

# Report on Progress



BRITISH  
COLUMBIA

The Best Place on Earth



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# Message from the Minister

In 2007, the Ministry of Energy, Mines and Petroleum Resources announced the BC Energy Plan: A Vision for Clean Energy Leadership. The Energy Plan puts British Columbia at the forefront of environmentally and economically responsible natural resources management, and lays the foundation to help B.C. families reduce their energy costs and their carbon footprint.

This Energy Plan Report on Progress details the work that's been done to date in achieving the goals and targets set out in the Energy Plan, and provides a snapshot of how B.C. is working with First Nations, industry and communities to develop innovative, sustainable energy solutions for British Columbians.

In the Energy Plan we stated that we would make B.C. among the most competitive oil and gas jurisdictions in North America. We've delivered. Since 2001, the oil and gas industry in B.C. has seen unprecedented growth and investment. In 2008, oil and gas rights sales hit a record high of \$2.66 billion. Additionally, B.C.'s established natural gas reserves have increased for the tenth straight year.

The Province has introduced programs to attract new investment into northeastern B.C. and its rich natural gas plays, including incentives to companies that drill outside the traditional winter drilling season, funding for upgrades to the Sierra Yoyo Desan road, and improvements to our existing royalty programs.

The Province has moved closer to its goal of electricity self-sufficiency by 2016, which is creating jobs and opportunities for British Columbians. BC Hydro's Clean Power Call encourages the development of clean or renewable energy alternatives from larger projects using proven technologies such as hydro and wind. The Clean Power Call complements the Standing Offer Program for smaller clean projects that generate up to 10 megawatts of power, and the two-phase Bioenergy Call for Power.



The Energy Efficient Buildings Strategy: More Action, Less Energy, which introduced the LiveSmart BC: Efficiency Incentive Program, provides rebates and incentives to encourage individuals, families and small businesses in their efforts to reduce their greenhouse gas emissions and save on future energy costs. Through the LiveSmart BC: Efficiency Incentive Program, people across B.C. have reduced their carbon footprint and energy costs through upgrades to homes and businesses. To date, more than 19,600 people have had their homes assessed and LiveSmart BC rebate cheques worth a total of over \$3.4 million have been issued to participants who have completed their retrofits.

Thirty-four clean energy projects received funding through the Innovative Clean Energy (ICE) Fund, delivering on the Energy Plan commitment of investing in a broad range of technologies and sectors, including bioenergy, geothermal, solar and other alternative energy sources, to help the Province reach its goal to reduce greenhouse gas emissions by 33 per cent by 2020.

While we're proud of the achievements to date, there is still much work to be done. Through sustainable, responsible resource management, we will ensure a secure, affordable energy supply while preserving the bounty and beauty of British Columbia for many generations to come.

Honourable Blair Lekstrom  
Minister of Energy, Mines and Petroleum Resources



**Honourable Blair Lekstrom**  
MINISTER OF ENERGY, MINES AND  
PETROLEUM RESOURCES

*"The Province has moved closer to its goal of electricity self-sufficiency by 2016, which is creating jobs and opportunities for British Columbians."*

# Highlights

## Building the B.C. economy

- ✦ Since 2001 the oil and gas industry has experienced unprecedented growth, with record land rights sales in 2008 generating \$2.66 billion in revenues for British Columbia.
- ✦ The Infrastructure Royalty Credit Program has allocated over \$316 million in infrastructure royalty credits to oil and gas companies, resulting in 72 new road-based projects and 53 new pipeline projects, representing new total capital investment in B.C. of over \$632 million.
- ✦ The \$205 million Brilliant Expansion Project has moved British Columbia a step closer to electricity self-sufficiency by adding 120 megawatts – enough power to supply 50,000 homes – of clean, renewable energy to the province's power grid while creating 400 jobs at peak construction and contributing nearly \$44 million to the local economy through the purchase of goods and services and another \$50 million in wages.
- ✦ The Province is moving forward with the Northwest Transmission Line - a \$400 million project that will be pursued in partnership with the private sector that could stimulate thousands of jobs and billions of dollars worth of economic activity - with an investment of \$10 million to support the environmental assessment and First Nations consultation process.
- ✦ Through the Public Sector Energy Conservation Agreement (PSECA), 74 energy efficiency retrofit projects in schools, colleges, hospitals and social housing save over 8,500 tonnes of greenhouse gas emissions and 21.4 gigawatt hours of electricity a year – enough to power almost 2,000 homes –while saving taxpayers \$3.5 million annually.
- ✦ Independent Power Projects (IPPs) provide approximately 13 per cent of BC Hydro's domestic electricity supply, producing clean electricity from sources such as run of the river and biomass. IPPs are subject to rigorous environmental approvals and only projects with the lowest possible environmental impacts move forward. At present, there are 1,000 construction workers building IPPs in rural B.C. and an additional 140 people operating completed power projects.

## Developing clean energy solutions

- ✦ Homeowners across the province are eligible for rebates through the LiveSmart BC: Efficiency Incentive Program. Launched in May 2008, the LiveSmart BC: Efficiency Incentive program invests \$62 million over four years to help British Columbians reduce their energy costs and carbon footprint through upgrades to homes and businesses.
- ✦ High demand for LiveSmart BC energy audits has resulted in an increase in energy advisors from 30 to over 100, including service in such diverse locations as the Village of Queen Charlotte, Creston and Dawson Creek.
- ✦ The development of the new Hartley Bay hydroelectric project will replace diesel-generated electricity with clean power, saving the community over \$2.65 million dollars over 20 years.
- ✦ B.C.'s clean or renewable electricity generation accounts for 90 per cent of total generation, placing the province among the top jurisdictions in the world.

