The Town of Ingersoll
Administrators Report

Ingersoll Solar Farm

July 5, 2010
Report Number A – 108/10

Update:

- The Town has submitted the Feed in Tariff application to the Ontario Power Authority and the required fees.
- Applications submitted by June 4 will proceed through review, connection availability testing and consideration for contract before the Economic Connect Test (ECT) is held in August.
- Applications proceed to contract or the ECT as they are deemed to be complete and have completed the Transmission Availability Test (TAT) and Distribution Availability Test (DAT).
- Staff have met with the Ontario Power Authority, have participated in a number of conference calls, and have met with the Ministry of Natural Resources and the Ministry of the Environment.
- Intech Clean Energy and staff are working on the Ministry of the Environment's Renewable Energy Application which is very comprehensive and includes a number of reports, such as, project description report, designs and operations report, decommissioning plan report, construction plan report, consultation report, natural heritage report, cultural heritage report, water protection report, endangered species and fish and wildlife conservation report.
- Staff anticipates a contract will be offered by the end of 2010.
- Unfortunately, because of the long process and the province adjusting things as they go a long the Town will not qualify for the Ontario Power Authority requirement of 50% Ontario content if the project was connected in 2010. The Town is now required to demonstrate a 60% Ontario content. This change, results in a higher cost but on the positive the Town will be moving from thin film solar panels (25 year life span) to crystalline solar panels (40 year life span) which require less land. The solar farm can be built on approximately 45 acres. The new cost will be $32,500,000. See attached spreadsheet.
- Intech Clean Energy is in serious discussions with three solar panel manufacturers to locate in Ingersoll and the goal is to finalize negotiations in September/October time frame.

Recommendation:

1. The Mayor and Clerk are authorized to sign a contract with Intech Clean Energy to construct a 10 MW solar farm.

The Green Energy and Economy Act

Background

The Green Energy and Economy Act (GEGA) was passed by the Government of Ontario on May 14, 2009. The GEGA enacts the Green Energy Act and amends over 16 other Acts. Regulations were prescribed on September 24, 2009. The stated purpose of the GEGEA is to "green" Ontario's energy sector through increased energy conservation and renewable energy generation.

