Green Energy Advisory Task Force Report

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Introduction

British Columbia is blessed with enormous untapped clean energy potential. Harnessing that potential will generate new wealth and jobs in communities while lowering greenhouse gas emissions at home and beyond B.C.'s borders. One of government's highest priorities is developing B.C.'s clean and renewable energy resources, with the intent of making B.C. a leading clean energy powerhouse.

In November 2009, the government appointed a Green Energy Advisory Task Force to recommend strategic action for turning British Columbia's clean power potential into real economic, environmental and social benefits for British Columbians. Green Energy Advisory Task Force members included clean energy and climate experts, First Nations and community representatives, and environmentalists. The names of the Green Energy Advisory Task Force members are included in Appendix 1.

The Green Energy Advisory Task Force was composed of four groups, each with a specific mandate:

TASK FORCE	MANDATE
1. **Carbon Pricing, Trading and Export Market Development**	To advance British Columbia's interests in any future national or international cap and trade system, and to maximize the value of B.C.'s green-energy attributes in all power generated and distributed within and beyond B.C.'s borders. The task force will assess the market opportunity for B.C.'s clean and renewable electricity, plus any barriers and how they may be addressed, including any future national or international cap and trade system.
2. **Procurement and Regulatory Reform**	To recommend improvements to BC Hydro's procurement and regulatory regimes to enhance clarity, certainty and competitiveness in promoting clean and cost-effective power generation; and identify possible improvements to future clean power calls and procurement processes.
3. **Resource Development**	To identify impediments to, and best practices for, planning and permitting new clean, renewable-electricity generation to ensure that development happens in an environmentally sustainable way. The task force will also consider allocation of forest fibre to support energy development and invite input from solar, tidal, wave, geothermal and other clean energy sectors to develop strategies to enhance their competitiveness.
4. **Community Engagement and First Nations Partnerships**	To ensure that First Nations and communities see clear benefits from the development of clean and renewable electricity and have a clear opportunity for input in project development in their areas. It will work in partnership with First Nations, not only to respect their constitutional right, but to open up new opportunities for job creation and reflect the best practices in environmental protection.

Each task force group was also encouraged to explore other relevant issues and provide additional recommendations as it saw fit.

The four task force groups met between November 2009 and January 2010. The public, First Nations and interested stakeholders had an opportunity to provide input to each task force during this time. The task force groups received over 290 submissions from a broad range of environmental organizations, industry associations, clean and renewable producers, citizen groups, First Nations and members of the public and considered the input during the course of their work.

The task force groups prepared separate reports for government, based on their individual mandates and presented their recommendations to government in mid-January 2010. The groups were very positive about the substantial economic, environmental and social benefits that could result from the development of B.C.'s clean and renewable energy resources. Their expert advice and recommendations has greatly assisted government in advancing its Clean Energy Strategy. In keeping with government's commitment to share these reports and recommendations with all British Columbians, all of the recommendations from each task force group are included in this document.

Ministers Lekstrom, Penner and Yap meet members of the Green Energy Advisory Task Force as they gather for their first meeting.

PART 1: Carbon Pricing, Trading and Export Market Development

Clean energy will be one of this century's driving economic and environmental forces. British Columbia has tremendous opportunities to leverage its clean energy resources and clean technology sector and stimulate economic development and environmental improvements throughout the province.

Making the very most of these opportunities requires a strategic approach that identifies and targets emerging opportunities in domestic and export markets; capitalizes on B.C.'s competitive advantages; effectively manages risk; and leverages partnerships with other jurisdictions. The Carbon Pricing, Trading and Export Market Development Task Force considered all of these issues, and made recommendations on critical immediate and long-term actions that government should take to maximize B.C.'s clean energy potential.

> ***"The world is now engaged in a peaceful competition to determine the technologies that will power the 21st century. The nation that wins this competition will be the nation that leads the global economy."***
>
> PRESIDENT BARACK OBAMA

Report of the Carbon Pricing, Trading and Export Market Development Task Force

MANDATE

The task force was provided with a mandate to "develop recommendations to advance British Columbia's interests in any future national or international cap and trade system, and to maximize the value of B.C.'s green energy attributes in all power generated and distributed within and beyond B.C.'s borders. The task force will assess the market opportunity for B.C.'s clean and renewable electricity, plus any barriers and how they may be addressed, including any future national or international cap and trade system."

CONTEXT AND VISION

British Columbia's economy was built on natural resource foundations through leadership, innovation and entrepreneurship. The strategic public investments in energy and other infrastructure made over the last fifty years have created a significant legacy:

- *Competitive electricity rates, among the lowest in North America.*
- *Electricity trade revenues, which have helped to fund public services.*
- *Leading universities, such as UBC (the most sustainable campus in Canada) and UNBC (90% heated with clean biomass).*

For the future, the task force envisages a British Columbia in 2030 that has achieved the following:

Jobs	Clean electricity and clean technology sectors have created over 100,000 construction jobs and over 60,000 sustainable jobs across B.C.
First Nations	First Nations are active participants in developing B.C.'s biomass, wind and small hydro resources
Communities	Decentralized energy generation results in locally owned projects with benefits flowing directly to communities
Revenue	Revenue from electricity trade supports social services and keeps our electricity rates among the lowest in North America
Clean Technology	B.C. is a leading clean technology exporter, supplying a global clean technology sector of over $500 billion
Leadership	B.C. has the greenest public sector in North America

ELECTRICITY TRADE OPPORTUNITIES AND RISKS

Energy and climate change policies in North America are expected to drive decarbonisation of the electricity sector. Demand for low-carbon electricity in western North America may grow significantly, possibly by as much as 800,000 gigawatt hours per year.