*"I can barely wait for the day we flip the switch from diesel generated power to clean hydro power!"*

- PETER KIRBY, TAKU RIVER TLINGIT FIRST NATION



- ✦ Since 2008, the Innovative Clean Energy (ICE) Fund has approved investments of over \$47 million in 34 projects in communities across B.C., representing a total value of over \$174 million to help develop clean and renewable energy technologies for British Columbians in areas such as solar, geothermal, tidal, wind, and bioenergy.
- ✦ Phase Two of BC Hydro's Bioenergy Call for Power, focusing on larger-scale biomass projects and innovative, community-level electricity supply solutions using biomass, was announced in March, 2009. The Call for Power focuses on converting biomass into clean, cost-effective and carbon-neutral electricity. The four successful proposals in Phase One of the call will generate a combined total of 579 gigawatt hours of electricity annually, or enough to power more than 52,000 homes, while providing jobs and economic opportunities in rural communities.

## Energy security

- ✦ BC Hydro is investing \$3.6 billion in upgrades for heritage asset power plants, including existing dams like the W.A.C. Bennett Dam, transmission and distribution systems, and other facilities, to ensure these resources continue to benefit British Columbians.
- ✦ The *BC Hydro Public Power Legacy and Heritage Contract Act* and the *Transmission Corporation Act* ensure the ongoing public ownership of BC Hydro's heritage assets and the British Columbia Transmission Corporation.
- ✦ The BC Hydro Standing Offer Program for clean, renewable or high-efficiency co-generation projects less than 10 megawatts - enough electricity to power 4,000 households - is helping to get more small clean, renewable power projects onto the grid and expanding B.C.'s clean energy supply.
- ✦ New terms of reference will guide the British Columbia Utilities Commission (BCUC) in looking ahead 30 years at the long-term, province-wide electricity transmission needs of British Columbia.

### DID YOU KNOW?

- ✦ The oil and gas industry has invested almost \$30 billion in B.C. in the last eight years, creating 34,000 direct and indirect jobs
- ✦ Through energy efficiency and conservation, British Columbians will realize net energy savings of approximately \$3.4 billion by 2020

### COMMUNITY PROFILE

The community of Atlin in Northern B.C., with the support and partnership of BC Hydro and the B.C. Government, has developed a comprehensive Community Energy Plan that includes developing a locally owned small hydro facility to replace the diesel generating station. Taku River Tlingit First Nation is developing the project, which will power approximately 420 homes and reduce greenhouse gas emissions by approximately 4,500 tonnes annually over the next 20 years.

Clean Energy Kits, including compact fluorescent light bulbs and other energy saving products, were also provided to many citizens in Atlin through the Community Energy Planning phase.

Local ownership of this hydro facility means the control and revenues of the project will stay in Atlin. Many of the local workers and companies hired have gone above and beyond the call of duty because they know the project is to the benefit of all who live in Atlin.

# Environmental Leadership

B.C. is blessed with abundant natural resources. By implementing policies and actions outlined in the Energy Plan, B.C. is leading the way in managing these resources in an environmentally responsible fashion, ensuring the energy needs of British Columbians are being met now and into the future.

## Combating climate change through legislation

- ✦ New regulations under the *Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act* are helping to reduce the environmental impact of transportation fuels and are contributing to a new, low-carbon economy.
- ✦ *Utilities Commission Act* (UCA) amendments provide the framework for the BC Utilities Commission to regulate utilities consistent with Energy Plan objectives.
- ✦ *The Oil and Gas Activities Act* supports growth in a way that safeguards the environment and demonstrates responsible stewardship of energy resources.

## Leading the way in clean energy solutions

By focusing on B.C.'s natural strengths and competitive advantages of clean and renewable sources of energy, the Province is encouraging a diverse, competitive and sustainable energy sector that will provide a legacy we can all be proud of for our children and grandchildren.

- ✦ British Columbia has arguably the most aggressive climate change and energy policies in Canada, according to Canada's Power Play Report.
- ✦ The Canadian Energy Efficiency Alliance awarded British Columbia the top score of A+ in their 2007 annual report card on energy efficiency.
- ✦ B.C. is breaking new ground in hydrogen fuel cell technology with the world's first fleet of fuel cell buses and the development of a hydrogen highway between Vancouver and Whistler. The 20-bus fleet, together with \$7.5 million in funding, reinforces British Columbia's commitment to hydrogen and fuel cell development as a zero-emission transportation solution.