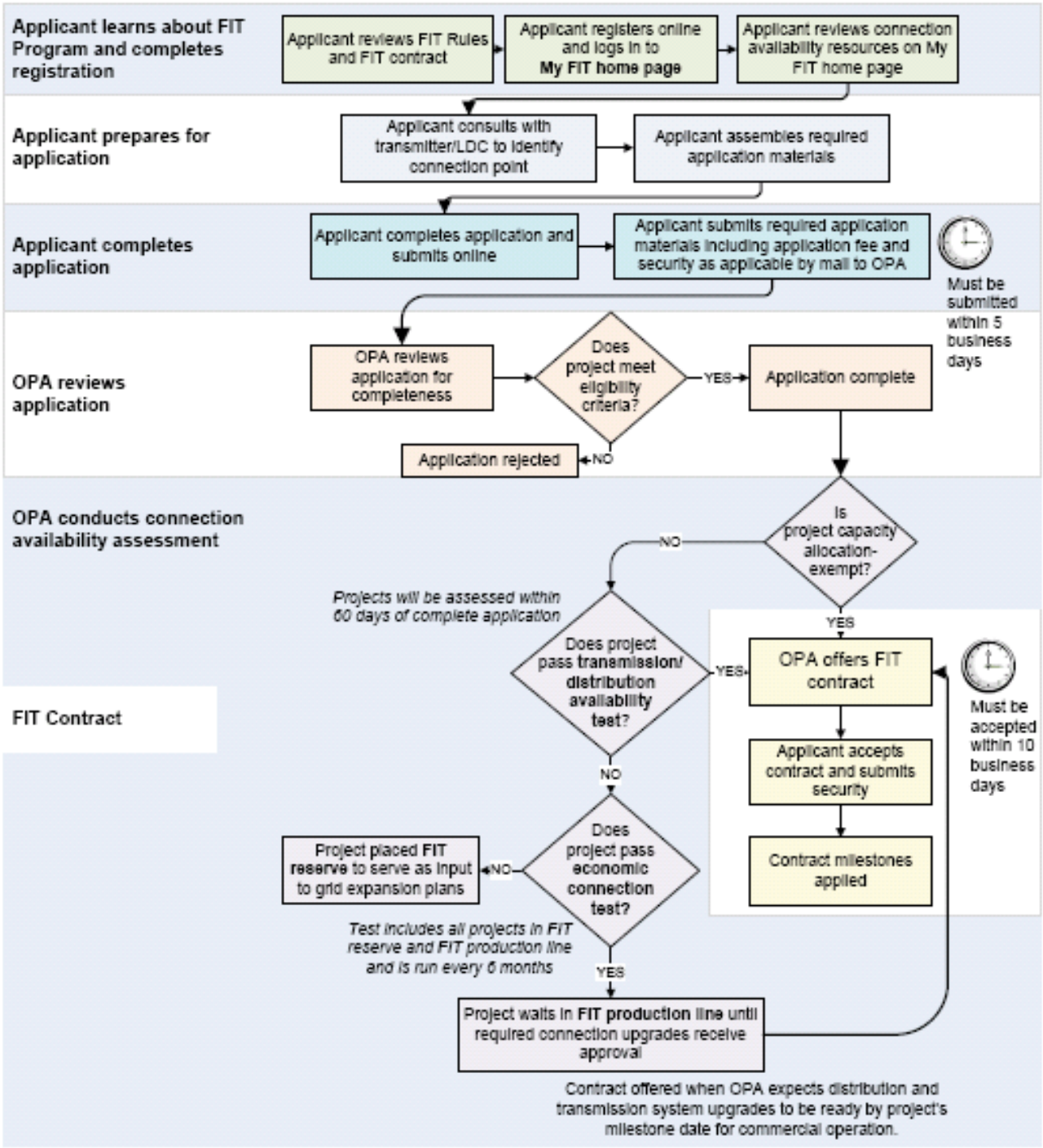
Part of the GEGA is the ability to build a facility and sell power back into the grid. This ability to generate electricity from renewable sources without the creation of an independent corporation will allow municipalities to increase their revenue through participation in the Ontario Power Authority's (OPA) Feed in Tariff (FIT) program and selling electricity onto the grid. **Self-generating electricity can reduce this monetary expenditure and free up much needed funds for use elsewhere in the municipality.**

What is the Feed-in Tariff Program?

Ontario's feed-in tariff or FIT Program is North America's first comprehensive guaranteed pricing structure for renewable electricity production. It offers stable prices under long-term contracts for energy generated from renewable sources, including:

- Biomass – biogas - landfill gas - on-shore and off-shore wind
- Solar photovoltaic (PV) - waterpower
- The FIT Program was enabled by the *Green Energy and Green Economy Act, 2009* which was passed into law on May 14, 2009. The Ontario Power Authority is responsible for implementing the program.
- By encouraging the development of renewable energy in Ontario, the FIT Program will:
- Help Ontario phase out coal-fired electricity generation by 2014 - the largest climate change initiative in Canada
- Boost economic activity and the development of renewable energy technologies
- Create new green industries and jobs.

An overview of the FIT Program Process Chart



The Town of Ingersoll

Background

As a result of the Green Energy and Economy Act 2009, it was decided to be proactive to develop a Renewable and Alternative Energy Strategy for the Town of Ingersoll. To that end a partnership was formed with The Town of Ingersoll, ERTH Corporation and Conestoga College and a steering committee was struck with staff, energy companies and local company representation.

Short term results have been successful with monthly meetings with one outcome being the planning and implementation of renewable energy workshops for the general public through Conestoga College held at the Elm Hurst Inn and Country Spa from February to March 2010. Other plans are under way for a second round of more focused workshops and also new curriculum development for the Power Centre which will be very unique for the Province.

Another outcome is that **InTech GmbH & Co. KG,** (http://intech-solar.com/) a German distributor of photovoltaic plants, and located in Germany and France, is excited to announce that they are expanding to open an office in Ingersoll, Ontario, Canada in February 2010 to be called **InTech Clean Energy**.

