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IS SOLAR PV A GOOD FIT FOR YOUR BUILDING?

Just a few years ago the idea of putting solar panels on the roof of your apartment building(s) would have seemed altruistic at best and foolhardy at worst — something you might do for the sake of being green but certainly not something you would do for the sake of your bottom line. The problem was that by the time the panels generated enough electricity to pay for themselves, they would be at or near the end of their life expectancy (30 years).

All that has changed with the passage of the Government of Ontario's Green Energy Act, and the new Feed In Tariff (FIT) and MicroFIT programs. The programs offer owners of small rooftop solar photovoltaic (PV) installations a generous price of between 80.2 cents and 71.3 cents for every kilowatt hour (kWh) of solar energy they produce. And better yet, once a contract is signed that price is guaranteed for 20 years.

The FIT and microFIT programs have revolutionized the economics of small scale solar installations. At these guaranteed prices, solar panels will usually pay for themselves in 8-12 years, and offer a very reasonable return on investment over the course of a 20 year contract. This makes a rooftop solar installation an attractive investment opportunity for many building owners.

At this point, you may be asking yourself how can we sell the solar energy we produce, won't it all be used in the building? The answer is both yes and no. Through the FIT programs, the energy from rooftop solar installations flows directly to the electricity grid, rather than into your building. In practice, most of that solar energy will then be drawn back into your building. Essentially, your local utility is buying the solar energy from you at 80.2cents/kWh, and then selling it back to you at 7.5cents/kWh, for a net profit to your building of 72.7cents/kWh!

However, solar PV isn't a viable option for every building. The first thing to consider is the size of your roof, and what else is up there. The ideal rooftop has at least 80m2 of free, un-shaded roof space. The second thing to consider is the condition of your roof. If your roof requires major repairs or outright replacement in the near-term future, now is probably not the time to install solar panels. The third thing to consider is the height of your building. The higher your building is, the higher your installation costs will be because some of the materials will need to be craned up to the roof. A reputable energy management firm or solar installer can help you evaluate the suitability of your rooftop for a solar PV installation.

If your roof is suitable for a solar installation, you'll then need to figure out how to finance it. Depending on the size of installation you are considering, the costs are likely to be in the range of $100K to $200K including materials and installation. A good rule of thumb for estimating costs is $10K per KW of capacity. One option is to take out a loan. You'll be paying interest on the loan, of course, but the income from selling the solar energy should be enough to cover your loan repayment costs. Once the loan is paid off, you will be able to keep all of the revenue generated by the solar installation.

Another option is to enter into a leasing arrangement with a solar company. The solar company will pay 100% of the costs of purchasing and installing the solar panels. In return, they will earn the revenue from selling the solar energy that is produced. In exchange for the use of your roofspace, you will receive annual payments equivalent to around 10% of the revenue generated by the solar installation. You don't need to spend a penny, but the annual income from the solar installation will be considerably less than if you owned the installation outright.

Before moving forward with a solar installation, be sure to compare the benefits of investing in solar energy with the benefits of investing in your building's energy efficiency. Despite the attractive price paid for solar energy, the return on investment for energy efficiency retrofits in multi-unit buildings is usually even higher. Or better yet, invest in energy efficiency and renewable energy at the same time as part of a comprehensive energy plan for your building.

For more information on planning and implementing energy efficiency and/or renewable energy projects, check out our TowerWise website at **TowerWise.ca**. If your building is in the 416 area code, you are also eligible for our free TowerWise Conservation Advisor service — sponsored by the City of Toronto and a number of non-profit partners including the Greater Toronto Apartment Association. If your building would like free, independent advice on energy conservation renewable energy, pick up the phone and call Rob Detta Colli at 416-450-7989 or email advisor@towerwise.ca. ◆

OWN OR LEASE?

OWNING

AS THE OWNER OF A RENEWABLE ENERGY PROJECT, YOUR RESPONSIBILITIES WILL INCLUDE:

- HIRING QUALIFIED INSTALLERS
- SOURCING AND PURCHASING EQUIPMENT
- ARRANGING FOR PROJECT FINANCING AND INSURANCE
- OBTAINING ALL NECESSARY APPROVALS (E.G., BUILDING PERMITS)
- ARRANGING FOR AN ELECTRICAL SAFETY INSPECTION
- WORKING WITH YOUR LOCAL UTILITY TO CONNECT YOUR PROJECT TO THE GRID
- OBTAINING A MICROFIT CONTRACT
- PAYING FOR ONGOING OPERATING COSTS

SOME OF THE BENEFITS OF OWNING YOUR OWN PROJECT COULD INCLUDE:

- HAVING CONTROL OVER YOUR OWN PROJECT
- RECEIVING PAYMENTS DIRECTLY FOR THE ELECTRICITY PRODUCED.

SOME OF THE RISKS OF OWNING YOUR OWN PROJECT COULD INCLUDE:

- PURCHASING EQUIPMENT THAT DOES NOT PERFORM AS WELL AS EXPECTED
- BEING RESPONSIBLE FOR ALL ONGOING PROJECT COSTS.

LEASING

AS A LESSOR OR "HOST" OF A MICROFIT PROJECT, YOUR RESPONSIBILITIES COULD INCLUDE:

- NEGOTIATING A LEASING AGREEMENT WITH THE PROJECT DEVELOPER. WE RECOMMEND THAT YOU CONSULT A LAWYER FOR THIS.
- ENSURING THAT THE PROJECT DEVELOPER OBTAINS ALL NECESSARY APPROVALS. ARRANGING FOR PROPERTY INSURANCE, IF NECESSARY
- MAINTAINING AN ONGOING RELATIONSHIP WITH THE PROJECT DEVELOPER

SOME OF THE BENEFITS OF LEASING YOUR PROPERTY COULD INCLUDE:

- RECEIVING STEADY INCOME FROM YOUR LEASING AGREEMENT.
- NO UPFRONT CAPITAL INVESTMENT.

SOME OF THE RISKS OF LEASING YOUR PROPERTY COULD INCLUDE:

- DAMAGE TO YOUR PROPERTY IF THE PROJECT IS POORLY INSTALLED
- NON-PAYMENT FROM THE PROJECT DEVELOPER
- PENALTIES FOR TERMINATING THE LEASE AGREEMENT

Adapted from: http://microfit.powerauthority.on.ca/pdf/microFIT-Program-Overview.pdf

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