC.

The evidence supports the assertion that conservation and efficiency continue to improve in cost effectiveness. Implementing additional conservation and efficiency can provide multiple benefits, including reducing the bills for customers implementing the measures.

BC Hydro could continue to do more work beyond the meter by going further into supporting development of more sustainable communities, businesses, buildings and transportation.

Importantly, BC Hydro can have significant influence on supporting the growth of capacities to improve the productivity and sustainability of our work and living activities. The Covid-19 opportunities have highlighted numerous opportunities to create conservation and efficiency through transforming processes for a number of sectors of the economy.

This approach could lead to substantially greater benefits by accelerating innovation and the broader implementation of improvement, taking the benefits into the multiple billions of dollars.

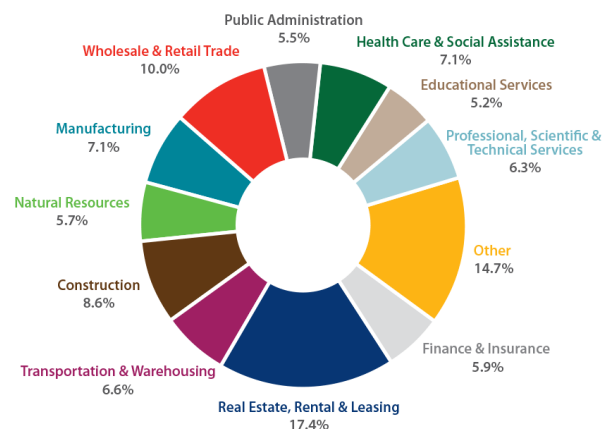
3. Export Economic Development

BC has an enviable reputation for having Vancouver as one of the greenest cities in the world. The City of Vancouver has made a number of changes over many years which have been designed to make the city more livable, less car centric, have denser living, include greater integration of work & living spaces and become generally ‘greener’ overall.

It is well known that denser urban settings are more efficient with respect to numerous attributes and characteristics of human life. It is also well known that smarter growth principles versus urban sprawl or large block high rise isolation lead to better living outcomes. Finally, it is well known that buildings can be made to perform very sustainably, and be healthier, safer, and more disaster resilient.

Reshaping our cities, our urban growth and community quality of life become huge imperatives for the future. This is true in regard to handling the incremental growth but is even more important in retrofitting our earlier city expansions.

BRITISH COLUMBIA'S GROSS DOMESTIC PRODUCT BY SECTOR (2018)



Source: Statistics Canada (Table 36-10-0400-01 – May 2019 Preliminary Industry Accounts)
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040001>
 (numbers may not add to 100 per cent due to rounding)

The degree to which the \$250 billion BC economy revolves around construction, property, and commercial sector activities is impressive. The natural resource and trade economy at about \$50 billion is less significant than in BC's past. This sort of service economy is also increasing worldwide and being augmented by the digital information economy. This economy takes place often in buildings as work places and homes.

The BC economy is increasingly focused on knowledge and services (a new economy), while the export trade from BC is focused on wood, pulp and paper, minerals, metals and energy (a traditional economy) Some of these sectors have a history of contracting demand.

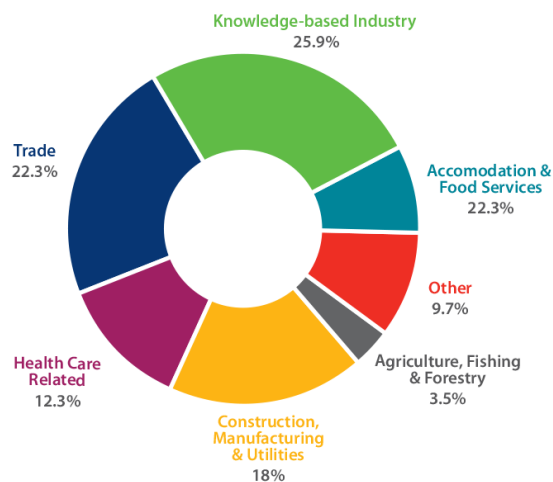
It is the cities and urban buildings where the vast majority of British

Columbians live and work, which presents an opportunity to define new exports with respect to our emerging advanced building technologies.