B.C. has a number of key electricity trade advantages:

- *The most important advantage is B.C.'s ability to 'firm and shape' intermittent renewable energy. As jurisdictions begin to integrate increasingly large volumes of intermittent renewable energy supplies (especially wind), B.C.'s existing and potential hydroelectric storage capacity represents a unique, high-value asset.*
- *B.C. has a wide diversity of renewable resources – wind, small hydro, biomass, geothermal.*
- *Complementary demand – B.C. has a winter peak load, California has a summer peak.*
- *B.C.'s Crown-owned assets provide a single point of authority for negotiation with export partners.*

While the potential market is very large, the task force recognizes that there are a number of risks:

- ***Policy risks:*** *demand growth will be driven primarily by energy and climate policies, policies that may not be favourable to B.C.'s renewable electricity. Some renewable portfolio standards restrict eligibility of B.C.'s small hydro resources. Decisions taken in the next year by California are especially critical. While B.C.'s renewable resources are cost-competitive on a level playing field, the US subsidies for domestic wind and solar resources are very significant ($40 -$60 per megawatt hour).*
- ***Technology risks:*** *over the 20-year time frame of long-term firm electricity exports, there may be game-changing breakthroughs in technology that significantly alter B.C.'s competitive market position (as shale gas developments have changed the North American gas market).*
- ***Financial Risks:*** *new transmission projects may take 5 -10 years to complete, and require very large investments long before electricity and revenues flow.*

NEED FOR A STRATEGIC APPROACH

The task force identified the following as key elements of a strategic approach:

Timing considerations:

- *The policy, market and technology risks dictate a staged approach to development with decisions at key milestones.*
- *A number of key energy and climate policy decisions will be made in the U.S. in the next few years that will affect B.C. trade opportunities. Active intervention is required to protect B.C. interests.*
- *A number of proposed transmission lines to supply California are at various stages of development. Not all will get built, and decisions are likely to be made relatively soon.*

Transmission development:

- *The need for significant transmission investment within the US to deliver B.C. renewable electricity means that a US partner or partners are critical. A US load serving utility probably needs to be the lead developer.*
- *The first stages of transmission development focus on permitting and planning, and are relatively low-cost. Acting early to advance transmission projects may not entail significant financial risks, while helping to preserve any "first mover" advantage on long lead time transmission investments.*

Key roles for Government and Crown Corporations:

- *Government-to-government agreements can help facilitate and support new transmission capacity.*
- *A partnership-type structure involving B.C. Crowns and US utilities can help minimize*

contract risk by aligning the incentives of partners and including key government stakeholders.

RECOMMENDATIONS

The task force made recommendations in five key areas:

- *Increase export market access*
- *Increase clean electricity demand in B.C.*
- *Increase clean energy supply*
- *Increase storage and capacity*
- *Grow clean technology*

1. Increase Export Market Access

Without new transmission capacity, B.C. will be unable to deliver significant renewable electricity to customers in California and other states. A new 500 kilovolt line would be a major undertaking, requiring billions in investment and numerous regulatory approvals. The long lead time for transmission (up to 10 years) compounds the policy, technological and financial risks discussed above. A partnership-type structure with customers can help reduce contract risk by aligning the incentives of partners. The partnership should include procurement, transmission development, and policy/advocacy.

Recommendation 1: Establish transmission and procurement partnership with California utility

Government-to-government relationships also have a key role to play in ensuring that B.C. has access to US markets. An agreement between B.C. and California may be particularly helpful if it sets out specific commitments and timelines for joint action to achieve common renewable energy goals, including reciprocal recognition of environmental approvals and resource development standards.

Recommendation 2: Negotiate government-to-government commitment (e.g., a Memorandum of Understanding).

In the next two years, major US state and federal decisions on climate and energy policy will impact B.C.'s position in the export market. B.C. is already taking a lead role in prominent regional initiatives on climate policy (Western Climate Initiative, etc.) and this should continue. B.C. also needs to undertake direct lobbying in the US (specifically California) to protect B.C. energy and carbon interests.

Recommendation 3: Government should aggressively promote and protect B.C. energy (California's Renewable Portfolio Standards) and carbon interests (cap and trade).

2. Increase Clean Electricity Demand in B.C.

Growing a low-carbon economy means attracting new investment to B.C. that can be supplied by B.C.'s clean electricity. Clean technology industries, like data centers, could be incented to locate in B.C. to take advantage of data networks.

Recommendation 4: Bring the load/business/jobs to the electrons–actively recruit and attract new low-carbon industry (such as server farms for the Interior).

Meeting B.C.'s legislated emission reduction targets will require deep reductions in greenhouse gas (GHG) emissions (33 per cent by 2020 and 80 per cent by 2050). This will likely require major investments in energy conservation and efficiency, commercialization and application of emerging clean energy technologies like carbon capture and storage, and shifting from fossil fuels to decarbonized electricity for most energy services.

Recommendation 5: Evaluate cost-effective GHG reduction options to shift energy use from fossil fuels to de-carbonized electricity.

3. Increase Clean Energy Supply

Meeting the export and domestic demand for clean energy will require significant development of B.C.'s renewable energy resources as well as new transmission within B.C. Certainty and predictability are key to managing development.

Recommendation 6: Schedule regular, predictable calls for clean power to create investor certainty and rebuild confidence.

Recommendation 7: Establish development zones for clean energy generation and technology; establish transmission corridors.

4. Increase Storage and Capacity

B.C.'s existing and potential hydroelectric capacity, and especially storage, can continue to provide significant economic benefits to the province and enhance B.C.'s competitive position in the export market. The Mica and Revelstoke Upgrade Projects represent some of the lowest-cost capacity additions in North America and should be completed as early as possible.

Recommendation 8: Advance completion of Mica and Revelstoke capacity additions.

Projects on the Peace River should also be completed.

Recommendation 9: Move forward on the Site C and lower Site E projects.

