

Title: OREC: A renewable energy co-operative model

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Case Summary

The Ottawa Renewable Energy Co-operative (OREC), established in 2010, is a for-profit co-operative that develops renewable energy systems within the City of Ottawa. OREC gives Ottawa residents the opportunity to support sustainable community infrastructure by direct investment into the growth of a local renewable energy that finance renewable energy projects, through a co-operative structure.

OREC enters into 20-year lease agreements with property owners in Ottawa communities to use their land or rooftops for the installation of renewable energy systems. Once the installations are in place, the renewable energy produced generates revenue through Ontario's Feed-in Tariff (FIT) program, which provides guaranteed payment for each kilowatt hour (kWh) of electricity produced. This enables OREC to fully repay invested capital to investors along with a dividend over a 20-year period.

In addition to the benefits of renewable energy and local economic growth associated with community-level renewable projects, OREC's projects build social capital in the community through strong community engagement and their Board educational outreach activities.

Sustainable Development Characteristics

This case study demonstrates two key features of sustainable development—an alternative governance model, that is, a co-operative business model, and its attention to one of the most critical issues of the 21st century, renewable energy and climate change.

The Ottawa Renewable Energy Co-operative (OREC) is committed to community-based power generation by providing residents of Ottawa the opportunity to invest money into solar rooftop projects within their community. It is a unique model that fully integrates the social, ecological and economic imperatives of sustainable development. The co-operative business model contributes to sustainable community development by:

- investing in community-based asset development: all profits, after operational costs have been covered, are distributed to member investors;

- diversifying the energy grid through renewable energy options; through member investments in renewable electricity generation facilities with long term contracts;
- local economic development by financing long term, local and clean power facilities, helping to fuel the green economy and open up investment opportunities related to addressing climate change;
- local economic diversification;
- community engagement and collaboration through community education and outreach programs about renewable energy; and,
- sustainable community development through the seven co-operative principles.

OREC's co-operative governance structure in and of itself has been a key factor for embedding sustainable development principles into the organization's operations. Operating as a co-operative means that the organization is guided by seven principles ensuring that the organization integrates sustainable development within its business model:

1. voluntary and open membership;
2. democratic member control;
3. member economic participation;
4. autonomy and independence;
5. education, training, and information;
6. co-operation among co-operatives; and,
7. concern for community.

Critical Success Factors

The success of OREC's model can be attributed to several factors: enabling provincial legislation, its strong connections to the community, very strong Board leadership, the expertise and commitment of its Board members, its linkages to fueling the green economy through community based renewable power generation, and its commitment to the co-operative model. Since its inception, OREC has been able to flourish due to committed leadership and expertise in both renewable energy and the co-operative model, working with and within different levels of government. From this experiential base, the organization has had the focus and forward-thinking to invest in the development of its solar power community-based projects. By working on behalf of its member owners, and not 'distant' shareholders, business decisions take into account the impacts they have on the communities in which OREC operates. Further, by involving more and more people into its share offerings, its outreach and its active communications program, OREC also builds social capital in the community by bringing diverse

people together and also implicating them into sustainable energy implementation that directly impacts members.

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What Worked?

OREC has had a number of success factors that have contributed to the current success of the organization. The first step was the provincial enabling legislation that has started to create a level playing field for renewables vis-a-vis traditional suppliers. The Green Energy Act introduced in 2009 created strong financial incentives for a renewable market by providing stable pricing (the feed in tariff), creating a more secure investment opportunity for renewable projects, and in subsequent policies, giving preference to energy co-operatives.

With respect to OREC, its founding board members are dedicated individuals that have extensive knowledge of renewable energy and previous existing and deep connections to the Ottawa community. The OREC board is actively engaged in daily operations and has a diversity of expertise and skills, including renewable energy engineering, policy, business, accounting, community engagement and education, and social finance. Three advisory committees have also been formed to engage members in technical, business, and communications tasks, building upon Board members' particular expertise and skills.

Ottawa has some beneficial physical conditions that benefit solar energy production. Ottawa is one of the best locations in Ontario for solar production as there are many sunny days throughout the year (including the winter). Solar energy production increases when it is cold; thus, OREC's solar panels produce effectively during the sunny winter days in Ottawa.

OREC's projects not only provide 'ethical' investment opportunities to residents of Ottawa, but also serve as solar energy demonstration projects for residents to discover, discuss, and share with peers the role that renewables can play for more sustainable futures. The City of Ottawa benefits from the success of these projects as revenue stays within the geographical limits of the city and local jobs are created in the development and maintenance of the projects.