BC is a world leader in developing sustainable city environments for this economy of the future. Building innovation is being incented by government programs, while city planners and a responsive modern workforce look for good quality of life and work integrated into their cityscape.

The BC government has a unique opportunity to capture this emerging trend and establish an economic cluster of business focused on advance

BRITISH COLUMBIA WORKFORCE BY SECTOR OF EMPLOYMENT



Sources: Trade and Invest BC, BritishColumbia.ca – Labour Force
<https://www.britishcolumbia.ca/invest/why-british-columbia-canada/labour-force/>
 Accessed: August 2019

building technologies and advanced urban city development. The concepts for these buildings of the future would also integrate transportation and supply in concept.

This Advanced Building Cluster (ABC) can propel not only the developments in British Columbia and its cities but can become a premium export to the world. People and experts from all over the world come to BC to share in understanding the path to the future economy living, working and thriving in some of the most advanced communities and buildings in the world. The cluster focused modalities for economic development are well known and successfully used throughout the world.

This export potential could be worth tens of billions to hundreds of billions to the economy over the next 10 years and more importantly could assist the government in reaching objectives for livable communities, climate change, economic productivity, affordable housing, health and safety and indigenous peoples reconciliation.

The CEC supports this cluster and advanced building technologies approach to economic development and recommends it to the BC government. The CEC suggests that BC Hydro and the BC government could be instrumental in achievement of key objectives using this as an organizing principle.

This paradigm involves rethinking BC Hydro, not so much as an energy company, but more so as a catalyst and support for the economies and communities of BC, as BC Hydro works in concert with its customers and the governments of all levels.

There are three distinct levels at which such visions are and can be supported. The first level is a key innovation level which includes basic research and development, and prototype implementation to prove concepts. The next level is the commercialization level, where early stage production and implementation demonstrates market demand and profitable service. The final realization level involves scale

commercialization for world adoption and realization of the ultimate benefits.

The CEC notes that a frequent propensity for government programs is to focus on particular projects which they may control, such as social housing. These sorts of prototype opportunities are relevant and useful but alone would likely not achieve the full benefit potential.

Any comprehensive review of BC Hydro and opportunity should consider the broader concepts seriously.

4. Indigenous Nation Community Reconciliation

The Report recognizes a broad role of BC Hydro in addressing Indigenous peoples reconciliation. It focuses on participation in the energy sector.

In the past BC Hydro has engaged indigenous nations with relatively small benefits agreements in regard to large impacts of hydroelectric facilities. Also, BC Hydro has engaged first nations in some cases with independent power supply contract opportunities creating long term revenue, when successful. BC Hydro with surplus energy is not in a good position to continue with the supply contract approach. This is naturally limited by demand profiles.

Increased interest in ownership of certain electrical system assets with associated revenue streams has become of interest.

BC Hydro has recognized the need for the Crown to consult meaningfully with Indigenous Nations. Indigenous Nations have emphasized the importance of relationships and a recognition of what Indigenous peoples, businesses and communities contribute now and what they could contribute as full participants in the BC economy.

The CEC supports fully the change of focus from limited opportunity profiles for Indigenous Nations toward full participation in the BC economy.

The CEC recommends that BC Hydro consider full participation in the BC economy as reaching beyond the meter and the hydroelectric system to the parts of the economy that are not necessarily constrained by the electric system. The CEC would support concepts of participation in leveraging the BC Hydro strengths in concert with the Indigenous People and then leveraging this into full participation in the economy, with a focus on buildings and the evolving opportunities in this sector. The CEC of course does not preclude participation in other sector but emphasises the broad opportunities in the building sector.