### POLICY ACTION UPDATE

**Ensure clean or renewable electricity generation continues to account for at least 90 per cent of total generation.**

☑ COMPLETED	⚡ UNDERWAY
<ul style="list-style-type: none"> <li>* Guidelines defining clean or renewable electricity established.</li> <li>* 2008 UCA amendments give regulatory authority to establish targets or guidelines for utilities to facilitate achieving the Provincial goal.</li> <li>* <i>Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act</i> enables regulation of zero and net zero GHG emissions for electricity generation.</li> </ul>	<ul style="list-style-type: none"> <li>* BC Hydro pursuing a clean call for power.</li> <li>* Government to examine appropriate geothermal regulatory amendments.</li> <li>* Review of <i>Geothermal Resources Act</i> and associated regulations to allow increased geothermal development.</li> </ul>

*"I love it... I want more to follow your lead."*

- BILL CLINTON, FORMER U.S. PRESIDENT,  
COMMENTING ON WHAT B.C. IS DOING TO FIGHT CLIMATE CHANGE

## COMMUNITY PROFILE

Tsawwassen's Ulrich Schrems not only talks the green talk, he walks the green walk. Almost nine years ago, Schrems installed eight solar panels on the roof of his house and in summer 2008 added a wind generator. However, the journey started long before that.

Schrems and wife Barbara Hinson worked for years to reduce their power consumption so the infrastructure inside could support a renewable energy production system from outside. One of the keys, he said, is to unplug items, not just turn them off, when they are not in use. Electrical items, such as a TV or radio, still use electricity even when they are turned off. "We're using too much stand-by power," he said. "It's unnecessary."

Today, Schrems said about 80 per cent of energy the couple uses is generated by the sun and wind, while the other 20 per cent comes from BC Hydro. Of course, the amount of power generated and stored depends on the weather.

Aside from the environmental and fiscal benefits of generating their own energy, there is another perk, said Hinson. On the rare occasion that the power goes out, the couple's house is the only one on the block that still has light, heat and hot water.

### DID YOU KNOW?

- \* Capital investment by BC Hydro was \$1.1 billion in fiscal 2007-08

# Investing in Innovation

By investing in innovation, British Columbia is positioning itself as a world leader in alternative energy and power technology.

## DID YOU KNOW?

- \* Over 800 megawatts of biomass electricity capacity is installed in B.C. – enough for 640,000 households

## Alternative energy leadership

- ✦ The ICE Fund supports the development and commercialization of new, clean and renewable energy technologies, including bioenergy, solar and geothermal energy.
- ✦ The government is taking its commitment to shift to hybrid vehicle fleets one step further by investing in plug-in hybrid electric vehicles and related monitoring equipment around B.C., delivering on its promise to reduce greenhouse gas emissions by 33 per cent by 2020.
- ✦ The BC Bioenergy Strategy and BC Bioenergy Network are turning challenges into enduring economic and environmental benefits by promoting new sources of sustainable and renewable energy in order to take advantage of B.C.'s vast amounts of pine-beetle attacked timber and other biomass resources.
- ✦ Four proposals were selected in Phase One of BC Hydro's Bioenergy Call for Power. Phase Two is now underway.

## Innovation for the future

The B.C. Government is embracing the challenge of developing innovative and sustainable solutions for managing the abundant natural resources in our province. By implementing targets set out in the BC Energy Plan, the Province is ensuring an economically profitable, secure and environmentally responsible energy supply for British Columbians.

*"I think my children have really helped me become more environmentally conscious. I'm thinking about the world we're leaving to them and I don't want that world to be a mess."*

– TERI COLES, LIVESMART COMMUNITY HERO

## POLICY ACTION UPDATE

Implement a provincial Bioenergy Strategy which will build upon British Columbia's natural bioenergy resource advantages.

☑ COMPLETED	✦ UNDERWAY
<ul style="list-style-type: none"> <li>* BC Bioenergy Strategy released January 2008.</li> <li>* BC Bioenergy Network created (\$25 million).</li> <li>* Eight bioenergy projects selected for funding under the ICE Fund.</li> <li>* Four proposals were selected in Phase One of BC Hydro's Bioenergy Call for Power.</li> </ul>	<ul style="list-style-type: none"> <li>* \$10 million to support the production of liquid biofuels with demonstrated low GHG emissions.</li> </ul>



# A Strong Commitment to Energy Conservation and Efficiency

Conservation is a cornerstone of the BC Energy Plan. By encouraging British Columbians to maximize efficiency, conserve energy and reduce greenhouse gas emissions, B.C. is creating a culture of conservation that will support the goal of acquiring 50 per cent of BC Hydro's incremental resource needs through conservation by 2020.

## LiveSmart BC – you choose, you save

Through its programs, LiveSmart BC is helping British Columbians make green choices that save money at home, at work and on the road.

- ✦ The Energy Efficient Buildings Strategy: More Action, Less Energy encourages the use of energy efficiency measures in homes, businesses, communities, and governments.
- ✦ Efficiency Incentive Program participants have saved, to date, more than 19,600 tonnes of greenhouse gas emissions a year, averaging 2.59 tonnes per house. Participants reduced their home energy use, on average, 31 per cent per household.

## Reliable, affordable, renewable electricity

Through innovation and investment, important milestones are being achieved towards realizing electricity self-sufficiency by 2016.

- ✦ The Brilliant Expansion Project has added 120 megawatts – enough power to supply 50,000 homes – of clean, renewable energy to the province's power grid.
- ✦ The Vancouver Island Transmission Reinforcement project has ensured a reliable supply of power for over 700,000 residents, social infrastructure and business services on Vancouver Island and the southern Gulf Islands.
- ✦ The Province funded SolarBC to support six solar hot water initiatives, including installations on residences, local government buildings, First Nations homes, social housing, schools and a Solar Communities project.