OREC has a strong relationship with the Federation of Community Power Co-operatives (FCPC), a province-wide umbrella organization for community power co-ops in Ontario that are developing grid-tied renewable energy projects. This network fosters strong relationships between renewable energy co-ops, allowing them to network, share knowledge and strengthen strategies and opportunities for collaboration and investment strategies.

What Doesn't work?

The barriers to renewable energy co-operatives can be firstly characterized as the subsidized price of the traditional electricity supply. To date, traditional energy sources are heavily subsidized by governments. As mentioned in the Community Research Connection Blog on Business Leaders, the economic case for withdrawing fossil fuel subsidies is steadily increasing; the January 11th, 2014 edition of *The Economist* entitled *The Economic Case for Scrapping Fossil Fuel Subsidies is Getting Stronger* states, "It is not only that the economic cost of subsidies is at a new high. The case for cutting them this year is particularly strong. Countries with high fuel subsidies are more exposed to external shocks, as holding down prices causes their budget deficits to explode, making them vulnerable to rising global interest rates. Cutting subsidies now would help them prepare for when borrowing gets harder as quantitative easing ends. It would also leave more money for growth-boosting policies, such as infrastructure investment"¹.

Other factors are technical, capacity, institutional, and time lags. With respect to technical and capacity issues, OREC has to continuously search for new projects in the right locations, and can be limited by grid capacity issues in some locations. It has experienced challenges in finding partners, identifying the right building, at the right time willing to lease their roof for a 20-year time commitment (OREC's buildings vary from institutions, businesses, school boards, community buildings, condos, etc.).

The grid is a major barrier to entry and scaling up. The current grid was designed to handle large-energy suppliers shipping power through big lines, such as nuclear and coal electricity; a unidirectional system to individual homes. It is not designed to handle small-scale distributed energy inputs and significant investment is needed to create or re-design the grid to be capable of handling more diverse inputs. Such an investment is dependent upon other government support, and this is, of course, dependent upon factors such as path dependence, technological lock-in, institutional rigidities (Dale and Newman, 2009) and commitments to a priori energy mix decisions. In Ottawa, the limited capacity of the Hawthorne Transmission Station resulted in no renewable electricity projects being approved under FIT 2 in Ottawa in 2013. Consequently,

¹ Community Research Connection (2014). Business Leaders. Retrieved April 7th, 2014 from: <http://www.crcresearch.org/crc-blog/business-leaders>

OREC did not win any new projects to build under FIT 2; in fact not one project was awarded in the entire city. The Ontario government has promised that the Hawthorne Transmission Station will be updated, and consequently FIT 3 has the potential to encourage and open up a diversity of smaller-scale projects, while prioritizing aboriginal, public sector, and community group power projects.

Institutionally, it has also been difficult for OREC to leverage debt financing as conventional financial institutions do not understand the value and the security of the FIT contracts held by renewable energy co-operatives. Due to OREC being a for-profit co-operative, access to grant money is limited. Most organizations of OREC's size at this stage in their evolution face issues of scaling up and out. Energy projects, even renewables, need large capital assets to start, and OREC has been, albeit slowly, scaling up the size of its projects. One Board member estimates that OREC will have to 'grow' from a one million dollar portfolio to 5 million, in order to be financially viable in the long-term.

As mentioned above, OREC also experiences time lag issues. OREC's first offering statement was submitted in August 2011. However, OREC experienced a delay as the Financial Services Commission of Ontario (FSCO) took a substantial amount of time to approve the offering. During this time the industry and the FIT rules were changing dramatically, causing a key project OREC had targeted to collapse. The co-op however was able to identify several new projects and when they were secure, started raising money from its members. As the offering statement was time sensitive, when the decision was made to proceed there was only two months left to raise the money. Even with these challenges OREC was able to raise \$991,000 in a nine week period over the summer of 2012. OREC is regulated under the Cooperatives Corporation Act (CCA) and all capital fundraising matters (offering statements) are regulated through FSCO.

There is considerable media misinformation about the role that renewable energy plays in the grid. For example, during our interviews, a press article was highlighted claiming that "the government signed contracts for so much unneeded electricity that Ontario had to export the surplus, at a loss, to Manitoba, Quebec, New York, Michigan or Minnesota, adding \$220 a year to the average household electricity bill, said NDP energy critic Peter Tabuns". The article then went on to state, however, that "the province buys electricity for about 8.5 cents a kilowatt hour, often through contracts that include generous subsidies for solar and wind power, but then has to sell off the surplus for less than three cents/kwh, said Tabuns" (Ottawa Citizen, Tuesday, January 21, 2014). Please see the detailed section of this case study to see how this last statement is inaccurate.