Hydroelectric storage is B.C.'s most important strategic advantage in electricity markets. BC Hydro should evaluate opportunities to expand storage with minimum environmental impacts.

Recommendation 10: Conduct a "Call for Storage".

5. Grow Clean Technology

B.C.'s growing clean technology sector adds value to B.C.'s clean energy resources. However, the global and North American landscape for clean tech is very competitive, and B.C. needs to take action to need to strengthen and retain this industry. Although B.C. is not a very large marketplace, facilitating early commercialisation and demonstration would allow B.C. to be a competitive environment for clean technology companies. B.C. has already taken major steps to achieving this end with the carbon neutral government commitment, the carbon tax and the Pacific Carbon Trust together with other key players such as UBC (Living Lab) and the City of Vancouver (Green Capital).

The task force identified seven key actions that could help grow the clean technology sector in B.C.

Recommendation 11: Early commercial green/clean energy procurement (less than 10 megawatts in size).

Recommendation 12: Enable public sector investment in energy efficiency/clean energy.

Recommendation 13: Require industry-comparable levels of Crown utility research and development spending.

Recommendation 14: Expand the Innovative Clean Energy (ICE) Fund.

Recommendation 15: Create a financing program, using Pacific Carbon Trust, to drive energy/carbon productivity improvements across the province.

Recommendation 16: Leverage universities for clean technology demonstration and research.

Recommendation 17: Establish tax credits and other administrative incentives to recruit and retain clean tech firms and large clean technology strategics (e.g. GE, Google).

PART 2: Procurement and Regulatory Reform

To make the most of the sizeable emerging market opportunities, and meet climate challenges head on, B.C. must develop clean and renewable energy supplies and get them to market in a timely and responsible manner.

This will require new investments in independent power production and a stronger role for BC Hydro. While the BC Utilities Commission (BCUC) will continue to play a key role, regulatory process improvements may be required to facilitate a greater role for B.C. in export markets. Bearing export-associated risks in mind, a new way of managing risk costs must be developed, while maintaining the spirit of the existing Heritage Contract and ensuring B.C.'s ratepayers continue to receive the benefits of BC Hydro's low-cost energy resources.

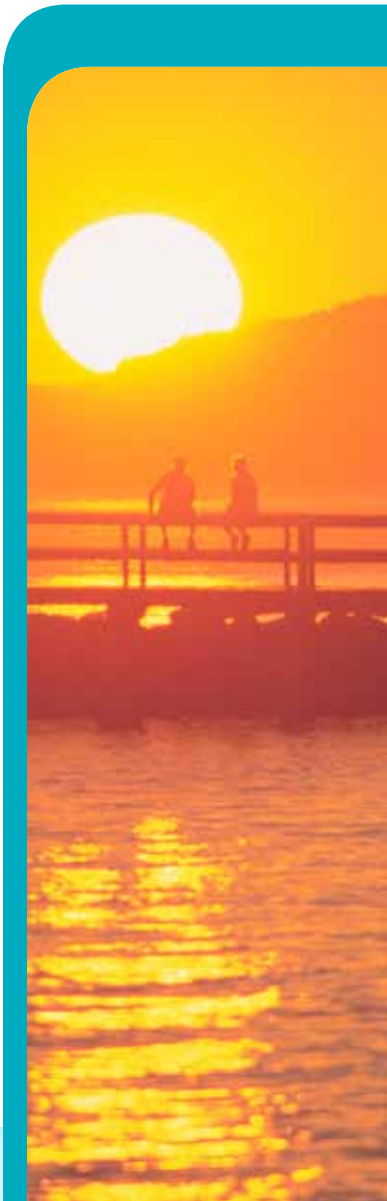
The Green Energy Advisory Task Force on Procurement and Regulatory Reform focused on its work on the steps that B.C. could take to address these challenges. This task force did not look at environmental assessments, permitting, or other regulatory requirements intended to balance the economic aspects of clean energy development with environmental sustainability. These aspects were addressed by two other task force groups – Resource Development and Community Engagement and First Nations Partnerships – and their recommendations are presented in subsequent sections of this document.

Report of the Procurement and Regulatory Reform Task Force

This report summarizes observations and recommendations of the seven-member Procurement and Regulatory Reform Task Group, which was mandated to recommend improvements to BC Hydro's procurement and regulatory regimes and to identify possible improvements to future clean power calls and procurement processes. Structural changes for British Columbia's Crown Corporations and regulatory structure also were examined by the Task Group which was encouraged to be visionary and to recommend both long and short term actions. The Task Group operated under the following assumptions.

- *Heritage resources and additions thereto will continue to be owned by government.*
- *Ongoing role for the private sector to provide clean electricity projects.*
- *British Columbia will pursue a Clean Energy Powerhouse vision by becoming the renewable energy supplier of choice for western North America.*
- *If structured and managed properly, British Columbia's renewable electricity industry will add jobs and create economic growth in the Province.*
- *Large-scale development of green energy resources will require an export market because future domestic load is unlikely to be sufficient to justify the initiative.*
- *New transmission will be required domestically and outside British Columbia to transport electricity to export markets.*

In the interests of time, the Procurement and Regulatory Reform Task Force had to assume that the development of a Clean Energy Powerhouse vision, and its particular recommendations in support of that vision, are solely within the Province's jurisdiction to bring about. That is, the task group did not feel constrained by the current legislative scheme. However, given significant Canadian federal and United States federal and state jurisdiction over exports, inter-jurisdictional undertakings, and environmental matters, the task group believes it prudent to ensure that the role of these agencies is accounted for in the continuing development of the vision.



