



## **Set Your Organization Apart** **As a Leader in Economic Recovery and Environmental Reform:** **Host a SolarShare Rooftop Solar Project**

With economic uncertainties foremost in the minds of Ontarians, the SolarShare Co-operative Inc. offers an opportunity for organizations to make a strong statement about their commitment to the environment and building a stable economy. Renewable energy projects are widely known to create significantly more long term jobs than conventional power projects, especially if local ownership is involved. By hosting a SolarShare project, an organization realizes the following benefits:

### **- Support Long Term Job Creation**

A 250 kW solar project will generate \$6.3 million of economic activity over 20 years, through development, construction and operation. The Ontario Power Authority's domestic content rules only ensure that Ontarians capture 40% of this value; **local ownership** of a SolarShare project ensures that Ontarians capture closer to 80% of this value.

### **- Offer Ontarians a Chance to Participate and Make Money**

Everyone needs to pitch in to help stabilize the Ontario economy. SolarShare offers an investment opportunity for Ontarians to put some of their savings to work creating long term jobs, supplementing taxpayer programs.

### **- Reduce Smog-Forming Emissions and Fight Climate Change**

Nothing ruins hot summer days like smog in the city. Solar systems produce their maximum output at peak times when electrical demand is highest and is usually being met by greenhouse-gas intensive coal and natural-gas fired generation in Southern Ontario. Hosting a SolarShare project demonstrates your concern for Ontarians quality of life and directly helps Ontario towards the goal of closing the last of its coal-fired generation plants by 2014. Solar is a breath of fresh air.

### **- Brand Awareness...At No Cost!**

All SolarShare fundraising and membership marketing and communications activities will include promotion of the host organization as the featured project partner, all at no cost to it.

### **- No Risk To The Host**

SolarShare will plan, permit, build, own, operate and insure the project (including a third party roof warranty) for its 20-year lifespan, essentially eliminating any risks for the host.

**Partner with SolarShare and Align Your Brand with Our Values.**

## **The Toronto Renewable Energy Cooperative (TREC) is pleased to announce its newest renewable energy project, SolarShare**

In development for two years now, SolarShare is a co-operative that will build multiple rooftop solar- electric projects of up to 250kW in size, which it will finance, develop, maintain and operate. Revenues from its energy sales will be at set rates guaranteed under 20 year contracts with the Ontario Power Authority (OPA), under Ontario's new Feed-In Tariff (FIT) Program, a part of the new Green Energy and Green Economy Act.

### **SolarShare's key objectives**

1. Develop at minimum of two commercial-grade, community-owned projects in 2010 and four in 2011
2. Make its projects replicable and assist other organizations elsewhere in Ontario to develop a minimum of two additional commercial-grade community-owned projects in 2010 and four in 2011
3. Demonstrate that renewable energy can provide extremely competitive and attractive investment opportunities, generating for its investors, a minimum pre-tax rate of return of 8% (IRR).
4. Maximize the education and engagement of the Ontario public about the benefits of renewable energy and, specifically, community-owned renewable energy projects.
5. Develop and circulate all possible best-practices documents incorporating the co-op principles including:
  - a. Maximum transparency
  - b. Maximum fairness and equity to all parties involved
  - c. Minimum negative environmental impacts
  - d. Democracy

### **Physical Roof Requirements**

A 250 kW system would require up to 80,000 ft.<sup>2</sup> of roof space, while a smaller system would require proportionately less space. One absolute requirement, is that the roof have unfettered exposure to the sun. This means that at least for 20 years, there can be no chance of obstructions which could cast a shadow onto the proposed system location. Examples of this would be the construction nearby of taller buildings or other structures, or the growth of trees in a southerly arc, from east through to west, and from about 10 degrees above the horizon, to vertical. The roof may be flat or sloped, but if sloped, it should be sloped to the south. Ideally, the roof should have the fewest possible penetrations for vent stacks, HVAC equipment, etc. A nice bonus would be to have the system visually obvious to passersby. Structurally speaking, the strength of the roof will be important to the question of whether it can support the additional loading resulting from the addition of a solar PV system, but this cannot be easily determined without a professional engineering assessment, which SolarShare would conduct at its own expense and risk.

## **Project Specifics**

- Electrical Name Plate Capacity: up to 250 kW \*
- Type of Generation: solar electric PV (photovoltaic) using mono or polycrystalline panels
- Projected Annual Electrical Production: up to approximately 275,000 kWh/year
- Rooftop Area Occupied: up to approximately 80,000 ft<sup>2</sup>
- Project Hard Cost: up to approximately \$1.6 million per project
- Targeted Commissioning Date of First Project: summer or fall 2010
- Target Annualized Return on Investment to Shareholders: 8%

\*SolarShare also hopes to develop smaller projects that deliver strong returns.