### POLICY ACTION UPDATE

Ensure a coordinated approach to conservation and efficiency is actively pursued in British Columbia.

☑ COMPLETED	⚡ UNDERWAY	🔄 ONGOING
<ul style="list-style-type: none"> <li>* LiveSmart BC: Efficiency Incentive Program launched in May 2008.</li> <li>* Public Sector Energy Conservation Agreement signed November 2007.</li> </ul>	<ul style="list-style-type: none"> <li>* BC Partnership for Energy Efficiency and Conservation (Partnership) established to coordinate policy and program actions between government, utilities, and crown agencies.</li> </ul>	<ul style="list-style-type: none"> <li>* Ongoing coordination of efforts among Partnership participants and the Federal Government to achieve the aggressive targets and implement the policies spelled out in the Energy Efficient Buildings Strategy.</li> </ul>

### DID YOU KNOW?

- \* British Columbians currently enjoy some of the lowest electricity rates in North America



# Oil and Gas Development

2008 was a record-breaking year for revenue and industry growth for B.C.'s oil and gas sector. Oil and gas activities play a vital role in B.C.'s economy, generating significant economic wealth and employing thousands of British Columbians.

## Encouraging conventional and unconventional opportunities

- ✦ The ultimate potential for conventional gas in northeast B.C. is estimated at over 91 trillion cubic feet of gas-in-place. Onshore unconventional resources are currently estimated to be over seven times higher than conventional ones.
- ✦ Investments over the next three years to encourage further growth and development in the energy sector include \$6 million for strategic development of shale and tight gas resources in the Northeast and \$94 million for the Oil and Gas Rural Road Improvement Program.
- ✦ Investment of \$187 million for upgrades to the Sierra Yoyo Desan Road will ensure industry investment and enable a shift from conventional to shale gas development in the region.
- ✦ The Net Profit Royalty Program encourages development of oil and gas resources that have higher costs and technical complexity, increasing interest and investment in unconventional plays.

*“To chart the future of the industry you need to look at where we are now and what can we do to reach the end goal of responsible development resulting in a secure, stable energy supply. The BC Energy Plan does just that.”*

– RANDY MCLEOD, PRESIDENT & CEO,  
BP CANADA ENERGY COMPANY

### POLICY ACTION UPDATE

**Promote exploration and development of the Interior basins with a priority focus on the Nechako Basin.**

☑ COMPLETED	✓ UNDERWAY	📅 ONGOING
<ul style="list-style-type: none"> <li>* Provided \$5 million to GeoScience BC for oil and gas geoscience projects in the Nechako.</li> <li>* \$4.1 million has been committed for projects.</li> <li>* Workshops held with communities and First Nations.</li> </ul>	<ul style="list-style-type: none"> <li>* Collection, analysis and publication of new geoscience data from the Nechako basin.</li> </ul>	<ul style="list-style-type: none"> <li>* Continue engagement with communities, First Nations and industry.</li> <li>* Continue to promote and facilitate innovative technologies to overcome exploration difficulties specific to the Nechako basin.</li> </ul>

## Working together for change

Oil and gas generates significant revenues that benefit all British Columbians. The Province is committed to working with industry, local communities and First Nations to build a sustainable, productive and environmentally responsible energy sector.

- ✦ The Infrastructure Royalty Credit Program has allocated over \$316 million in infrastructure royalty credits to oil and gas companies, resulting in 72 new road-based projects and 53 new pipeline projects, representing new total capital investment in B.C. of over \$632 million.
- ✦ The Province has provided \$3.4 million towards a large scale Carbon Capture and Storage project in northeast B.C. which has the potential to store over one million tonnes of carbon dioxide annually.
- ✦ Oil and Gas Commission Flaring Reduction Guidelines will achieve up to a 43 per cent reduction in routine flaring through 2009, with the goal of eliminating all routine flaring at oil and gas producing wells and production facilities by 2016.
- ✦ Provided \$5 million in funding to Geoscience BC for oil and gas geoscience projects in the Nechako Basin.
- ✦ The Northeast Energy and Mines Advisory Committee (NEEMAC) is enhancing community engagement around issues including surface access, landowner rights, ownership of subsurface rights, and landowner notification. To date, achievements include the launch of the "Landowner Notification Program" and the distribution of Oil and Gas Development & You, a guidebook for rural landowners directly affected by oil and gas development.
- ✦ The Province and industry are working together on the joint Oil and Gas Climate Action Working Group to develop cost-effective ways for industry to grow and prosper while at the same time meeting conservation targets.

### DID YOU KNOW?

- ✦ B.C.'s oil and gas industry provided \$4.09 billion in revenue for the province in 2008
- ✦ The 2008-09 fiscal year land rights sales of \$2.4 billion shattered the previous record-breaking year by \$1.2 billion
- ✦ Offshore oil and gas development won't happen until it can be done in a scientifically sound, environmentally safe manner
- ✦ A typical commercial coalbed gas project creates about 150 jobs during development, and 25 jobs in ongoing production
- ✦ The Horn River Basin, an unconventional gas resource, is touted by many as being the largest shale gas play in Canada