The task group chose the following key principles to guide their deliberations:

- *Development of green energy projects should follow sound business principles, subject to transparent public policy direction.*
- *An entity, not regulated by the BC Utilities Commission (BCUC), should procure new electricity supply and transmission service and optimize all generation in British Columbia to serve both British Columbia needs and create and serve export markets needed for a viable clean energy industry, and should manage associated risks.*
- *Domestic customers should continue to benefit from all Heritage assets and additions thereto.*
- *Reward should follow risk, however it is allocated.*
- *The Clean Energy vision is primarily to serve broad public policy purposes and therefore risk and rewards should broadly reside with government.*

Transmission acquisition is viewed as the first step in the development of a Clean Energy vision. Strategic planning and staged regional expansion of the transmission system early in the process is a critical element of creating a level of certainty, minimizing environmental impacts and costs, and advancing an export strategy. The building of transmission should be based on need established by significant long-term commitments from customers.

The second step is the development of a new structural approach. At present BC Hydro and BC Transmission Corporation (BCTC) are regulated by BCUC which approves their plans, projects and major contracts based on a domestically focused self-sufficiency model.

The task group is supportive of a structure that envisions an "aggregator" – a government-owned corporation (subject to the accountability system applicable to all British Columbia Crown corporations) to procure, operate, maintain and optimize provincial generation to meet domestic load requirements and to maximize long term returns by accessing external markets. The Aggregator would have a mandate to procure new clean and renewable electricity for domestic and export markets.

Ratepayers would continue to receive the benefits of the Heritage assets through a new Heritage contract between the Aggregator and BC Hydro.

The task group recommends that government should establish a public, transparent process to determine the extent, manner and circumstances in which any economic benefits associated with the Aggregator's export activities and commensurate costs, would be allocated to ratepayers and taxpayers.

To attract and retain major developers and financiers, interim measures are required to improve procurement performance while legislation and/or regulations are developed to create the Aggregator. Improvement is required in areas such as transparency, appropriate allocation of risk, and commitment and certainty of procurement activities in terms of volume and time horizons in market based contracts.

Processes and contracts should reflect global best practices and, as such, technology specific procurement processes and feed-in-tariffs should be considered for existing and new renewable power generation and conservation technologies.

Procurement was seen as a tool to economic development and job creation. In order to encourage job creation and economic development in every region existing Standing Offer Contract pricing based on the recent Clean Power Call should be updated as soon as possible in 2010 and the maximum project size should be raised from the present 10 megawatt (MW) limit.

RECOMMENDATIONS / ADVICE TO GOVERNMENT

The following is a compilation of the recommendations presented for consideration to the Cabinet Committee on Climate Action and Clean Energy. These do not represent government policy or direction, but rather advice from the collective comments of the Procurement and Regulatory Reform Task Group.

1.0 Transmission

1.1 Enable generation facility development, by planning for expansion of the transmission system in the near-term since long lead times are required.

1.2 Build transmission based on need established by significant long-term commitments from customers.

1.3 Plan for and develop zones of high quality, clean and renewable resources and transmission to reduce both costs and environmental impacts.

1.4 Continue to support clean and renewable energy projects outside the selected development zones where they are cost effective and environmentally sound.

2.0 Crown Corporation Structure and Regulatory Framework

2.1 Ensure alignment between government policy, BC Hydro implementation and BCUC regulation.

2.2 Discuss the need for a separate transmission corporation.

2.3 Move procurement, generation operations, and export outside of BCUC regulation.

2.4 Continue BCUC regulation of transmission and distribution (rates, demand-side measures, domestic demand, safety, etc.).

2.5 Create a government-owned Aggregator with control of generation and responsibility for domestic and export procurement and contracts.

3.0 Export

3.1 Assign responsibility to the Aggregator to manage risk so as to realize rewards while optimizing generation and storage resources, creating the scale necessary for the export market and reducing risk for the participating generation resources.

3.2 Protect the ratepayer in an appropriate Heritage contract arrangement as determined in an open and transparent process.

3.3 Assign responsibility to the Aggregator to acquire transmission services for export.

4.0 Procurement

The task group assumes that implementing its recommendations regarding electricity market and regulatory restructuring could take time, but also believes that there may be current generation and related transmission development opportunities available that are consistent with the development of a for-export green energy sector in British Columbia. To maintain and build upon existing investment momentum in the province, government should consider directing BC Hydro and/or the BC Transmission Corporation, as an interim measure, to take advantage of any generation or transmission development opportunities that currently exist, and which will cost effectively contribute to the longer term objectives.

Procurement:

4.1 Develop and procure green energy projects through the business principle of selecting the next best project, from a risk, cost, project viability, reliability, and environmental perspective, whether publicly or privately owned.

4.2 Improve the procurement process significantly to attract and retain credible developers and capital.

- *Revise the procurement process to ensure transparency, improve risk allocation, commitment and certainty*

of procurement objectives in terms of volume and time horizons.

- *Standardize procurement processes and contracts while reflecting resource differences (e. g., wind versus run-of-river) and market requirements.*

Procurement Public Policy:

4.3 Consider technology-specific procurement processes and feed-in-tariffs for existing and new renewable generation technologies.

4.4 Encourage job creation and economic development in every region of the Province, by:

- *updating existing standing offer contract pricing based on the recent Clean Power Call results as soon as reasonably possible in 2010;*
- *raising the maximum project size from the existing 10 megawatt limit.*

4.5 Encourage technology development and exports by enabling the demonstration and use of British Columbia-developed technology.

PART 3: Resource Development

The Carbon Pricing, Trading and Export Market Development Task Force identified strong market prospects for B.C.'s clean energy resources and recommended a strategic approach to take advantage of these opportunities. The Procurement and Regulatory Task Force suggested additional actions to position B.C. as a clean energy powerhouse by increasing clean energy supplies and enhancing regulatory regimes and Crown Corporation organizational structures.