5. **Evolving Electricity Sector**

In the evolving electricity sector within which BC Hydro is working there are a number of issues that warrant comment.

SELF-SUFFICIENCY

The first area of concern is the policy of self sufficiency, which was implemented in a way that causes electric energy and capacity to be acquired in a timeframe necessary to meet the first predicted supply deficiency based upon BC Hydro forecast loads. This policy has led to the acquisition of power in quantities greater than the actual need, which then leads to costs greater than the revenues available to cover the costs. The ultimate consequence is a costly impact on the rates for BC Hydro customers which could be mitigated using smarter policy for matching supply and demand.

If self sufficiency as a policy were to be calculated as an average over a 10 years period instead of as being a requirement at any given time according to uncertain forecasting, the damaging consequences of the

policy could be significantly reduced, while the concept of self-sufficiency is preserved. If BC Hydro was enabled to buy energy from, and sell energy into, the electricity markets without constraint BC Hydro could achieve a much more cost-effective supply demand balance on an ongoing basis. BC Hydro could sell spring and summer freshet energy into the electricity markets and either acquire return of previously sold energy from the electricity markets or pre-acquire energy from electricity markets to match to demands before later acquiring more permanent supply sources. Because BC Hydro also sells into the electricity markets the BC government's downstream benefits under the treaty with the US, BC Hydro trade with the electricity markets should be seen as and accounted for as clean energy.

It is a travesty of significant magnitude for BC citizens, by way of BC Hydro, to be providing clean energy to the electricity markets for very low prices that benefit the US economy, while acquiring much more expensive energy for domestic use.

Below is a load resource balance (LRB) after planned resources from the BC Hydro revenue requirements application before the BCUC Exhibit B-15-1 Appendix D, Table D3.

Table D-3 Planning View of the Energy Load Resource Balance After Planned Resources

(GWh)		F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	F2034	F2035	F2036	F2037	F2038	F2039	
1	<i>Existing and Committed Heritage Resources (incl. Site C)</i>	(a)	46,916	46,916	46,916	47,282	50,808	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	52,202	
2	<i>Existing and Committed IPP Resources</i>	(b)	16,359	16,227	14,193	13,783	13,505	13,224	13,115	13,008	12,542	11,770	11,228	10,880	10,671	10,366	9,664	8,136	7,684	7,511	7,180
<i>Future Supply-Side Resources</i>																					
3	IPP Renewals		1,058	1,280	3,270	3,628	3,845	4,124	4,208	4,291	4,660	5,154	5,624	5,826	5,951	6,188	6,832	8,123	8,550	8,723	9,046
4	Expected SOP Projects and other First Nations Commitments		27	182	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
5	Rev 6		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	26	26	26
6	Sub-total	(c)	1,085	1,462	3,496	3,854	4,071	4,350	4,434	4,517	4,886	5,380	5,850	6,052	6,177	6,414	7,058	8,360	8,802	8,975	9,300
7	Total Supply (Planning View)	(d) = a + b + c	64,360	64,604	64,606	64,919	68,384	69,775	69,727	69,630	69,353	69,280	69,134	69,050	68,982	68,924	68,698	68,688	68,688	68,688	
<i>Demand - Integrated System Total Gross Requirements</i>																					
8	June 2019 Mid Load Forecast Before DSM	(e)	(60,738)	(60,688)	(61,759)	(63,383)	(64,993)	(66,144)	(67,358)	(68,011)	(68,741)	(69,291)	(69,913)	(70,537)	(71,244)	(71,932)	(72,645)	(73,350)	(74,097)	(74,827)	(75,551)
<i>Existing and Committed Demand Side Management & Others Measures</i>																					
9	F19 DSM Portfolio Savings (F20-F21 RRA)		695	686	679	676	665	657	654	650	638	622	613	593	572	505	434	420	411	406	401
10	F20+ Codes & Standards (F20-F21 RRA) plus Voltage and VAR Optimization		615	964	1,235	1,482	1,713	1,920	2,108	2,271	2,427	2,584	2,726	2,856	2,982	3,110	3,239	3,367	3,494	3,622	3,750
<i>Planned Demand Side Management Measures</i>																					
11	F20+ Rates (F20-F21 RRA)		381	569	698	832	954	1,070	1,188	1,298	1,398	1,493	1,512	1,517	1,562	1,592	1,619	1,631	1,630	1,624	1,615
12	F20+ Programs (F20-F21 RRA)		128	144	149	145	142	140	139	138	137	137	137	136	136	136	136	136	135	135	135
13	Sub-total	(f)	1,819	2,363	2,760	3,135	3,474	3,788	4,088	4,357	4,600	4,835	4,988	5,102	5,253	5,344	5,428	5,554	5,672	5,787	5,901
14	Surplus / (Deficit)	(g) = d + e + f	5,441	6,280	5,607	4,671	6,864	7,419	6,480	6,072	5,489	4,897	4,355	3,700	3,059	2,395	1,707	902	263	(351)	(969)
15	Surplus / Deficit as % of Net Load		109%	111%	110%	108%	111%	112%	110%	110%	109%	108%	107%	106%	105%	104%	103%	101%	100%	99%	99%
16	Small Gap Surplus / (Deficit)		7,272	8,448	8,224	7,746	10,128	10,864	10,345	10,156	10,240	10,070	9,760	9,275	8,737	8,188	7,640	6,871	6,248	5,671	5,029
17	Large Gap Surplus / (Deficit)		3,215	3,580	2,332	848	2,789	3,094	1,685	990	(347)	(1,432)	(2,226)	(3,129)	(3,880)	(4,708)	(5,538)	(6,412)	(7,114)	(7,754)	(8,412)

