



SECOND ANNUAL REPORT: EXECUTIVE SUMMARY APRIL 2009 – MARCH 2010



1.0 Executive Summary

Solar is fast becoming an important energy source around the globe. The Province of British Columbia and the Federal Government have taken leadership and action to make solar energy systems more affordable and accessible for British Columbians, and SolarBC is playing an important role in delivering this vision.

SolarBC's mandate is to make solar hot water (SHW) an accessible, affordable and practical energy solution for citizens and communities across the province. In the first two years of operation, SolarBC's strategic focus has been to help transform British Columbia's solar market, bringing SHW systems to homes, communities, local governments, social housing, First Nations' homes, and schools.

SolarBC is a program of the BC Sustainable Energy Association (BCSEA) in collaboration with Eaga Canada Service Inc. Other partners include FortisBC, Terasen Gas, the Community Energy Association, Northern Lights College, the Canadian Solar Industries Association, eight Solar Communities and our network of 23 Registered SolarBC Contractors. An Oversight Committee comprised of diverse representatives oversees the SolarBC project, making high-level funding decisions and monitoring accountability and deliverables.

ON THE AVERAGE,
A HOUSEHOLD THAT
USES ELECTRIC FUEL
TO HEAT THEIR HOME
CAN SAVE \$200 ANNUALLY
AND ALMOST \$6,000 OVER
THE LIFETIME OF A SOLAR
HOT WATER SYSTEM, TO
REDUCE GREENHOUSE
GAS EMISSIONS OF 2
TONNES PER YEAR.

MAKING SOLAR HOT WATER SYSTEMS MORE AFFORDABLE

We have implemented several financial mechanisms with incentives from the Provincial Government, Natural Resources Canada (NRCan), FortisBC and the private financial sector.

For the residential sector, for example, SolarBC designed a \$2,000 point of sale discount to complement other government rebates, including the Federal ecoENERGY Retrofit and LiveSmart BC rebates. Together with other financial mechanisms, such as Zero interest loans and bulk-buy incentives, these mechanisms are making SHW systems a viable alternative for consumers. During the first eighteen months of SolarBC's operations, 246 households installed SHW systems. On average, each system cost \$6,751, and customers paid approximately \$4,945 after the SolarBC discount. As of March 31, 2010, total capital expenditure in the residential sector was \$1,934,808. NRCan, SolarBC and FortisBC contributed \$246,000, \$99,500 and \$17,100 respectively as incentives. Participants may have also received additional rebates from the ecoENERGY Retrofit Program, LiveSmart BC, or the Federal Home Renovation Tax Credit.

SolarBC also provided incentives in the institutional sector. For local government and First Nations buildings as well as social housing projects, we matched the funding received from the ecoENERGY for Renewable Heat Program to a maximum of \$40,000. For schools, we offered 90% of the balance remaining after the ecoENERGY rebate was deducted from total project cost to a maximum of \$20,000. As of March 31, 2010, four local government and three social housing projects were completed with many more projects especially at schools, in progress. Total capital expenditure in the institutional sector was \$1,158,254 (including \$900K for the Olympic Village project). NRCan contributed \$47,298, and SolarBC contributed \$70,332 towards these costs.

While these incentives serve as a starting point, they are short-term in nature and SolarBC is committed to working with the Province and other partners to develop a long-term incentive program that can help generate confidence in the market and realize the full potential of SHW.

PROVIDING QUALITY ASSURANCE

Providing Quality Assurance for systems and installations will help build market integrity. As the initial step, SolarBC set mandatory requirements for qualified contractors to become registered with SolarBC. By the end of March 2010, 23 contractors were registered on the SolarBC residential program. Contractors must also register SHW systems that meet CSA standards or provide a stamped engineer's drawing of the proposed system. In order to meet the above criteria, SolarBC appointed Stantec as an independent, licensed, professional engineer to review, stamp and seal drawings of systems. SolarBC covers the cost of providing these approvals.

BUILDING KNOWLEDGE AND AWARENESS

Building Knowledge and Awareness of SolarBC among British Columbians has been a top priority for SolarBC in our first eighteen months. During the last 12 months, a comprehensive marketing plan was developed and implemented focused on partnerships and a grassroots, community approach. A comprehensive, one-stop website enables consumers to learn about SHW, access applications for financial incentives and find a qualified contractor. By the end of March 2010, the site attracted over 77,000 visitors from all over the world and almost 700 people took advantage of free Solar Rating reports for their homes available on our website.

DEVELOPING A NETWORK OF LOCAL SKILLS

Developing a Network of Local Skills has ensured a highly trained industry of solar energy professionals throughout British Columbia. Certified SHW installer training available through the Canadian Solar Industries Association (CanSIA) provides basic training, a class room exam and evaluation of training installations to enable certification. By March 2010, BC had 41 CanSIA certified contractors, more than any other province. SolarBC also worked closely with Northern Lights College and CanSIA on a new training program that could provide practical, hands-on experience. We continue to work with other colleges to implement new training programs in locations across the province.