The Green Energy Advisory Task Force on Resource Development examined the next key set of challenges for implementation of the Clean Energy Strategy – i.e. ensuring that clean energy projects can be developed quickly and efficiently, in a manner that balances investor certainty with sustainable environmental management and social responsibility. This task force also considered approaches to overcome systemic barriers which are limiting B.C.'s ability to fully develop important energy resources, such as under-utilized forest biomass, and constraining the advancement of another strategic B.C. asset, the clean energy technology sector. It enforced the need to move forward on clean energy development as an effective means of fighting climate change, recognizing that the growth of this sector, paired with conservation and energy efficiency initiatives, are critical to helping B.C. reduce its carbon footprint and greenhouse gas emissions.

Green Energy Advisory Task Force on Resource Development Report

TASK FORCE MANDATE

The Green Energy Advisory Task Force on Resource Development was asked to:

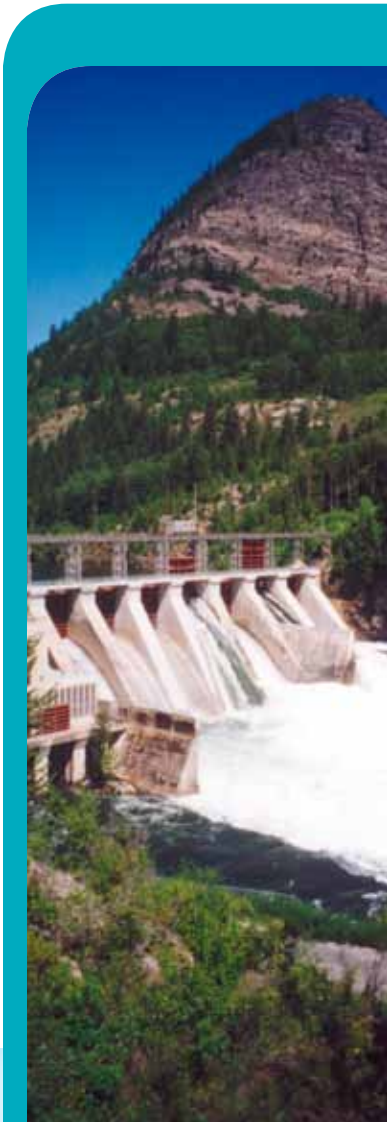
- *Identify impediments to and best practices for planning and permitting new clean, renewable-electricity generation to ensure that development happens in an environmentally sustainable way.*
- *Consider allocation of forest fibre to support energy development and invite input from solar, tidal, wave and other clean energy sectors to develop strategies to enhance their competitiveness.*

CRITICAL CONSIDERATIONS

- *Ensure the highest environmental standards and link greenhouse gas reduction strategies to energy planning.*
- *Ensure planning and permitting leads to greater environmental and economic certainty.*
- *Develop policies to accelerate growth, investment and job creation in the clean technology sector.*
- *Remove structural barriers for bio-energy development.*

RESOURCE PLANNING AND DEVELOPMENT

The task force felt strongly that its recommendations needed to provide the Cabinet Committee on Climate Action and Clean Energy (CCCACE) with the blueprint necessary to ensure clean energy resource development is undertaken with full social license with communities, including First Nations. Based on a significant volume of citizen comments, the task force members agreed this gap posed a significant risk to government in achieving its commitments – both for clean energy development and greenhouse gas emissions reductions. Task force members also felt the 'bar' on environmental performance needed to be consistent and predictable. The task force focused on the need to develop B.C.'s significant clean energy assets in an environmentally sustainable manner and still create a strong economic future for B.C. Ways to accomplish this include streamline the regulatory processes, ensure the playing field is level



among various resource users, and create the certainty and clarity essential for investment in the sector.

Outcome 1: Meet B.C.'s climate action targets whilst fostering a positive investment climate for the development of renewable energy resources.

Recommendations:

1. *B.C. must use the full range of tools at its disposal to make energy efficiency and conservation its highest priority and must continue and expand successful public engagement programs such as LiveSmart.*
2. *Develop a Low Carbon Transition Plan that: a) develops domestic energy demand scenarios that achieve existing climate action goals; and, b) models 80 – 90 per cent reduction of fossil emissions by 2050. Deliverables of the plan will include: actions to pursue identified opportunities (e.g. fuel switching, electrification of transport, energy efficiency, district energy systems, etc.); and, a strategy to attract businesses and industries with demands for clean energy to the province.*
3. *Legislate mandatory, periodic Clean Power Calls through a new Clean Energy Act or an Order in Council (Sec 3 BCUC).*
4. *Demonstrate and communicate how B.C. electricity exports will lead to greenhouse gas reductions in other jurisdictions.*

Outcome 2: Develop clear and consistent marketing of B.C.'s clean energy sector and better communication and engagement to build citizen confidence in B.C.'s green energy mandate.

Recommendations:

1. *Develop a public engagement program and a set of communication initiatives, including an interactive social media and event plan, to inspire and build public trust in the development of clean energy as both a job/investment creation strategy for B.C. and a critical climate solution.*
2. *Collaborate with industry and other stakeholders to brand, market and communicate the potential of B.C.'s clean energy power and technology sector for international investors.*

Outcome 3: Achieve world-class environmental performance for clean energy projects and a streamlined regulatory process that is clear, efficient, and represents a level playing field for all resource development.

The following recommendations chart a course to develop clear planning that will provide economic and environmental certainty while moving forward with the existing Clean Power Call.

Recommendations:

1. *Commission an independent study (completed by September 30, 2010) of clean energy planning and permitting processes with the following objectives:*
   i. *Remove unnecessary or duplicate steps in processes to improve transparency, effectiveness and efficiencies in permitting and environmental assessment;*
   ii. *Ensure B.C. has the highest environmental standards;*
   iii. *Ensure that projects are adequately monitored to maintain these standards; and,*
   iv. *Develop communication protocols to ensure proponents are able to clearly and easily understand and comply with regulation, and that these are administered in a straightforward and uncomplicated manner.*
2. *By September 30, 2010, and using existing data and information layers, develop a renewable energy zoning map for the Province that identifies*

where development of renewable energy and transmission is appropriate and inappropriate.