There are several significant opportunities for improvement evident with these forecasts which include:

- (1) reducing excess energy by avoiding renewal of expensive supply
- (2) making effective use of energy to achieve objectives valuable to BC Hydro customers and the province
- (3) ensuring surplus, not used domestically, attracts good value when sold
- (4) implementing load resource planning which matches supply and demand in a flexible manner so as to avoid surplus risks.
- (5) facilitating the use of DSM to defer or avoid additional purchases or new infrastructure

The benchmark for the cost of energy acquired on the supply side should on balance be competitive with conservation and efficiency costs for reducing energy requirements of existing and future BC Hydro customers.

The CEC has been a long-term supporter of policy that would relieve BC Hydro of planning constraints which make energy in BC more expensive than it would be with more flexible matching of supply and demand.

The CEC represents commercial sector customers that look forward to the government's initiative to move the integrated resource planning (IRP) process to the BCUC and hopefully within a policy context, where cost-effective matching of supply and demand can be achieved with greater efficiency.

DISTRICT ENERGY SYSTEMS

Over a number of years BC has seen the development of district energy systems touted as being cost effective supply. Some of these are owned and or supported by local governments, some are utility owned and some are private sector owned.

Some are municipally regulated and some are BCUC regulated.

In numerous cases the evidence provided from commercial sector experience with these systems is that they have significant capital and operating cost structures which need revenues from a small customer based in order to continue to operate successfully.

The major flaw the CEC sees with these systems is that they would be significantly challenged by substantive conservation and efficiency initiatives. Because these systems typically service buildings they are susceptible to the evolving understanding that buildings can increasingly be expected to improve their energy management to the detriment of these district energy systems.

The CEC has seen significant evidence of the cost-ineffectiveness of some of these systems and disadvantages to customers who could benefit from alternative options.

The BCUC has reviewed some of these issues in its inquiries into what should be regulated, however the CEC believes the scope for review may be too narrow and that the government could improve management of

this form of energy supply by taking the lead in having these issues properly addressed.