With regards to best practices, Germany is leading the world in distributed power grid design. Germany has had feed-in tariffs for the past 15 years; the German tariffs have brought down the cost of renewable power significantly while they have expanded the market and implementation industry. The country is now well on the way to a wholesale transition from nuclear power (and

fossil fuels) to renewable sources; a national project entitled the ‘Energiewende’². In January 2012, Germany made a reduction in its tariffs, lowering the cost of solar by another 15% to match the latest reductions in solar panel costs³. Renewables reduce Germany’s GHG emissions by around 130 million tons annually. Overall, Germany overshot its Kyoto target of a 21% reduction for 2012. By the end of 2012, Germany had reduced its GHG emissions by 25.5% and is now moving towards reaching its 2020 target of 40% reductions (relative to 1990 levels)⁴.

Over 60 other countries around the World also use feed-in tariffs – including China, Japan, France, Spain, the UK, and Italy, as well as smaller countries like Sri Lanka and Malaysia⁵.

Financial Costs and Funding Sources

OREC is a membership based co-operative; residents of Ottawa can become members of OREC and invest in local renewable power generation through the purchase of preference shares, which provide the capital to finance local projects, wholly-owned by OREC via its members. Some larger projects, are co-financed through joint venture arrangements.

OREC has chosen to confine their boundaries for projects and members within the City of Ottawa in an effort to close the loop of energy production and energy consumption for OREC’s members. This gives Ottawa residents a sense of investing in local economic development through renewable power generation, recognizing that they are investing both for themselves and their communities. OREC leases roof or property space from the respective property owners for the solar systems and OREC’s investors benefit from the revenue received from the sale of power.

OREC’s investment structure includes purchase of a member share (\$100). Each membership share provides a lifetime membership, voting rights and the opportunity to purchase Preference Shares when offered. A Preference Share is a capital investment in OREC’s portfolio of Feed-in Tariff (FIT) renewable energy projects. Preference Shares can be purchased in \$500 increments, with a minimum purchase of \$2,500 to a maximum of \$100,000 per member, with an expected annual dividend of 5% in addition to a full repayment of capital (starting in year 6) over a 20-year period.

Preference Shares are RRSP eligible, through the Canadian Workers Co-operative Federation (<http://www.canadianworker.coop/funding/rrsp-program>). A minimum purchase value of \$5,000

² Energiewende (2014). Retrieved May 21 2014 from: <http://energytransition.de/>.

³ Ottawa Renewable Energy Cooperative (2013). Retrieved January 26th, 2014 from: <http://ottawarenewableenergycoop.com/faq/about-feed-in-tariffs/>

⁴ Energiewende (2014). Retrieved May 21 2014 from: <http://energytransition.de/>.

⁵ Ibid.

applies when the RRSP program is used. Preference Shares can only be redeemed early if sold to another member or to OREC, as approved by the OREC board.

OREC currently has 277 members. OREC raised \$991,000 in its first offering (which included developing five 10kw projects on housing coops and 30% of a 250 kW project on a storage facility in Dunrobin - all projects have been operational since the spring of 2013). OREC paid out its first dividend (of 2%) in the fall of 2013. They have since paid out another interim dividend (in the spring of 2014) of 1.75%, enabling them to get closer to their 5% target.

OREC's second offering of a maximum of \$1.25 million sold out on April 30. This Series 2 (under FIT 1) consists of a second round of projects that is being invested in two mid-sized solar projects (Samuel Genest High School and an additional 20% in the Dunrobin storage facility). OREC is aiming to achieve \$5 million in investments with its expected third Offering Statement in 2014/15.

Profits are distributed to investors and members (in the case of excess profits) and therefore remain locally-invested, directly benefiting the community and contributing to its sustainable development through re-localization⁶.

Research Method

For this research, eleven in-person interviews were conducted, ten with different OREC members and another with one of their clients, using a semi-structured open-ended interview process. Prior to interviewing, a literature review of government policies and reports on Ontario's long-term energy plan, journal articles relating to the co-operative model, media articles on the impacts of energy generation sources in Ontario and documents from the organization were reviewed. Interviewees included a representative sample of employees, organizations and government collaborating with OREC, and a majority of the OREC board members, including the former President and four founding members.