3. *Complete the Section 5 inquiry as soon as possible, focusing on transmission planning and deferring all regional planning submissions to the regional planning process.*

4. *Using the outcomes of the provincial zoning map (recommendation 2) and Section 5 findings (recommendation 3), undertake regional planning in areas that are appropriate for more intensive development, have potential for industry electrification, and have potential for low cost energy clusters. An assessment of cumulative impacts of all projects within the planning area will also take place.*

Outcome 4: Create a level playing field for clean energy resource use.

Recommendation:

1. *Implement "diligent use requirements" for all clean energy technologies (similar to wind farm diligent use requirements). This would include placing a time limit (e.g. 2 years) on water license applications to require hydro project development within a reasonable timeframe, and to ensure that applicants are accountable for socially and environmentally appropriate project development.*

Outcome 5: A single point of public accountability for clean energy development in B.C.

Recommendation:

1. *Mandate a single provincial entity to streamline permitting and improve policy implementation and public accountability.*

BIOENERGY AND ACCESSING CLEAN ENERGY RESOURCES

The clean energy sector needs more tools to put it on a level playing field with other resource development sectors, or even other types of power generation technologies.

The task force, which was asked by CCCACE to specifically consider the bio-energy sector, recognized B.C. has some extraordinary but under-used biomass resources. This includes mill residuals, roadside debris, standing pine beetle-killed trees, as well as biomass that is still going to landfills. Estimates show these wood biomass resources have the potential to generate up to 1,700 MW of electricity. This represents $8 billion of investment potential in northern forest communities. Wood residue could also be used to increase wood pellet production or to produce cellulosic ethanol and bio-chemicals. The task force recognizes that the issue of harvesting wood for energy (e.g. pine beetle-killed trees) is a more complex issue, but did not have time to address it. Despite some encouraging progress, there continue to be impediments to the bio-energy sector including: fuel price risks, inability for bio-energy suppliers to source adequate volumes of fibre, and insufficient integration of bio-energy technologies into mill operations.

Outcome 1: Reduce fuel supply related financing risks for bioenergy power projects.

Recommendation:

1. *Direct BC Hydro to amend bioenergy electricity purchase agreements (EPAs) to transfer the biomass fuel price risk through to BC Hydro so that if biomass fuel prices increase, BC Hydro will correspondingly adjust the purchase price of electricity.*

Outcome 2: Improve access to biomass resources.

Recommendation:

1. ***Establish a B.C.-owned Biomass Fuel Aggregator to access and aggregate woody biomass from provincial forest land, and supply fuel to bioenergy project developers.***

Outcome 3: Enhance competitiveness of the forest industry through the integration of bioenergy technologies into mills.

Recommendation:

1. ***Provide incentives to the forest industry to adopt and integrate bioenergy technologies, such as combined heat and power, pellets, liquid fuels and chemicals, into their operations.***

DEVELOPING B.C.'S CLEAN TECHNOLOGY INDUSTRY

The task force agreed that B.C. provides some of the key building blocks for a competitive clean technology industry cluster including leading research universities, proximity to large markets, and a core group of established technology companies. In recent years, however, jurisdictions such as Germany, Denmark, and several US states have made growth of a domestic clean energy technology industry a strategic priority. This has been achieved through implementation of explicit and coordinated policies and regulations designed to reduce barriers, support commercialization, and encourage investment in early adoption and demonstration, all of which are required for new technologies to become conventional and competitive energy sources. Despite B.C.'s recent efforts, it has fallen behind as a competitive location for attracting, retaining and commercializing clean energy technologies.

Continuing systemic barriers to B.C.'s success in advancing clean technologies include:

- *insufficient incentives for early adopters of new technologies, particularly in the public sector;*
- *policies which prohibit electricity procurement from pre-commercial technologies;*
- *lack of incentives, including taxation regimes, which limit B.C.'s ability to compete with US clean technology industry;*
- *outdated regulations; and,*
- *lack of central coordination and alignment within the provincial government.*

Outcome 1: Incubate clean energy inside the public sector.

Recommendations:

1. ***Establish a clean energy funding mechanism of sufficient scale to enable public institutions across B.C. to adopt and finance emerging and commercially proven clean energy technologies.***
2. ***Increase R&D spending at the BC Transmission Corporation and BC Hydro to levels comparable to industry standards.***

Outcome 2: Power procurement that supports clean technology development.

Recommendation:

1. ***Direct BC Hydro to expand the Standing Offer Program so that it purchases electricity produced from projects demonstrating early commercial clean power generation technologies and provides the highest marginal rate for power BC Hydro is paying for clean power from commercially proven technologies.***

Outcome 3: Create a local market for emerging clean technologies.

Recommendation:

1. *Implement a technology-specific feed-in tariff to encourage investment and development of small scale, distributed clean power resources under 10 mega-watts (e.g. solar and ocean). Prices would be customized to each technology type.*

Outcome 4: A clean technology sector that can compete locally and globally.

Recommendations:

1. *Increase the Innovative Clean Energy (ICE) Fund from $25 million to $50 million with a commitment to review funding levels every two years. Restructure the ICE Fund with an expanded team of investment professionals and consider moving it outside of government as a separate, stand-alone organization.*
2. *Implement a royalty credit and/or tax credit program to provide the necessary incentives to industry to use clean energy technologies at remote installations in B.C., such as mining, natural gas operations and communities.*

PART 4: Community Engagement and First Nations Partnerships

Maximizing the economic, environmental and social benefits of clean and renewable energy development for all British Columbians is a fundamental principle underlying government's Clean Energy Strategy. Becoming a clean energy powerhouse will require meaningful opportunities for First Nations and communities to participate in clean energy development; respect for First Nations constitutional rights and economic and social capacity needs; and certainty for investors, First Nations and communities. The benefits are substantial, including a huge potential for enhanced job creation, economic development and prosperity in all regions of the province.