NET METERING

Net metering for solar energy supply to offset customer usage is an emerging issue. Solar energy systems are becoming more cost-effective when pitted against utility system supply. This evolving trend has at some points been impacting utilities, and could come to impact BC Hydro.

The problem is that the solar supply is intermittent and the customer needs connection to BC Hydro to obtain firm supply characteristics to meet the customer's needs. The BC Hydro infrastructure is being used but costs are not recovered from the customer with solar net metering.

There will be economic consequences to the utility, and non participant customers in terms of rates, should the volume of these activities become significant and their use of energy does not end up covering their use of the fixed cost infrastructure. And, as more customers conduct net metering there are fewer customers from which to recover the fixed costs resulting in possible rate impacts.

BC Hydro should be evolving charges for the use of its capacities that are not adequately charged to the customer through the current rate setting system. These can be phased in over a lengthy time period in order to support the solar energy integration into the BC Hydro system but defend against a volume consequence which would not be sustainable.

The CEC supports a long-term view to the solar energy trend to ensure that policy provide the room for appropriate rationalization in the future.

GRID MODERNIZATION

BC Hydro has been developing smart systems for managing customer supply and the electricity transmission and distribution systems.

These systems can provide a technical platform for delivery of services to customers and in turn can provide benefits to the electric system.

The CEC supports the integration of BC Hydro smart systems with customers willing to take advantage of the potential offerings BC Hydro could make. The CEC supports BC Hydro working with its customers to develop benefits for the BC Hydro system and for BC Hydro's customers.

NEW PRODUCTS AND SERVICES

With the BC Hydro smarter systems in place, new products and services, including beyond the meter communication options, become possible.

The options can improve the productivity of the BC Hydro systems significantly and can deliver useful options to BC Hydro customer.

The CEC supports BC Hydro developing these products and services.

In the past BC Hydro has undertaken development of certain products and services with restricted eligibility to some classes of customer. The CEC has found that often the commercial sector is not provided access to these products and services.

The CEC would support less discriminatory development and implementation of such products and services through inclusion of commercial sector eligibility on a consistent basis.

6. **Commercial Sector Economic Development**

The Report points out that BC Hydro is exploring optional rate designs for the commercial sector that improves the competitiveness of electricity as a fuel choice. Stakeholders have noted that low cost electricity has been an economic advantage in BC, and that it is important that BC Hydro

continue to focus on affordability for the private sector. In particular the Report cites the importance of ensuring low costs for the industrial sector.

This is an important concept, but ignores the very significant role of small and medium sized businesses in the BC economy, which can compete internationally and typically make up the commercial rate class.

Small and medium enterprises account for a large majority of businesses in BC; and they are strong drivers in job creation and provincial economic growth. Further, they are diverse in terms of language, ethnic background and gender. This sector however is vulnerable, and should be protected.

The small and medium sized businesses are generally small and young, with about 50% being characterized as 'self-employed' and a high percentage being under three years old.¹

Unfortunately, BC Hydro has historically, and continues to, utilize the commercial rate class to subsidize other rate classes.

The 2017 FACOS review demonstrated that Commercial customers are contributing a disproportionate share of the revenues, while residential customers recover significantly less. In fact, the commercial rate class is, and has been, subsidizing other rate classes for many years.

The Revenue to Cost ratios were found to be as follows:

¹ Government of Canada, Small Business Financing Profiles, June 2007

BC Hydro	
Residential	93.2
Small General Service Under 5kW	123.6
Medium General Service 150kW	115.1
Large General Service >150kW	103.9
Irrigation	89.5
Street Lighting Customer	95.1
Transmission	95.4
Street Lighting BC Hydro	198.4

In addition, the commercial sector is frequently excluded from various non-rate type benefits or receives these in lesser amounts.

Large and medium commercial customers were denied similar coverage as residential and small business customers in terms of certain COVID-19 relief measures. DSM programs have been scaled back considerably over the years for the commercial rate class as well.