DEVELOPING REGULATIONS

SolarBC is taking action to bring clarity to regulations and building codes, particularly with respect to issues of concern around back-flow prevention and annual inspection for SHW systems. While guidelines have been published by the Province, perception of lack of clarity on this issue has halted several installations, and SolarBC will continue to work with municipal inspectors to improve this situation.



CITY OF NORTH VANCOUVER
HOME
Source: Terratek

SHOWCASING OUR SOLAR COMMUNITIES

Dawson Creek, West Moberly First Nation, District of North Vancouver, Kelowna, Saanich, Tofino were joined this year by Whistler and the City of Vancouver, who were appointed as new Solar Communities. Our Solar Communities are the focus for public awareness, training, regulation and are leading public demonstration projects on community centers and schools. SolarBC matches the federal ecoENERGY for Renewable Heat incentive to a maximum of \$40,000 to support institutional demonstration projects. The Community Energy Association has helped to raise awareness of the funding available with a goal of securing 20 local government projects by the end of 2010.

SAVING ENERGY AND REDUCING GHGS

All SHW installations carried out with SolarBC funding to the end of March 2010 are expected to save approximately 2,597 GJ (721 MWh equivalent) every year. With an expected life span of approximately 30 years, the SolarBC installations should deliver lifetime saving of approximately 77,900 GJ (21,640MWh). This equates to an a GHG reduction of approximately 80 tonnes of CO₂ equivalent per year, or 2400 tonnes of CO₂ equivalent over the expected lifetime of the systems.

All SHW installations carried out with SolarBC funding to the end of March 2011 are expected to save approximately 6,553 GJ (1820 MWh equivalent) every year. With an expected life span of approximately 30 years, the SolarBC installations should deliver lifetime savings of approximately 196,600 GJ (54,600MWh). This equates to an a GHG reduction of approximately 213 tonnes of CO₂ equivalent per year, or 6400 tonnes of CO₂ equivalent over the expected lifetime of the systems.

LOOKING AHEAD

Beyond SolarBC's promising achievements in the first two years of operation, the focus remains on ensuring the solar industry can become self-sustaining and grow whilst continuing to support the Province's objectives for clean energy development, technology innovation and greenhouse gas reduction. Factors including clear targets and long-term commitments, regulations, financial support, financial incentives, public awareness and education, skills development and quality assurance, monitoring and evaluation, and high profile demonstration Solar Communities are critical success factors in emerging solar markets around the world. In British Columbia, major barriers in each category still need to be addressed.

The activity during the remainder of 2010 has been very promising, with activity steadily increasing across all sectors. This year saw BC's first Solar Days events in May, modeled after European Solar Days. Over 30 events took place across the province and 40 residential participants held open house tours with over 1,000 visitors.

SolarBC also made a commitment to continue to match the funding provided by NRCan for residential installations, which had a stabilizing effect on the market and residential demand continued to grow despite fluctuating incentives from other programs. The residential program will be fully subscribed by the end of 2010. The industry has grown significantly and the residential program now supports a network of 32 contractors,



CITY OF VANCOUVER BECOMES
OUR 9TH SOLAR COMMUNITY
Source: SolarBC

SOLARBC IS HELPING TO
ACHIEVE THE BC ENERGY
PLAN GOAL TO INSTALL
100,000 SOLAR ROOFS
BY 2020.

with over 40 individuals who have attained formal certification through CanSIA. NRCan has reported that the SolarBC residential program is so far the most successful of fourteen other pilots across Canada.

Similarly, it is anticipated that incentive funding for local government, social housing, and schools installations will be fully subscribed by March 2011. Unfortunately NRCan funding for all the SHW programs will end on December 31, 2010. SolarBC will work with the Province and the utilities to try to develop incentives for all the sectors in the future.

In response to overwhelming demand, a further 25 communities were awarded Solar Community status, bringing the total to 32. The Province of British Columbia also introduced a new “Solar Ready” voluntary regulation in August and 27 communities have opted in.

The Province’s inclusion of funding for SHW projects through the Public Sector Energy Conservation Agreement (PSECA) led to a massive response of over \$7M in SHW projects in schools, hospitals, colleges, universities and Crown Corporations. Although all the projects could not be supported through this call, this has resulted in the developments of promising partnerships with Terasen Gas and BC Hydro.

The 2011/12 fiscal year will be challenging for BC’s solar industry as incentives come to an end. Economic uncertainty and changes to federal and provincial incentives that support the industry will challenge the pace of growth. British Columbia’s emerging solar industry requires government’s continued leadership. SolarBC will work to ensure that the SolarBC legacy and infrastructure that has been put in place can be used for future projects and initiatives. SolarBC is committed to working with the Province and other partners to continue to build a vibrant solar industry in British Columbia, and to supporting the Province’s sustainable energy strategy that will help reduce greenhouse gas emissions (GHGs) by 33 per cent by 2020.



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