# Appendix A

## Summary of Policy Actions

POLICY ACTIONS	COMPLETED	UNDERWAY	ONGOING
<b>Set an ambitious conservation target, to acquire 50 per cent of BC Hydro's incremental resource needs through conservation by 2020.</b>	Energy Efficiency Buildings Strategy (EEBS) released May 2008. <i>Utilities Commission Act (UCA)</i> amended to include new conservation reporting requirements for BC Hydro.	BC Hydro has applied to BC Utilities Commission seeking approval of Long-Term Acquisition Plan (LTAP) that includes ambitious demand-side management program.	BC Hydro continues to support the development of regulated energy efficiency standards with market research, technical analysis, information, and outreach activities.
<b>Ensure a coordinated approach to conservation and efficiency is actively pursued in British Columbia.</b>	LiveSmart BC: Efficiency Incentive Program launched in May 2008. <i>Public Sector Energy Conservation Agreement</i> signed November 2007.	BC Partnership for Energy Efficiency and Conservation (Partnership) established to coordinate policy and program actions between government, utilities, and crown agencies.	Ongoing coordination of efforts among Partnership participants and the federal government to achieve the aggressive targets and implement the policies spelled out in EEBS.
<b>Encourage utilities to pursue cost effective and competitive demand side management opportunities.</b>	UCA amended to require utilities to undertake cost-effective and adequate demand side measures. New Demand-side Measures Regulation sets out rules the BCUC must use when assessing proposed demand-side measures from utilities.	BC Hydro has applied to BCUC seeking approval of Long-Term Acquisition Plan (LTAP) that includes ambitious demand-side management program.	Investment of \$500,000 in 2010 toward the development of a province-wide, conservation potential review and implementation plan with all utilities. Government continues to monitor the conservation and energy efficiency measures in utility resource plans, as reviewed by the BCUC.
<b>Explore with B.C. utilities new rate structures that encourage energy efficiency and conservation.</b>	BC Hydro implemented Residential Inclining Block Rate in 2008. UCA amendments require BC Hydro to implement smart meters by 2012, and support such initiatives for other utilities.	BC Hydro and other utilities are exploring and developing new conservation rate options. Government is developing a regulation under the UCA pertaining to smart meters.	Utilities and the Province will provide tools to consumers to reduce demand, such as the LiveSmart BC: Efficiency Incentive Program, BC Hydro's Power Smart and FortisBC's PowerSense.
<b>Implement Energy Efficiency Standards for Buildings by 2010.</b>	New green provisions implemented under the <i>B.C. Building Code</i> . New standards set under the <i>Energy Efficiency Act</i> .	Additional new standards being developed under the <i>Energy Efficiency Act</i> . Government to develop new building standards for 2010 and 2011.	Implementation of EEBS framework.
<b>Undertake a pilot project for energy performance labelling of homes and buildings in coordination with local and federal governments, First Nations, and industry associations.</b>	The LiveSmart BC: Efficiency Incentive Program has provided labels to over 10,000 houses. BC Hydro, the City of Vancouver and Natural Resources Canada are applying an "Energy Benchmarking Tool."	A municipal labelling pilot underway. Labelling pilots with local governments and/or First Nations communities via the Community Action on Energy and Emissions Program (CAEE).	Pursuing policies for energy labelling of houses and buildings at the time of transfer or sale.
<b>New provincial public sector buildings will be required to integrate environmental design to achieve the highest standards for greenhouse gas emission reductions, water conservation and other building performance results such as a certified standard.</b>	Legislation to make the broad public sector carbon neutral by 2010 enshrined in the <i>Greenhouse Gas Reduction Target Act</i> .	All new government buildings and facilities will meet the standards of LEED® Gold or equivalent certification, including British Columbia wood products.	Energy conservation agreements with utilities, beyond BC Hydro.
<b>Develop an Industrial Energy Efficiency Program for British Columbia to address specific challenges faced by British Columbia's industrial sector.</b>	Industrial energy efficiency working group was formed in 2008.	The industrial energy efficiency strategy will be released in 2009. Sector-specific energy conservation agreements under development.	Coordinating efforts among industry associations, governments, utilities, and academic institutions to sustain energy efficiency efforts.

**COMPLETED:** Initiatives implemented or launched, Acts amended or enshrined. **UNDERWAY:** Initiatives underway with a completion date. **ONGOING:** Initiatives with no end dates.