The Green Energy Advisory Task Force on Community Engagement and First Nations Partnerships put its attention towards developing recommendations on these critical and challenging issues. Their thoughts and advice to government are provided below.

Report of the Green Energy Advisory Task Force on Community Engagement and First Nations Partnerships

TASK FORCE MANDATE

The task force on Community Engagement and First Nations Partnerships was specifically tasked to develop recommendations to ensure that First Nations and communities see clear benefits from the development of clean and renewable electricity and have a clear opportunity for input in project development in their areas. It will work in partnership with First Nations, not only to respect their constitutional rights, but to open up new opportunities for job creation and reflect the best practices in environmental protection.

The task force was provided with four key questions aimed at facilitating the discussion of the Task Force. These questions were:

1. What are the economic opportunities for First Nations and communities to participate in clean and renewable electricity project development?
2. How should benefits from clean and renewable electricity development be shared with First Nations and communities?
3. What are the appropriate roles of industry, government, Crown corporations, First Nations and communities in determining and/or delivering benefits?
4. How can British Columbia ensure that the review processes provide for both certainty for project developers and adequate input from First Nations and communities?

Through the process of developing this report, the task force members struggled with the complexity of these issues. The task of creating an environment that fosters certainty while addressing First Nations rights and title was particularly difficult, sensitive and time-consuming. These are issues that have been grappled with for decades.

The intent behind the recommendations, when taken as a whole, is to enable First Nations and local communities to benefit from clean energy projects, and to be able to participate in the sector. For First Nations, the intent of the recommendations is also to address their constitutional rights, and attempt to build capacity in communities so that economic and social opportunities can be leveraged. Additionally, and equally as important, the recommendations attempt to create certainty for all parties, whether they are government, First Nations or industry.

DISCUSSIONS AND RECOMMENDATIONS

The task force members confirmed that while they were looking at mechanisms for engagement and partnerships for First Nations and local communities in the clean and renewable energy sector, they were mindful that an equally important role was to emphasize conservation and sustainable development within the industry.

Recommendations:

1. ***In order to ensure environmentally sustainable clean power projects and prevent potential negative cumulative effects of clean energy projects, the Province should establish a clean energy regional planning process. This process should take place at a watershed scale level, for example the Taku watershed, and should include fixed timelines. Planning for watersheds should be prioritized, with those watersheds having the potential to be impacted in the nearest timeframe having the highest priority.***

   The report from the task force on Resource Development includes a recommendation to develop a renewable energy zoning map for the Province that identifies where development of renewable energy and transmission is appropriate and inappropriate. This task force supports the recommendation.

2. ***The Province should review and strengthen the Environmental Assessment process to address and manage the cumulative effects of green energy projects and improve monitoring and compliance.***

ECONOMIC OPPORTUNITIES AND BENEFITS SHARING

The task force identified a number of economic opportunities associated with clean and renewable electricity sector, including revenue sharing, training, infrastructure development, the sharing of carbon values, assigning of new tenures, employment contracts, and equity/ownership opportunities. It was felt that opportunities were greater in this sector than other sectors, as this was a relatively new and expanding sector.

The task force members were unanimous in their strong belief that engagement between First Nations/local communities and industry early on in the project will enable relationships with proponents to be built and trust established. The duty to consult and accommodate First Nations can also be better addressed if early engagement occurs and trust is earned in the working relationship.

Recommendations:

3. ***The Province should expand the current revenue sharing model to include the sharing of revenue collected by the Province with First Nations on all types of green energy.***

4. ***Priority consideration should be given to First Nations in the issuance of all new tenures to lands or waters for purposes of green energy production. Priority consideration could include the transferring of land tenures to First Nations, either through treaty or an incremental agreement, to enable the First Nation to become the fee simple land holder and charge rents to industry.***[1]

1 *A majority of task force members strongly disagree with this recommendation as it was felt that it could negatively impact investor certainty, and could be particularly problematic in relation to tenures over large areas of land such as tenures for biomass. After lengthy discussion, out of respect for a number of First Nations Task Force members, it was decided to leave this recommendation in the report.*

5. *The Province and First Nations should enter into discussion on the ownership and beneficial use of carbon values with respect to green energy projects with a view to concluding an agreement on the sharing of those values.*

6. *Where First Nations and local communities demonstrate the capacity and interest for inclusion in a BC Hydro IPP Call, BC Hydro should initiate an IPP Call that gives priority to First Nations and local communities. BC Hydro could restrict a portion of applications approved under a broader IPP Call to those submitted by First Nations or local communities. The Province should enable feed-in tariffs for First Nations and local communities with energy producing capacity to sell clean power to BC Hydro.*

ROLE OF THE PARTIES

The task force felt that industry was looking for information from government on what their role should be with respect to First Nations and local communities, as well as information on what types of arrangements have been successful, i.e. best practices and examples that could be replicated. It was felt that this information would be welcomed by industry, and could stimulate investment and development as industry and communities see more effective partnerships and improved working relationships develop.