Detailed Background Case Description

In May 2013, global carbon dioxide (CO₂) emissions reached 400 parts per million (ppm) for the first time in probably the last 3 million years⁷. This historic milestone, which was reached years before the scientific community expected, shows the degree to which humans are impacting the

⁶ Dale et al. (2012). Action Agenda: Rethinking Growth and Prosperity. Action Agenda for Sustainable Prosperity. Royal Roads University, November 30th 2012.

⁷ National Geographic Daily news (2013). Retrieved January 24th 2014 from: <http://news.nationalgeographic.com/news/energy/2013/05/130510-earth-co2-milestone-400-ppm/>

atmosphere and the climate. It also illustrates how we are entering *uncharted* territory, which is to say that we are embarking upon a period of uncertain and probably undesirable change. Not only is the earth getting warmer, but positive feedback cycles threaten to further increase concentrations of greenhouse gas (GHG) emissions and/or hinder earth's ability to absorb these gases⁸. Although mean temperatures have increased and are projected to continue to rise, perhaps the most important impact in climate change is the potential for more, and more severe, extreme and unusual events such as heavy precipitation, floods, hurricanes and droughts⁹.

Provincial Context

OREC's growth was in direct response to innovative provincial legislation and policies by the provincial government that was committed to shutting down all its coal fired power plants within a decade. Ontario's [Climate Change Action Plan](#) was created to reduce the Province's greenhouse gas emissions and position the province towards a sustainable future. Ontario has adopted aggressive targets for reducing Ontario's greenhouse gas emissions: six per cent below 1990 levels by 2014, 15 per cent by 2020 and 80 per cent by 2050. The Province is planning to achieve these targets through the phasing out coal-fired power plants and supporting more renewable energy; creating a culture of conservation; creating a cap-and-trade system for industry; giving provincial sales tax breaks for energy-efficient products, and introducing programs and incentives for consumers, businesses, and municipalities to go green.¹⁰

The province is working towards phasing out the use of coal in generating electricity by the end of 2014. Further, it is investing in transit systems for urban areas and providing incentives for electric vehicles and is supporting research and innovation through the Ontario Emerging Technology Fund, the Ontario Network of Excellence (ONE), and other initiatives¹¹.

Ontario's Green Energy Act + Feed-in-Tariff

Ontario's *Green Energy Act* (GEA) was created to encourage renewable energy generation, encourage energy conservation and promote the creation of clean energy jobs. Ontario's Feed-in Tariff (FIT) Program for power generation from renewable energy is part of a long-term strategy under the Government of Ontario's *Green Energy Act* to develop a renewable power industry in

⁸ Examples of these cycles include increased water vapour in the atmosphere, loss of sea, permafrost degradation and ocean acidification.

⁹ IPCC Climate Change 2013: The Physical Science Basis. IPCC Working Group | Contribution to AR5 (2013). Retrieved January 24th 2014 from: <http://www.climatechange2013.org/>

¹⁰ Ontario Ministry of the Environment (2013). Retrieved January 26th, 2014 from: http://www.ene.gov.on.ca/environment/en/category/climate_change/index.htm

¹¹ Climate Progress (2009-2010). Retrieved January 26th, 2014 from: http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/stdprod_085413.pdf

the Province, encourage investment in clean renewable power, and drive down the cost of renewable power systems.

The FIT initiative currently consists of two programs that are run by the Ontario Power Authority (OPA) – a MicroFIT program for small solar systems 10kW or less, and a FIT program for solar, wind, hydro, biomass, and biogas power systems up to 10 MW. The two programs have resulted to date in the contracting of close to 9,000 MW of new renewable power systems, representing over 1700 medium and large renewable FIT power projects and over 50,000 smaller MicroFIT projects. This represents enough electricity to power almost 1.2 million homes; it has also helped to create over 20,000 jobs. This has lowered the price of these systems by up to 50%¹². FIT has also helped Ontario shut down eight of nineteen coal units while helping to stabilize the grid by having more points of power generation in all parts of the Province.

In the latest (third) round of tariffs, the rates for solar power were reduced by 50% to reflect the lower costs of these technologies. Due to the costs of conventional power plants and their fuels increasing in cost, renewable power sources could be competitive or cheaper than conventional power sources within a decade¹³.