POLICY ACTIONS	COMPLETED	UNDERWAY	ONGOING
<b>Increase the participation of local governments in the Community Action on Energy and Emissions Program (CAEE) and expand the First Nations and Remote Community Clean Energy Program.</b>	Sixty-five communities participating in CAEE and Remote Community programs. Remote Community Energy Network, an intergovernmental & utility partnership, established. Local Government (Green Communities) <i>Statutes Amendment Act</i> passed in April 2008.	Researching community based, clean energy sources.	Encouraging all British Columbian communities to complete community energy plans. Supporting remote communities to implement community energy solutions that displace diesel generation. Accelerating approvals and other incentives for efficient new homes and buildings.
<b>Ensure self-sufficiency to meet electricity needs, including "insurance" by 2016.</b>	Amendments to UCA require BC Hydro to achieve self-sufficiency. BC Hydro issued a clean power call. BC Hydro issued a Phase 1 Bioenergy Call for Power; four successful projects. Issued Special Direction 10 to BCUC to ensure BC Hydro can pursue self-sufficiency goals.	Phase 2 of the Bioenergy Call for Power is underway. BC Hydro undertaking resource-smart upgrades to its facilities.	BC Hydro's Standing Offer program.
<b>Establish a standing offer for clean electricity projects up to 10 megawatts.</b>	Standing Offer Program implemented in 2008. The 2008 UCA amendments require BC Hydro to maintain a standing offer program.	BC Hydro receiving project applications.	Report on energy acquired under program.
<b>The BC Transmission Corporation (BCTC) is to ensure that British Columbia's transmission technology and infrastructure remains at the leading edge and has the capacity to deliver power efficiently and reliably to meet growing demand.</b>	2008 UCA amendments included a new requirement for BCUC to undertake a long term transmission planning exercise. BCTC has modernized its system control centre to use the most modern and efficient operating technology available.	BCTC is pursuing new initiatives aimed at innovation. BCTC is extending the life of aging transmission towers by applying a special composite corrosion protection coating.	
<b>Ensure adequate transmission system capacity by developing and implementing a transmission congestion relief policy.</b>	2008 UCA amendments include requirement for BCUC to undertake a long term transmission planning inquiry. Terms of Reference for long term transmission inquiry issued in December 2008.	Inquiry commenced March 2009.	
<b>Ensure that the Province remains consistent with North American transmission reliability standards.</b>	2008 UCA amendments set regulatory framework for BCUC to consider North American transmission reliability standards. Regulation to define the applicability of mandatory reliability standards (MRS) issued March 2009.	BCTC to take assessment of MRS to the BCUC for review.	Monitor new standards as developed.
<b>Continue public ownership of BC Hydro and its heritage assets, and the BC Transmission Corporation.</b>			<i>BC Hydro Public Power Legacy and Heritage Contract Act and Transmission Corporation Act</i> ensure ongoing public ownership.
<b>Establish the existing heritage contract in perpetuity.</b>	<i>Heritage Contract Act</i> amended to remove the termination provisions.		
<b>Invest in upgrading and maintaining the heritage asset power plants and the transmission lines to retain the ongoing competitive advantage these assets provide to the Province.</b>		Over the next two years, BC Hydro to invest \$3.6 billion in generation, transmission and distribution systems, and other facilities.	BC Hydro and BCTC Capital Plans identify major replacement and refurbishment projects for the Heritage Assets over the next 10 years.
<b>All new electricity generation projects will have zero net greenhouse gas emissions.</b>	2008 amendments to <i>Environmental Management Act</i> create legislative framework.	Regulations under development - targeting completion for fall 2009.	

**COMPLETED:** Initiatives implemented or launched, Acts amended or enshrined. **UNDERWAY:** Initiatives underway with a completion date. **ONGOING:** Initiatives with no end dates.

POLICY ACTIONS	COMPLETED	UNDERWAY	ONGOING
<b>Zero net greenhouse gas emissions from existing thermal generation.</b>	2008 amendments to <i>Environmental Management Act</i> create legislative framework.	Regulations under development - targeting completion for fall 2009.	
<b>Require zero greenhouse gas emissions from any coal thermal electricity facilities.</b>	2008 amendments to <i>Environmental Management Act</i> create legislative framework. New <i>Oil and Gas Activities Act</i> allows for disposal and storage of prescribed substances not associated with petroleum and natural gas development.	Regulations under development - targeting completion for fall 2009. Government to determine prescribed substances for regulation by fall 2009.	
<b>Ensure clean or renewable electricity generation continues to account for at least 90 per cent of total generation.</b>	Guidelines defining clean or renewable electricity established. 2008 UCA amendments give regulatory authority to government to establish targets or guidelines for utilities to facilitate achieving the Provincial goal. <i>Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act</i> enables regulation of zero and net zero GHG emissions for electricity generation.	BC Hydro pursuing a clean call for power. Phase 2 of the Bioenergy Call for Power is underway.	
<b>Government supports BC Hydro's proposal to replace the firm energy supply from the Burrard Thermal plant with other resources. BC Hydro may choose to retain Burrard for capacity purposes after 2014.</b>		BC Hydro's LTAP under review by the BCUC proposes to reduce reliance on Burrard Thermal while retaining the facility for peaking and reliability purposes.	
<b>No nuclear power.</b>	In April 2008, the Province announced it would not support uranium exploration and development in B.C. In 2009, the Province issued an order to prevent permits from being issued for uranium and thorium exploration and development.		
<b>Review BC Utilities Commissions' role in considering social and environmental costs and benefits.</b>	2008 UCA amendments ensure BCUC considers Government's energy objectives such as reducing greenhouse gasses and pursuing demand-side measures.		
<b>Ensure the procurement of electricity appropriately recognizes the value of aggregated intermittent resources.</b>	BC Hydro Calls for Power and Standing Offer Program.	BC Hydro undertaking a wind integration study.	
<b>Work with BC Hydro and parties involved to continue to improve the procurement process for electricity.</b>	BC Hydro held workshops with industry and stakeholders. BC Hydro conducted consultations through their Standing Offer Program. BC Hydro pursuing a request for proposals process in their current call to better address unique project features.		Ongoing workshops.
<b>Pursue Government and BC Hydro's planned Remote Community Electrification Program to expand or take over electricity service to remote communities in British Columbia.</b>	Remote Community Energy Network established. Remote Community Regulation issued under <i>BC Hydro Public Power Legacy and Heritage Contract Act</i> .	Ministry, BC Hydro, Industry and Northern Affairs Canada negotiations ongoing on funding agreement, with expected close in 2009. Four communities in place under Remote Community Regulation Schedule.	Ongoing engagement with communities on BC Hydro's utility service and other Remote Community Energy Network partner programs to support community energy planning, clean energy and energy efficiency.