Recommendations:

7. *In order to ensure that First Nations and communities realize employment opportunities in the green economy, both in new green energy technologies and in related land-based activities, the Province should commit training programs to build First Nations and community capacity.*

8. *The Province should establish an equity fund to enable First Nations and remote communities to be full participants in the green economy. The Province, in collaboration with First Nations, should lobby the federal government to participate in or build on the equity fund.*

9. *The province should promote engagement between First Nations and communities and the proponent of a proposed green energy project. The goal of the engagements would be to develop arrangements that provide benefits, such as jobs and training, or contracting opportunities. Additionally, engagement with First Nations in whose territories the proposed green power developments are to take place should include Impact Benefit Agreements (IBAs), which could also encompass a wide range of elements such as equity arrangements, profit-sharing and royalties. When the proponent applies for a provincial tenure, these IBAs should be disclosed to the Province for the Province to review during the approval process. However, where the proponents request, the Province must respect the confidentiality of IBAs.*

10. *To encourage consistency with respect to these arrangements, the Province should develop and communicate a collection of best practice examples for industry on engagement with First Nations and communities. Additional educational information regarding government policy on green energy and First Nations right, title and interests, should be developed by the Province and First Nations to inform industry and lending institutions.*

11. *In its procurement processes, BC Hydro should consider placing a value on First Nations engagement undertaken by the proponent, including valuing the quality of the engagement as well as the negotiation of an Impact Benefits Agreement. This value should be reflected in the energy contract purchase price in order to provide an incentive to the parties to reach agreements.*

12. *BC Hydro and BC Transmission Corporation should work with First*

Nations to develop consultation and accommodation policies and guidelines on all new green energy projects.

13. *The Province should set up a fund, specific to communities and First Nations, for the purposes of supporting research and investigation on the advancement of green technology within a community's region.*

GOVERNMENT REVIEW PROCESSES

The task force discussed examples of where positive and negative experiences with the Environmental Assessment process for specific projects had occurred. It was suggested by the task force that First Nations needed to be engaged at an early stage in the Environmental Assessment process. It was felt that this would provide a mechanism for relationships to be established with project proponents at an early stage in the project, which was felt to be a key in determining the success of a project.

Recommendations:

14. *Impacted First Nations should be involved in the establishment of the Terms of Reference and the Panel Review Board for specific projects being reviewed under the Environmental Assessment process.*

15. *First Nations should be involved in any discussion with respect to changes or amendments to the Environmental Assessment review process. Also, with the goal of achieving one assessment for any one project, First Nations should be involved in any discussions between Province and Canada with respect to the harmonization of the Environmental Assessment review process.*

16. *The Province should establish timeline limits for the approval of applications by provincial organizations, such as the Agricultural Land Commission, in order to provide clarity for proponents. Government should also make submissions to federal approving organizations, such as the Department of Fisheries and Oceans, to adopt similar timelines.*

Conclusion

Once their recommendations were submitted to the Cabinet Committee on Clean Energy and Climate Action, the work of the Green Energy Advisory Task Groups was complete, and the groups disbanded.

The Green Energy Advisory Task Force played an instrumental role in informing the government of British Columbia's comprehensive Clean Energy Strategy, which will put the province at the forefront of clean energy development in the 21st century.

Government is acting swiftly to implement this strategy, beginning with the introduction of a new Clean Energy Act in spring 2010. The Clean Energy Act will build on many of the recommendations made by the Green Energy Advisory Task Force including new investments in clean energy and expanded energy efficiency and greenhouse gas reduction measures. Moving forward, the Government will continue to explore and implement additional initiatives to expand development of the clean energy sector, including trade and export arrangements with neighbouring jurisdictions, ensuring First Nations' participation, leveraging investments through long-term contracts, growing the clean technology sector and developing run-of-river small hydro, wind, geothermal, biomass and ocean energy, in an environmentally sustainable manner. These actions will provide new opportunities for job creation, move B.C. closer to electricity self sufficiency, and support meeting B.C.'s climate action goals. If government acts with clear vision and concerted effort now, in 2030, people will look back on this decade as we look to the 1960's today.

Appendix: Members of the Green Energy Advisory Task Force

Carbon Pricing, Trading and Export Market Development

Cheryl L. Slusarchuk (Chair), partner with McCarthy Tetrault

Warren Brazier, chair of Clark Wilson LLP Energy and Natural Resources Practice Group

Scott MacDonald, CEO of Pacific Carbon Trust

Martin Merritt, former president and CEO of the Alberta Market Surveillance Administrator

Dr. Ren Orans, managing partner of Energy and Environmental Economics

James Tansey, president and co-founder of Offsetters BC

Procurement and Regulatory Reform

Tim Newton (Chair), former vice president of Powerex, Director, Board of the Western Electricity Coordinating Council

Larry Blain, CEO, Partnerships BC

Jeff Christian, litigator with Lawson Lundell

John Keating, co-founder and former CEO of Canadian Hydro Developers, Inc

Dave Kusnierczyk, managing director of Fred Olsen Renewables Canada

Duncan McCallum, partner with the Public Sector and Infrastructure Group, RBC Capital Markets in Toronto

Mossadiq Umedaly, former chair of BC Hydro

Community Engagement and First Nations Partnerships

James Hoggan (Chair), president of Hoggan and Associates and chair of the David Suzuki Foundation

David Andrews, principal of Cloudworks Energy

Mike Bernier, mayor of Dawson Creek

Chief Ken Brown of the Klahoose First Nation

Peter Kirby, CEO of Xietl (Taku Tlingit)

Craig Lodge, president of Pinnacle Pellet Inc.

Dave Porter, CEO of the First Nations Energy and Mining Council

Resource Development

John Webster (Chair), B.C. region leader for Clean Tech and Renewable Energy for PricewaterhouseCoopers BC Region and director of the Canadian Hydrogen and Fuel Cell Association

Craig Aspinall, manager of Public Policy for Western GeoPower Corporation

Tzeporah Berman, executive director and co-founder of PowerUp Canada and Co-Founder of ForestEthics

Paul Hemsley, president of Hemmera

Matt Horne, director of Energy Solutions, Pembina Institute

David Huggill, Western Canadian policy manager for the Canadian Wind Energy Association

Jonathan Rhone, president and CEO of Nexterra and chair of CleanTech CEO Alliance

John Walker, president and CEO of FortisBC

Dr. Steve Wilson, principal of EcoLogic Research