A core consideration of the FIT program design is that the program is reviewed yearly to ensure the new rates (for 20 year periods) reflect the lower costs of renewable energy production and provide the investor with a predictable 9 to 10% rate of return. In this way the costs to the electricity rate payer is steadily lowered, the industry can grow as it matures and lowers costs and the investors have a predictable rate of return. As mentioned earlier, the German experience over 15 years has proven to be very successful in this regard.

The Ministry of Energy sets the targets for the percentage of renewables on the grid and the grid operator has to oblige; grid upgrades are required for certain energy generation projects. All prospective FIT projects must demonstrate that they meet the technical and safety standards of the grid. All projects other than small MicroFIT projects must also undergo a connection test to ensure that there is sufficient local grid capacity. If the projects meet these conditions, the local utility must connect them to the grid. However, if there is insufficient capacity, as demonstrated in some parts of Eastern Ontario, utilities need to upgrade the grid so that these projects can be connected in the future. As mentioned above, this is the situation in Ottawa with the Hawthorne sub-station, scheduled to be upgraded in 2014.

In 2013, energy production in Ontario included gas (10%), solar PV (1%), bioenergy (1%), wind (3%), hydro (22%), coal (2%), nuclear (56%) and conservation (5%). As you can see from this

¹² Ottawa Renewable Energy Cooperative (2013). Retrieved January 26th, 2014 from: <http://ottawarenewableenergycoop.com/faq/about-feed-in-tariffs/>

¹³ Ottawa Renewable Energy Cooperative (2013). Retrieved January 26th, 2014 from: <http://ottawarenewableenergycoop.com/faq/about-feed-in-tariffs/>

energy mix, nuclear dominates the energy grid, followed by hydro, with renewables making up less than 5% of the grid. As previously mentioned, the grid was designed for a one-way form of energy from centralized sources (coal or nuclear for example) and not for two-way flow as is required by decentralized generation sources. One other element to note is that nuclear energy is considered a "base load" because it produces the same amount of power all the time and cannot safely be turned up and down. This means that 50-60% of the provincial grid capacity is taken up by nuclear at all times and the variable power sources (renewables primarily) only have the remainder to play with. This also means there is excess power overnight, which may create a need to dump much of it or sometimes pay neighbouring jurisdictions to take it from us. By reducing the amount of nuclear or introducing energy storage, more renewables will be possible on the grid.^{14 15}

Benefits of Solar Energy

Solar energy is a clean source of energy that can provide significant power and there is a nearly endless supply; it is especially available when most needed by the grid. Solar PV tariffs are categorized according to whether they are on a roof or ground and by size. Systems on a roof are, by definition closer to demand. Therefore, solar PV generation reduces grid line loss. On average, 7 to 9% of the electricity generated in Ontario is lost during transmission to what's called 'line loss' at various points in the grid. The longer the distance from the point of production to the point of consumption, and the higher the demand and stress on the grid, the greater the line loss will be. In peak demand periods, when high currents are present on the lines, the line loss increase and can reach over 11%, or a marginal increase of 20-25%. Locally produced peak energy avoids these broad-system losses, thus provide a significant financial and operational benefit¹⁶.

OREC's Background

The idea for the Ottawa Renewable Energy Co-op (OREC) grew out of an existing co-operative working on solar thermal panel installations called Sustainable Ottawa. The five founding OREC board members were all involved in this solar thermal initiative when the Feed-in Tariff (FIT) Program was announced in 2009. The OREC founders all shared a vision to establish a co-operative that built a connection between members through the co-operative structure, to contribute to a more sustainable community through the renewable energy they would collectively be selling to the grid, and to build energy literacy. At that time, they decided that a

¹⁴ For further details on the province's future energy targets, please visit the Ontario Ministry of Energy's website: <http://www.energy.gov.on.ca/en/ltep/#.Uz1wwOddVQM>

¹⁵ Community Research Connection (2014). Stopping the Myths. Retrieved April 7th, 2014 from: <http://www.crcresearch.org/crc-blog/stopping-myths>

¹⁶ Lazar, Jim and Xavier Baldwin (2011). From RAP "Valuing the Contribution of Energy Efficiency to Avoided Marginal Line Losses as Reserve Requirements". Retrieved May 9th, 2014 from: http://www.google.ca/url?sa=t&rct=i&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0CE8QFjAD&url=http%3A%2F%2Fwww.raponline.org%2Fdocument%2Fdownload%2Fid%2F4537&ei=YdlwU9_iA5apyATomoCwBq&usq=AFQjCNF7dFCIjqs76IYWkWzX0WWGzX6rQ&sig2=vZiqrIaW1hI_tCo3Ivqj7q&bvm=bv.66330100.d.aWw

renewable energy co-op focusing on renewable community based power would offer an opportunity to increase the uptake of sustainable energy in Ottawa and provide on-the-ground demonstration projects of its viability. It was a strategic opportunity to connect renewable energy options directly with the Ottawa community. OREC was subsequently created to generate electricity under this program.