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POLICY ACTIONS	COMPLETED	UNDERWAY	ONGOING
<b>Ensure BC Hydro considers alternative electricity sources and energy efficiency measures in its energy planning for remote communities.</b>	Remote Community Energy Network partners agreement. Energy efficiency and alternative energy supported in first four communities under BC Hydro regulation.	Community energy planning guidelines under development, with expected completion in early 2009.	Ongoing intergovernmental and utility partnership to coordinate support for remote community energy planning.
<b>Establish the Innovative Clean Energy (ICE) Fund to support the development of clean power and energy efficiency technologies in the electricity, alternative energy, transportation and oil and gas sectors.</b>	First round of funding (\$25 million) for 15 projects announced July 2008. Request for applications for second round of funding completed (\$25 million). Budget 2009 extended funding for three years (\$75 million).	Application and review process for second round of funding.	Providing funding to projects on an annual basis.
<b>Implement a provincial Bioenergy Strategy which will build upon British Columbia's natural bioenergy resource advantages.</b>	BC Bioenergy Strategy released January 2008. BC Bioenergy Network created (\$25 million). Eight bioenergy projects selected for funding under the ICE Fund.	\$10 million to support the production of liquid biofuels with demonstrated low GHG emissions.	
<b>Issue an expression of interest followed by a call for proposals for electricity from sawmill residues, logging debris and beetle-killed timber to help mitigate impacts from the provincial mountain pine beetle infestation.</b>	Expressions of interest issued 2007. Phase 1 Bioenergy call results announced Dec 2008; four successful projects. Government has revised tenure legislation and regulations.	Phase 2 Bioenergy call underway.	
<b>Implement a five per cent average renewable fuel standard for diesel by 2010 to help reduce emissions and advance the domestic renewable fuel industry.</b>	Legislation enacted May 2008 through the <i>Greenhouse Gas Reduction (Renewable and Low Carbon Fuels Requirement) Act</i> . <i>Renewable Fuel Regulation</i> issued December 2008.		Monitoring and reporting.
<b>Support the federal action of increasing the ethanol content of gasoline to five per cent by 2010 and adopt quality parameters for all renewable fuels and fuel blends that are appropriate for Canadian weather conditions in cooperation with North American jurisdictions.</b>	Legislation enacted May 2008 through the <i>Greenhouse Gas Reduction (Renewable and Low Carbon Fuels Requirement) Act</i> .	Participating on CGSB B6-B20 Standards Committee to develop standards for biodiesel content over five per cent.	
<b>Develop a leading hydrogen economy by continuing to support the Hydrogen and Fuel Cell Strategy for British Columbia.</b>	MOU on "alternative highway" signed with Washington. Hydrogen and fuel cell buses and related fuelling infrastructure funded, with \$7.5 million in Budget 2009 for Hydrogen/Green Fuels Highway.	Hydrogen highway MOU with California is underway. First hydrogen fuel cell bus in testing, with 20 more by spring 2010.	The Hydrogen Highway Program continues to provide marketing and outreach for the hydrogen and fuel cells sector.
<b>Establish a new, harmonized regulatory framework by 2010 for hydrogen by working with governments, industry and hydrogen alliances.</b>	Scoping review of hydrogen regulations and regulatory process completed.	Hydrogen fuelling infrastructure standards are being developed at the national and international level with input from British Columbia industries.	The Province, in partnership with the federal government and industry associations, will continue to work together on national and international hydrogen regulations.
<b>Eliminate all routine flaring at oil and gas producing wells and production facilities by 2016 with an interim goal to reduce flaring by half (50 per cent) by 2011.</b>		The Oil and Gas Commission has introduced new venting and flaring guidelines, estimated to reduce routine flaring by more than 40 per cent.	