## **Market Context**

The Ontario government's Green Energy and Green Economy Act of 2009 has set in place a number of enabling mechanisms to encourage the development of privately-owned renewable electricity generation projects that will feed into the province's electrical grid. The most important mechanism, Ontario's new Feed in Tariff (FIT) program, pays greatly increased amounts for electricity generated from new renewable energy sources at rates which differ by project size and technology. More information about this can be found at: <http://fit.powerauthority.on.ca/>.

SolarShare has identified a significant demand from retail investors looking for an investment vehicle that allows them to hold equity in these projects; due in no small part to the added benefit of community-ownership.

## **Ownership Model**

SolarShare Co-operative Inc. is a for-profit co-operative corporation, founded by the Toronto Renewable Energy Co-operative (TREC), a not-for-profit co-operative. The projects will be financed through a traditional mix of debt and equity. Projects can be wholly owned by the SolarShare co-operative or through a joint venture partnership, similar to the Toronto Hydro-Windshare partnership that owns the Exhibition Place wind turbine in Toronto, another TREC project. Shares may be purchased by any person or business, including the roof host and its employees. There is also the possibility of RRSP eligibility, but that has not yet been determined.

## **Benefits to Host**

Building owners who host SolarShare projects on their roofs can realize a number of significant bottom-line benefits as follows:

### Environmental Benefits

- Solar Energy is abundant, clean, and sustainable (unlike gas, oil and coal), helping to secure our energy future. The transition to renewable energy will take time but must begin in earnest immediately.
- Solar Energy does not pollute our air by releasing carbon dioxide, nitrogen oxide, sulphur dioxide or mercury into the atmosphere as do many traditional forms of electrical

generation and therefore, does not contribute to global warming, acid rain or smog. For instance, coal is the most polluting and greenhouse gas intensive fuel source for generation (in fact, one of Ontario's largest single sources of air pollution) which is why the Ontario government has set a goal for itself, of shutting down all of its coal-fired generation plants by 2014. This can only be accomplished if sufficient quantities of other forms of generation are brought on line, thus forming a direct relationship between the amount of renewable energy successfully brought online before then, and whether we succeed in meeting the deadline.

- Solar systems are silent, unobtrusive and have no affect on any form of wildlife.
- By generating electricity physically close to where it is needed, electrical line transmissions losses are avoided, thereby reducing wasted electricity.
- Solar Energy does not contribute to the cost and environmental problems of the extraction and transportation of fuel (such as the Alberta tar sands) or the storage of radioactive waste (Ontario is presently storing over 30,000 metric tons of it, without any plan for disposal).
- The key ingredient in making solar cells is silica sand, which is available all over the world. Geo-political stability is unaffected, in stark contrast to fossil fuels like oil.
- Solar Energy is naturally produced when we need it the most: mid day, thereby reducing the need for natural gas "peaking" generation facilities that have been added recently in many Ontario cities. Peaking facilities are wasteful and inefficient, being very expensive to build and staff, but only operating a small percentage of the time.
- The only real cost to a solar energy system is its upfront cost. It then runs on free fuel (the sun!) for decades, thereby avoiding future potential economic shocks due to greatly increasing fossil fuel prices.

#### Community Benefits of Renewable Energy

- Stimulates economic development - Creates new skilled jobs and long-term investment throughout Ontario.
- Improves health - Reduces smog-related illnesses and premature deaths.
- Ethical investment - Offers a socially responsible investment for the every-day Ontarian, without the complexities that often accompany other investments.
- Improves grid reliability - Smaller scale, localized generation helps avoid massive blackouts such as that of August 2003, and speeds grid power recovery when such do occur (3 minutes automatic recovery versus up to two weeks for a nuclear generating facility).
- Often leads to energy conservation - Increased member education and awareness often leads to reduced consumption.
- Saves money - Generating energy closer to where it is used reduces transmission and distribution costs through reduced "wear and tear" on the system and reduced line losses ,thereby reducing long term maintenance costs to ratepayers.
- More rapid growth in renewable energy capacity - The remarkable success of wind energy in Denmark and Germany is largely due to community ownership.

#### Greening The Corporate Image...Legitimately

Successfully greening one's corporate image definitely resonates with consumers. Consumers today are demanding more environmental accountability from businesses and are increasingly

choosing to patronize the businesses that share their concerns for the environment. At the same time, consumers are becoming increasingly aware of "greenwashing" efforts by some companies who tout their concerns for the environment with programs or marketing statements which are less than genuine or lack substance.