OREC is one of the oldest energy co-op working to create renewable energy to sell to the grid in the Province of Ontario. At the time of the FIT introduction, there were only 3 energy co-operatives operating, and there are currently over 70 energy co-operatives in the province of Ontario¹⁷. OREC continues to focus on solar projects in the City of Ottawa, although the co-op is looking into biogas and energy efficiency possibilities.

The Board consists of up to fifteen directors who are elected at the annual general meeting. Directors serve for three-year terms and are not remunerated. The board is responsible for contracts, projects, reserve funds, dividends and surplus distribution, and borrowing. Advisory committees have been formed to advise the board on business, technical, and communication issues, which have formed around both strategic imperatives and Board interest and expertise. The management team now includes a full-time Operations Manager and part-time bookkeeping, legal counsel, and technical services.

OREC has become well known in the community and has received significant media attention over the last few years for several reasons. Their Board members are actively engaged in community events and are committed to increasing civic literacy around the valuable role of renewable energy in sustainable community development. For example, OREC and Eileen Tallman Housing Co-operative (one of OREC's partners) collaborated on a solar carnival in the summer, contributing a lot of community value to that particular project. OREC is known to be very collaborative and transparent, sharing the production of data especially around how much solar energy is produced and how much is used. They are also active in the local co-operative network, and are seen as a connector of different groups and organizations. Their involved membership is key to this outreach and media, benefitting from a diverse group of people and expertise available to the community.

OREC's goal is to offer competitive long-term commitment returns for their projects, ensuring that their members' money is invested both profitably and yet rooted in social and ecological imperatives related to sustainable community development. OREC currently has 7 solar rooftop projects, including five 10 kilowatt (kW) solar power projects on the rooftops of non-profit or co-op housing buildings across Ottawa, a 75 kW project on the roof of Samuel Genest School, and now 50% of a 250kW solar rooftop project on a storage facility in the Dunrobin area.

¹⁷ Financial Services Commission of Ontario. Retrieved February 7th, 2014 from: <http://fsco.gov.on.ca/en/coops/Pages/default.aspx>

Each of the projects feeds power to the Ottawa electricity grid under already approved feed-in tariff contracts with the Ontario Power Authority (OPA). The projects include:

Better Living Housing Co-op

This 10-kilowatt solar system on the roof of Better Living Housing Co-op was connected to the electrical grid on December 27 in the middle of a snow storm.

Eileen Tallman Housing Co-op

Eileen Tallman Co-operative is located in Ottawa's west end.

Coopérative d'habitation Lafontaine

Co-operative d'habitation Lafontaine has always been dedicated to environmental issues since its inception and has prioritized installing solar panels on their rooftops helping to generate income for their co-op.

Presland OCISO Non-profit Housing

OCISO Non Profit Housing provides affordable housing for a diverse community. On Earth Day, April 22, 2013, OCISO Presland became one of Ontario's leading examples of solar energy use by mounting two solar PV systems on the North and South housing blocks.

Dunrobin Storage Facility

This is the OREC's largest project to date, it is located on the roof of a large boat storage facility in rural west Ottawa: a 250 kW installation of 1140 panels, which will help power the nearby high school and subdivision.

The storage facility is located within the City limits, near the village of Dunrobin. The 20,000 square-foot building was constructed in the fall of 2012.

Samuel Genest School

Samuel Genest French Catholic high school's rooftop solar energy system began producing electricity in May 2014. The project also serves as a demonstration project and paves the way for community members to invest in the future of the students and school. In June 2014, The Conseil des écoles catholiques du Centre-Est and the Ottawa Renewable Energy Co-operative will be celebrating the inauguration of this project, a first community-owned solar project on a school in Ottawa (a 75 kilowatt solar project).

OREC is now preparing its third Preference Share offering for the next round of projects.

Strategic Questions

1. Would it be beneficial for other provinces in Canada to implement Feed in Tariffs similar to Ontario's Feed in Tariff and Nova Scotia's Community Feed in Tariff Program?
2. Can small, medium and large Canadian municipalities benefit from investing in their grid to increase capacity for small-scale renewable inputs?
3. What would it take to scale up and out OREC's model across the country?

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