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<b>Establish policies and measures to reduce air emissions in coordination with the Ministry of Environment.</b>	Ministry of Environment's Air Action Plan included policies and measures to reduce air emissions.		Review options for carbon capture and storage for gas processing plants in northeast B.C., including economic evaluation and electrification.
<b>Best coalbed gas practices in North America. Companies will not be allowed to surface discharge produced water. Any re-injected produced water must be injected well below any domestic water aquifer.</b>	<i>Petroleum and Natural Gas Act</i> amended to allow for the long-term disposal of produced water from coalbed gas projects. <i>Environmental Management Act</i> amended to prohibit discharge of produced water.	Regulatory analysis completed of Energy Plan Coalbed Gas Best Practices Project.	
<b>Enhance the Oil and Gas Environmental Stewardship Program, ensuring sound environmental, land and resource management.</b>	Multi-Agency Steering Committee established to provide program direction. Ten projects funded.	Twelve projects identified for 08/09 funding. Strategic Plan setting program direction for next three years underway.	Continue to make the Environmental Stewardship Program relevant to current environmental issues facing oil and gas development in the province.
<b>Continue to work to lift the federal moratorium on offshore exploration and development and reiterate the intention to simultaneously lift the provincial moratorium.</b>		Continue to inform and educate regarding the benefits and risks of offshore oil and gas development.	Continued engagement with federal government on offshore exploration issues.
<b>Work with the federal government to ensure that offshore oil and gas resources are developed in a scientifically sound and environmentally responsible way.</b>			Continued engagement with federal government on offshore exploration issues.
<b>Participate in marine and environmental planning to effectively manage marine areas and offshore oil and gas basins.</b>		Participating in Ocean Coordinating Committee, MOU signed on information sharing and marine planning. Providing direction on DFO request to establish Pacific Region Committee on Oceans Management.	Continued presence in marine planning discussions.
<b>Develop and implement a comprehensive community engagement program to establish a framework for a benefits sharing agreement resulting from offshore oil and gas development for communities, including First Nations.</b>		Meeting with, and reporting on, the expectations of coastal communities and First Nations regarding risks, benefits, roles and processes of offshore oil and gas development.	Community and First Nations engagement ongoing. Support and meet with the UBCM Working Group on Offshore Oil and Gas.
<b>Pursue regulatory and fiscal competitiveness in support of being among the most competitive oil and gas jurisdictions in North America.</b>		<i>Oil and Gas Activities Act</i> regulations to be finalized in late Spring 2009, with regulatory framework in effect late 2009. Training and external consultations will continue through 2009. Net Profit Royalty Program introduced and will be implemented in 2009.	Petroleum Registry underway. Opportunity Assessment and Business Case Analysis completed. Negotiations with industry on funding nearing conclusion.
<b>Enhance infrastructure to support the development of oil and gas in British Columbia and address impediments to economic development such as transportation and labour shortages.</b>	Oil and Gas Trainers Centre of Excellence in Fort St John.	Labour Market Agreement to target skills training for oil and gas sector jobs. Expanded to \$100 million in royalty credits in 2008/09. A request for another instalment has been introduced.	

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<b>Encourage the development of conventional and unconventional resources.</b>	Record land rights sales in 2007 (\$1B) and 2008 (\$2.66B). \$5.7 million to GeoScience BC to develop geological analysis in Horn River. New geoscience publications highlight shale gas and other opportunities.	Net profit royalty program provides a royalty framework consistent with the development of unconventional resources. New geological mapping and studies to encourage exploration in high potential areas.	Publication and dissemination of geology reports, maps and promotional information on gas resource opportunities in B.C. at national and international industry forums.
<b>Support the growth of British Columbia's oil and gas service sector.</b>	Partnered with industry on three year education and training initiative.	LMA funding for training and employment programs. Support Energy Services B.C.'s Business Development Initiative.	Participation in oil and gas weeks, trade shows and job/career fairs.
<b>Promote exploration and development of the Interior basins with a priority focus on the Nechako Basin.</b>	Provided \$5 million to GeoScience BC for oil and gas geoscience projects in the Nechako. \$4.1 million has been committed for projects. Workshops held with communities and First Nations.	Collection, analysis and publication of new geoscience data from the Nechako basin.	Continue engagement with communities, First Nations and industry. Continue to promote and facilitate innovative technologies to overcome exploration difficulties specific to the Nechako basin.
<b>Encourage the development of new technologies.</b>	Provided \$3.4 million towards a feasibility project on carbon capture and storage. Terasen issued RFP for biogas. <i>Net Profit Royalty Regulation</i> came into effect May, 2008.	Reviewing current tenure conversions regulations to be responsive to unconventional gas, and longer horizontal drilling techniques. Summer drilling program to encourage year round activity.	
<b>Add value to British Columbia's oil and gas industry by assessing and promoting the development of additional gas processing facilities in the Province.</b>		Analysis underway with industry to look at investment opportunities in areas where gas processing constraints exist.	
<b>Provide information about local oil and gas and health service providers to inform and support the development of necessary social infrastructure.</b>			Northeast Energy and Mines Advisory Committee (NEEMAC). Presence at regional tradeshow.
<b>Work with First Nations to identify opportunities to participate in and benefit from oil and gas development.</b>	Consultation Protocol Agreements for OGC with Treaty 8 First Nations. Agreements signed with a number of First Nations. Oil and Gas 101 Workshop Series.	Negotiating Long Term Oil and Gas Agreement with Treaty 8. Engagement of First Nations in development of OGAA regulations. Northern Energy Corridor initiative.	
<b>Support First Nations in providing cross-cultural training to agencies and industry.</b>	Agreements signed with a number of First Nations.	Development of an industry/Blueberry River First Nation protocol agreement.	Participation of First Nations in industry conferences and events.
<b>Improve working relationships among industry and local communities and landowners by clarifying and simplifying processes, enhancing dispute resolution methods, and offering more support and information.</b>	Landowner Notification (of petroleum and natural gas sale) program launched. NEEMAC information strategy implemented. Standard Surface Lease created. Mediation and Arbitration Board and OGC MOU to clarify dispute resolution processes.	Working group created to develop a new standard Pipeline Right of Way Agreement. Creating Farmers Advocate office.	NEEMAC 22 recommendations. Presence at regional tradeshow.
<b>Examine oil and gas tenure policies and develop guidelines to determine areas that require special consideration prior to tenure approval.</b>	<i>Petroleum and Natural Gas Act</i> amended to allow for Lieutenant Governor in Council to approve pre-determined tenure criteria beyond monetary value.		

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Ministry of  
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Petroleum Resources

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