Town of Ingersoll / ERTH Corporation / Conestoga College
Renewable and Alternative Energy Strategy 2010

The Overall Goal:

1. To create renewable and alternative energy opportunities in Ingersoll!
2. To create jobs for rural and urban areas.

Sub Goals are:

1. Attract a renewable energy manufacturer(s) to Ingersoll. This includes feasibility of cluster development for the Clarke Road Industrial Park.
2. Explore existing companies in Ingersoll who could provide expansion and diversifications opportunities.
3. Open up opportunity to build dual use solar / agricultural farms in Oxford County.
4. Open up opportunity for roof top solar construction for Residential, Commercial and Industrial Properties.
5. Work with Conestoga College to develop curriculum around renewable energy which can be delivered at the 'Power Centre Ingersoll'
6. To develop partners who will bring a variety of options, opportunities and investment. This will include opportunities for local power authorities for materials, servicing and installation etc.
7. To develop opportunities for local farmers who wish look at renewable and alternative energy options.

The Project - Industrial Park on Clarke Road

Description

The Town of Ingersoll currently owns industrial land on Clarke Road which could be developed into a **Solar Park Development** which would include a 10 MW solar farm, a solar manufacturing facility and additional space for other development. The rationale for the proposal is that it will move the industrial land into development stage and will create an opportunity for revenue generation.

The current proposal and concept would be the development of a 10 MW Solar Farm.

The Town of Ingersoll would own the solar farm and receive the benefits from the FIT program. The FIT program guarantees revenue for 20 years. As this is a community project the Province pays an addition one cent per kilowatt and the Town would receive 45.3 cents per kilowatt per year if considered a community project or 44.3 cents if it is not a community project.

The Industrial Park under the existing conditions has approximately 66 acres available. The solar farm development will require about 45 acres. With a reduced storm water management pond and the elimination of Street A and B, there should be available an additional 20 acres available for development. The Town would recoup the cost of street C. Intech Clean Energy and the Town are aggressively pursuing a solar panel manufacturer.

Comparison revenue with existing industrial land:

Example - IMT sits on 13.83 acres and generates $71,000 in local taxes. Today the Industrial Park could accommodate 4.77 plants similar to IMT in size. Local taxes would be $71,000 x 4.77 plants = $338,670. In comparison a Solar Farm on 45 acres, based on a 10 year loan, net revenue would calculate to be $897,425. After, 10 years net revenue $4,863,753.

The CAMI Plant generates $959,901 in local taxes and obviously would not fit on the 66 acres.
For the first 10 years when paying off the loan it would be like having 1.07 new CAMI Plants and after 10 years it would be like having 5.066 CAMI Plants located in the community paying taxes.

LOAN REPAYMENT	ANNUAL REPAYMENT	INTEREST FOR 10 YEARS
10 YEAR LOAN	$ 3,966,175	$ 7,161,749
15 YEAR LOAN	$ 2,903,366	$ 11,050,488
20 YEAR LOAN	$ 2,382,873	$ 15,157,438

OPTION 1

REVENUE/EXPENSE REPORT **FOR 10 YEAR LOAN**

Annual Revenue	$ 5,073,600	AVERAGE PRODUCTION (KWH)	11,200,000

Annual Expenses

Loan Repayment	$ 3,966,175
Insurance	$ 90,000
Maintenance	$ 100,000
Reserve	$ 20,000
Expense Total	$ 4,176,175
NET REVENUE	**$ 897,425**

After the loan is paid off the Town will receive on an annual basis for 10 years - $5,073,600 in revenue

OPTION 2

REVENUE/EXPENSE REPORT **FOR 15 YEAR LOAN**

	$		
Annual Revenue	5,073,600	AVERAGE PRODUCTION (KWH)	11,200,000

Annual Expenses

	$
Loan Repayment	2,903,366
	$
Insurance	90,000
	$
Maintenance	100,000
	$
Reserve	20,000
	$
Expense Total	3,113,366
	$
NET REVENUE	**1,960,234**

OPTION 3

REVENUE/EXPENSE REPORT **FOR 20 YEAR LOAN**

	$		
Annual Revenue	5,073,600	AVERAGE PRODUCTION (KWH)	11,200,000

Annual Expenses

	$
Loan Repayment	2,382,873
	$
Insurance	90,000
	$
Maintenance	100,000
	$
Reserve	20,000
	$
Expense Total	2,592,873
	$
NET REVENUE	**2,480,727**