It is of critical importance to the BC economy overall, and particularly so in the current COVID-19 economy that commercial customers are supported by BC Hydro and helped to survive the current crisis rather than being exploited to support residential and industrial customers.

BC Hydro should undertake to relieve the cost pressure on commercial customers as quickly as possible.

7. Social Issue Integration

The Report makes several references to the manner in which BC Hydro might serve to address various social issues such as greenhouse gas reductions, business competitiveness, indigenous opportunity and others.

When considering BC Hydro as an agency for government policy, however, it should be recognized that embedding the policy into utility practices can have long-term, expansive and comprehensive impacts.

For instance, BC Hydro is, appropriately, required to provide adequate stakeholder consultation and consideration of indigenous interests when conducting its activities. Accordingly, much of BC Hydro's decision-making is imbued with these considerations including their assessment of major investments such as Certificates of Public Convenience and Necessity; and many of their smaller actions.

Similarly, environmental policies such as those outlined in the Clean Energy Act are also given weighty consideration in BC Hydro's significant and daily activities. These considerations are then balanced against the costs and benefits of the alternatives.

In the CEC's view BC Hydro may or may not be the appropriate means for delivering public policy throughout the province depending on the various circumstances and it would be appropriate to exercise caution when investing such responsibilities in the utility.

In assessing the appropriateness of BC Hydro serving as a vehicle to discharge government responsibilities and policies there are several considerations which should be examined.

These include the likely usefulness of BC Hydro as an administrator, its relevance to the issue at hand, its capacity and capabilities relative to other options, the costs of doing so, the potential for market disruption, and whether or not the objectives can or will be achieved in non-discriminatory manner.

It should be noted that when certain policies are enacted through the utility there may be inherent advantages and disadvantages. For instance, incorporating various renewable resources at greater cost than market increases costs to customers and reduces competitiveness.

An examination of various policy options illustrates the issues:

Electrification and Climate Change:

In the CEC's view, because BC Hydro is the utility provider of electricity throughout the province, it is appropriate for BC Hydro to be involved in supporting electrification, reducing greenhouse gases and promoting fuel switching throughout the province.

BC Hydro has province-wide facilities and staff available that are capable of delivering this objective, which infrastructure are not readily available through any other means.

When delivering such policies however, it is important that BC Hydro does not disrupt market development, nor create discrimination between rate classes. Such impacts might occur if BC Hydro created subsidized charging facilities for electric vehicles without consideration for the impact on competitive markets.

COVID-19 Relief:

BC Hydro might reasonably have a role in providing temporary relief for individuals and companies suffering from some form of disaster. Examples might be evacuation relief from floods or fires and relief from the economic impacts of the COVID-19 pandemic. The utility supplies necessary power to nearly the entire province and has the needed billing capability to easily and cost-effectively deliver the benefit. BC Hydro within its regulatory framework also has the ability to defer costs and collect them appropriately in the future across the appropriate customer rate groups.

It is important however that the utility provide relief fairly to all ratepayers. Excluding some classes of ratepayers from relief is discriminatory and can create an unfair burden on certain sectors.

Indigenous Issues:

Having government responsibilities and policy related to indigenous issues integrated into BC Hydro activities is necessary, important and should be continued.

BC Hydro is a crown corporation, and as such, acts as an agent of the government. Further, it is an expansive entity active in many areas throughout the province, including indigenous lands. Infrastructure has encroached on indigenous lands in some cases with significant impact, and will likely continue to do so.

Accordingly, it is appropriate for BC Hydro to integrate indigenous issues into all its practices.

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PHASE 2 INTERIM REPORT
QUESTIONS

3. Supporting B.C.'s Energy and Economic Development Goals through CleanBC

What do you think?