As a result, many businesses recognise the benefits of truly "greening" their corporate image with meaningful actions that demonstrate not just a commitment to environmental responsibility, but an enlightened understanding of the role they can and should play in addressing the environmental concerns that face us all. Partnering with SolarShare by simply providing a host roof requires absolutely no capital outlay, yet serves as meaningful proof that your company is part of the environmental solution, not the problem.

### Community Engagement and Participation

Companies today want to be seen to be good friends of the community by directly being involved in activities or events, through direct participation, sponsorship or other facilitation. Being a SolarShare partner affords any or all of the three. The community is invited to invest in this very exciting and unique project, and will feel true ownership in it, and thereby is likely to feel a closer tie to the company offering the host roof.

Additionally, in keeping with TREC's desire to educate the public about renewable energy, it hopes that in-store exhibits and periodic rooftop tours and in-store talks or workshops could be arranged. TREC's Our Power program also provides great opportunities to further engage the public by exposing them to the idea of buying a solar electric system for their own home and then offering them assistance if they do. For more information on Our Power see [www.OurPower.ca](http://www.OurPower.ca).

### **SolarShare Contact Information:**

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Website: <http://www.trec.on.ca> (Click on "SolarShare" under the "Project Development" header)

(Background information on the Toronto Renewable Energy Cooperative follows)



## Toronto Renewable Energy Co-Operative Backgrounder

### **Vision**

Inspired citizens working together and pooling their resources, to realize a sustainable, fair and accountable energy economy.

### **Mission**

At TREC we are working hard to create a world in which everyone is fully aware of the link between their energy habits and environmental impacts and all people have a clear and easy choice for participating in renewable energy and conservation activities. We believe this can be accomplished by:

- Building renewable energy projects which are community-based and owned, and
- Educating Ontarians and visitors about renewable energy, energy efficiency/conservation and the community power model

### **History**

The Toronto Renewable Energy Co-operative (TREC) was founded in 1998. In 2002, TREC's first project, the wind turbine at Exhibition place began commercial operation. TREC spun off a separate co-op, Windshare, to partner with Toronto Hydro for the project. It was the first urban-sited turbine to be constructed in North America, and was also the first community-owned wind power project in Ontario. It has become Ontario's icon for renewable energy and has been the subject of numerous articles and photos.

Now entering its twelfth year, TREC has expanded well beyond the building of the Ex-Place wind turbine and is today a sought-after partner in a range of renewable energy initiatives. From community energy projects to energy education, the two streams of this not-for-profit co-operative enable the dissemination of unique insights, experiences and information that are needed in the transition to a sustainable energy future.



### **Educational Programs and Activities**

Using the highly visible Ex Place turbine as its point of departure, TREC has been building its education program over the last seven years with a number of activities, most notably:

1. EcoPod activities: In partnership with the Toronto District School Board, TREC complements the energy curriculum taught at various school levels by providing interactive, hands-on-learning activities at its education centre (the EcoPod) on the Exhibition grounds. In the 2008/2009 school year TREC reached more than 4000 grades 5, 7 and 9 students, many of whom have limited access to field trip experiences.
2. Kids' World of Energy Festival, started in 2008, brings the unique educational experience of the EcoPod activities to even more students. This annual event enables grade five students to learn about energy issues in a fun, interactive forum and hosted over 4,500 grades 5, 7 and 9 students.
3. Green Collar Career program: New in 2009 is the launch of the Green Collar Career program, an initiative developed in partnership with the Toronto District School Board to expose high school students to the green energy sector through work placements and a career fair.
4. Toronto Solar Roundtable: TREC hosts a monthly meeting of individuals to discuss all facets of solar development including opportunities and barriers to further development.

## Renewable Energy Generation Projects

On the project development side, TREC is presently working on three main fronts:

1. Our Power, supports individuals (through a community approach) who wish to understand and install solar energy systems (hot water and photovoltaic) for residential application. In December of 2009, Phase One of Our Power's new expanded program was announced with plans for ambitious growth and scope.
2. LakeWind: In November of 2009, TREC filed a Feed-In Tariff (FIT) application for the development of a 20 MW wind energy project in Bruce County. As the very largest undertaking ever with a project exceeding \$50 million, TREC will likely partner with another party, possibly a commercial wind developer or utility.
3. SolarShare (the subject of this brief)

TREC builds all its projects through creative, collaborative partnerships enabled by the twelve Board members that govern the organization. The knowledge, experience and dedication of TREC's Board and staff allows achievements that belie the organization's small size. TREC is keen to build more renewable energy projects, enable community members to participate and enhance energy literacy for people of all ages.

For more information see [www.trec.on.ca](http://www.trec.on.ca).

TREC is a member of:



Ontario Sustainable Energy Association



SolarShare Funders:

