



Ontario Feed-In-Tariff & Domestic Content

On 29 September 2009, the Ontario Feed-In-Tariff program was launched on an initial two year trial basis to subsidize the installation of renewable generation resources in the Province of Ontario.

In a significant departure from similar programs, a major feature of this new Feed-In-Tariff (FIT) was the inclusion of Domestic Content requirements. The Domestic Content provisions were incorporated as a mechanism to keep the FIT program consistent with the Ontario Government's overall mandate to create green energy jobs. Notably, the Domestic Content provisions must be met from Ontario goods and services and not goods and services from other Canadian jurisdictions.

Due to their novelty, there has been considerable industry discussion and uncertainty regarding the structure of these Domestic Content requirements. As key information about the FIT rates and Domestic Content requirements is spread over many official documents on the OPA web site, this document has been prepared to provide a summary of the key aspects of the Ontario FIT and its Domestic Content requirements with an emphasis on solar PV installations. Information from this document has been obtained from the Ontario Power Association's official website, <http://fit.powerauthority.on.ca/>.

Please note that this document does not represent the official position of the OPA, and Dunnison & Associates does not warrant that the information provided here is consistent with the FIT program now or in the future.

The new Ontario FIT has received a strong positive reception. There has been a heavy inflow of applications for solar PV and other renewable generation projects which have been accompanied by a number of exciting announcements from various solar industry participants.

This is an attractive program. According to Deutsche Bank in December 2009, "Two of the most advanced FiTs in our view at present are Germany and Ontario."

As currently structured, the residential portion of the program – the MicroFIT – can provide a return on the original investment in less than ten years.



Ontario Feed-In-Tariff & Domestic Content

There are three key aspects to how FIT projects are classified. All of these aspects are based upon project size and whether the project is roof or ground-mounted. PV projects can range up to 10 MW total. In combination with whether the project is ground or roof mount and with whether the project application is approved in 2010 or 2011, these three classifications dictate:

- The Project's FIT tariff rate
- The Project's capacity exempt or non-exempt status
- The amount of Domestic Content required for the Project

The following table summarizes these elements for the Ontario FIT PV program:

	Project Capacity	Roof or Ground Mount	FIT Rate (¢/kWh)	Domestic Content Requirement	
				2010	2011
Capacity	≤ 10 kW	Any Type	80.2	40%	60%
Exempt	10 kW – 250 kW	Roof Mount	71.3	50%	60%
	250 kW – 500 kW	Roof Mount	63.5	50%	60%
Non	>500 kW	Roof Mount	53.9	50%	60%
Exempt	≤ 10 MW	Ground Mount	44.3	50%	60%

The FIT rate – which directly impacts the financial return - is thus tied to the capacity of the underlying installation and whether the installation is ground or roof-mount. Smaller installations receive higher tariff rates. A single site cannot be broken down or otherwise staged into smaller projects to increase the collective FIT rate.

Like its German counterpart, the Ontario FIT benefits are structured as payment for actual production. Project owners receive compensation for kilowatt hours produced. These incentives are structured as follows:

Solar PV

Type	Size	Contract Price (¢/kWh)
Any type	≤10 kW	80.2
Rooftop	> 10 ≤ 250 kW	71.3
Rooftop	> 250 ≤ 500 kW	63.5
Rooftop	> 500 kW	53.9
Ground Mounted	≤ 10 MW	44.3



Ontario Feed-In-Tariff & Domestic Content

For specific insight on the FIT price schedule, please refer to:
[Fit Price Schedule](#) from the OPA web site.

While there is no cap on the collective number of installations or cumulative power output, as noted, the Ontario FIT does include domestic content provisions. Evidence of Performance on Domestic Content is required for each FIT project and is to be provided upon project completion. It is not possible to receive pre-authorization of Domestic Content.

These domestic content provisions and their minimum hurdles differ between the three types of PV system covered under the FIT. While the FIT rates differ on the basis of roof versus ground mount, for example, the domestic content provisions do not. The domestic content provisions remain consistent regardless of the size or type of installation within the three installation categories. The MicroFit projects have a relaxed Domestic Content requirement in 2010 as compared to all others. All projects, regardless of size or type, have the same Domestic Content requirements in 2011. Due to the differences in fundamental manufacturing processing, the components of a PV installation have different weightings depending upon whether crystalline technology or thin film technology is used and whether the project is MicroFit or not.

For more information on the domestic content provisions, please refer to the following documents on the OPA web site:

[Fit Program Overview](#)

[Exhibit D – Domestic Content](#)

The domestic content provisions of the Ontario FIT program can be summarized as follows:



Ontario Feed-In-Tariff & Domestic Content

Ontario FIT - Domestic Content Provisions

PV Crystalline (10 kW to 10 MW max)

Item	Activity	Qualifying %
1	Silicon	11%
2	Ingots & Wafers	13%
3	Cells	11%
4	Modules	15%
5	Inverter	8%
6	Mounting Systems	11%
7	Wiring & Electrical	9%
8	On-site labor & construction	18%
9	Consulting services	4%
Total		100%

PV MicroFIT (<10 kW)

Item	Activity	Qualifying %
1	Silicon	10%
2	Ingots & Wafers	12%
3	Cells	10%
4	Modules	13%
5	Inverter	9%
6	Mounting Systems	9%
7	Wiring & Electrical	10%
8	Labor & Services	27%
Total		100%



Ontario Feed-In-Tariff & Domestic Content

PV Thin Film over 10 kW

Item	Activity	Qualifying %
1	Thin Film Cells	35%
2	Modules	10%
3	Inverter	8%
4	Mounting Systems	10%
5	Wiring & Electrical	9%
6	On-site labor & Construction	24%
7	Consulting services	4%
Total		100%

Reviewing these categories, there are certain items that should be readily source-able within Ontario even with a modest PV industry. These items include Wiring & Electrical, On-Site labor & Construction and Consulting services. For the purposes of illustration, these can be considered ‘Baseline’ domestic content resources.

As noted, the domestic content ‘Qualifying Percentage’ varies by project category – as well as by time period. Assessing these provisions against the various categories suggests that the domestic content requirement can be achieved as follows:

PV Crystalline (10 kW to 10 MW max)

Minimum Domestic Content Level	Year of Commercial Operations
50%	2009 to 2010
60%	2011 and later

Baseline Content	Percentage
Wiring & Electrical	9%
On-site labor & construction	18%
Consulting services	4%
Total	31%

Options	Percentage
Baseline + Silicon + Inverter	50%
Baseline + Silicon + Mounting	53%
Baseline + Inverter + Mounting	50%



Ontario Feed-In-Tariff & Domestic Content

PV MicroFIT (<10 kW)

Minimum Domestic Content Level	Year of Commercial Operations
40%	2009 to 2010
60%	2011 and later

Baseline Content	Percentage
Wiring & Electrical	10%
On- and Off-site Labor & Services	27%
Total	37%

Options	Percentage
Baseline + Silicon	47%
Baseline + Inverter	46%
Baseline + Mounting Systems	46%

PV Thin Film over 10 kW

Minimum Domestic Content Level	Year of Commercial Operations
50%	2009 to 2010
60%	2011 and later

Baseline Content	Percentage
Wiring & Electrical	9%
On-site labor & Construction	24%
Consulting services	4%
Total	37%

Options	Percentage
Baseline + Inverter + Mounting	55%

Dunnison & Associates is not the definitive authority on the application of these or any other Domestic Content or FIT program provisions. Nothing in this document will be



Ontario Feed-In-Tariff & Domestic Content

considered as legally binding. The actual assessment on any Domestic Content situation may differ from that has been presented and the OPA may change any or all Domestic Content criteria at any time. The reader is encouraged to contact the Ontario Power Authority directly for any questions on the FIT Program or its Domestic Content requirements.