- *What factors are important to consider when looking at optional rates to support electrification?*
 - *Non-discriminatory eligibility*
 - *Off-peak and off super peak economics (capacity focus)*
 - *Cost of service balance*
 - *Social cost integration at standard value & with limits*

- *How can competitiveness for business and industry be prioritized in an electrified future? How can BC Hydro reduce barriers to electrification for existing and new customers?*
 - *Revenue to Cost at 1*
 - *Social cost incorporated & business competitiveness adj.*
 - *Focus on lower bill cost and not lower rates*
 - *Support programs to lower the bill costs*
 - *Conservation and efficiency focus on continuous gain*
 - *Rationalizing termination, deferral & use of excess supply*
 - *Self Sufficiency should move to a multi-year average*

- *What are key considerations for programs to reduce reliance on diesel for non- integrated communities?*
 - *Diesel reduction should not be an objective*
 - *Cost-effective energy & social cost integration is objective*

- *Are there new types of community projects or education programs that should be considered as part of an offering for new services either at or behind the meter?*
 - *Yes! Develop cost-effective deep retrofit technology*
 - *Community projects should be measured for effectiveness*
 - *Conservation and Efficiency for bill reduction is best*
 - *Conservation and Efficiency should apply to CO2 emission*
 - *Conservation and Efficiency should apply to EV and AV*
- *How should BC Hydro use a value for greenhouse gas emission reductions (for example, a carbon price) in its evaluation of investments?*
 - *Value of CO2e emissions should be used to avoid expensive cost-ineffective reduction investment*
 - *Programs similar to DSM management required*
 - *Same values apply on the demand and supply side*

4. Thriving in an Evolving Electricity Sector

What do you think?

- *What are important considerations to empower BC Hydro to make the most cost-effective decisions on resource options, under the oversight of the BCUC, with respect to clean electricity?*
 - *Self-sufficiency defined over a 10 years period could work*
 - *Acquiring all cost-effective conservation and efficiency for customer bill reduction service*
- *What should BC Hydro be aware of when considering partnerships for behind the meter services?*
 - *BC Hydro should not partner to become a competitive player in a market and risk distorting competitive markets*
 - *BC Hydro should not partner to discriminate in providing service to one customer class versus another*
 - *BC Hydro should partner with market suppliers to incent the desired development of advanced and improved product*

- *BC Hydro should partner with the building industry players to solve the tenancy incentive problems, particularly for rental and lease properties*
- *BC Hydro should drive performance metrics as a basis for incenting industry to innovate and advance the performance of the products.*
- *Other jurisdictions, including Ontario and Quebec, invest in research and development in the electricity space to expand their customer offerings. How can BC Hydro best position itself to drive innovation? What is the best way to fund these efforts?*
 - *BC Hydro should be assessing the drive for innovation at 4 levels (1) R&D (2) Prototype Proof (3) Commercial Proof (4) Scale Production*
 - *Expanding customer offerings should be considered in terms of working with important concepts at the appropriate level (above)*

5. Leveraging Our Strengths

What do you think?

- *What are important considerations for a 100% clean electricity energy standard for BC Hydro's integrated system?*
 - *A 100% clean objective is a poor objective*
 - *A 100% cost-effective clean objective makes more sense*
- *What factors should be considered if BC Hydro looks to expand its business interests including considering new opportunities outside of B.C. via Powerex or a new subsidiary?*
 - *Powerex is a weak strategy as it only deals with energy*
 - *A constellation of exportable technology and products across economic sectors in BC would be a better focus*
 - *Must be competitive in the relevant markets*

6. Advancing Reconciliation through New Partnerships with Indigenous Nations

What do you think?

- *What emerging issues and trends will BC Hydro need to address in the Phase 2 Review and beyond?*
 - *IPPs for First Nations is a poor strategy*
 - *Cost-effective, safe, sustainable, disaster resilient buildings better*

- *What are the key issues and trends for Indigenous and non-Indigenous communities related to electricity and BC Hydro?*
 - *Full participation in the BC economy*
 - *Economic financial capacities to participate*
 - *Concepts of joint purpose to give value to people and the planet*