

A Progress Report on Electricity Supply

Third Quarter 2011



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Forward

The Ontario Power Authority (OPA) ensures a reliable, cost-effective and sustainable supply of electricity for Ontario. Its key areas of focus are: planning, designing and coordinating conservation programs across the province, planning the power system for the long term, and contracting for the development of needed generation resources.

The OPA publishes A Progress Report on Electricity Supply quarterly to provide updates on the electricity supply contracts and programs currently managed by the OPA.

As outlined in the government's 20-year Long-Term Energy Plan, a long-term approach to energy planning is the most efficient way to ensure Ontario is able to meet demand with a clean energy supply and to ensure Ontarians have the power they need, when they need it.

Presently, the OPA has about 21,000 megawatts (MW) of electricity supply capacity under contract of which close to 8,000 MW are clean, renewable energy from wind, solar and bioenergy. The OPA understands that not all of this clean, renewable energy capacity will come into commercial operation and this is a natural occurrence in programs of this type.

As capacity becomes available, it will be allocated by the OPA with the goal of ensuring sustainable, on-going uptake in the renewable energy industry. Priority transmission projects are already underway to enable significant capacity.

Based on the current status of both generation and transmission projects, there remain significant opportunities to develop renewable energy projects in Ontario, and there are also opportunities to support the many renewable energy projects currently under development across the province.

Executive Summary

As of the end of the third quarter 2011, the OPA had 20,936 megawatts (MW) of electricity supply capacity, based on average contract capacity¹, under contract. This included 10,277 MW of renewable energy, 7,659 MW of clean energy, and 3,000 MW of nuclear energy.

Within this 20,936 MW of supply capacity, 4,717 MW were procured from existing generating facilities, which required minimal or no new capital investment. The remaining capacity of 16,219 MW was procured from new development, expansion, redevelopment or refurbishment of existing facilities.

This represents more than \$35.0 billion of new capital investment in generation in the Ontario electricity system since 2005.

Chart 1 – Total Contract Capacity
20,936 MW

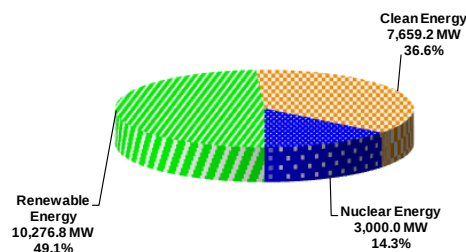


Chart 2 – Total Capacity in Commercial Operation
12,501 MW

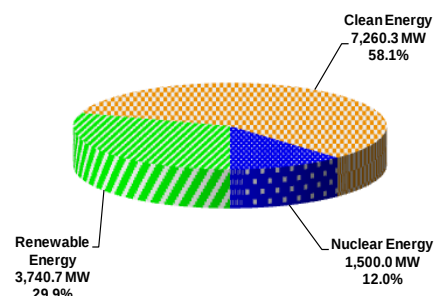


Chart 3 – Renewable Energy
(Contract Capacity)
10,277 MW

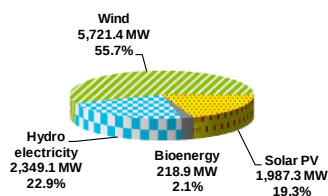


Chart 4 – Clean Energy
(Contract Capacity)
7,659 MW

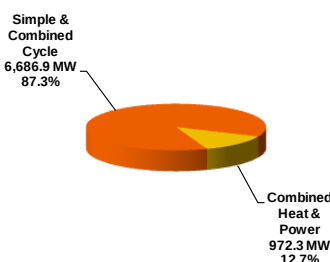


Chart 5 – Nuclear Energy
(Contract Capacity)
3,000 MW

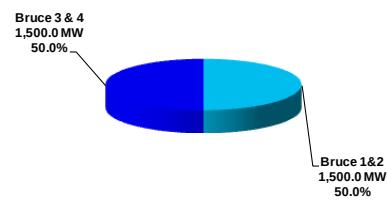


Chart 3 – Renewable Energy (Contract Capacity) 10,277 MW		Chart 4 – Clean Energy (Contract Capacity) 7,659 MW		Chart 5 – Nuclear Energy (Contract Capacity) 3,000 MW	
Commercial Operation	Under Development	Commercial Operation	Under Development	Commercial Operation (3 & 4)	Under Refurbishment (1 & 2)
3,741 MW	6,536 MW	7,260 MW	399 MW	1,500 MW	1,500 MW

Note: Variations in total megawatts and percentage are a result of value rounding.

¹ Average contract capacity is the average of the seasonal contract capacity.

New Contracts Executed

In the third quarter of 2011, the OPA successfully executed two new 20-year contracts with Markham District Energy Inc. to develop and operate two new Combined Heat and Power Standard Offer Program (CHPSOP) natural gas-fired plants located in the town of Markham. The Birchmount Energy Centre and the Bur Oak Energy Centre which have a combined contract capacity of close to 6 MW are scheduled to achieve commercial operation by mid-2014.

The OPA successfully executed two new 20-year Hydroelectric Contract Initiative (HCI) contracts in the third quarter of 2011, the first with Trout Creek Power Corporation and the second with Algonquin Power Fund (Canada) Inc. The combined capacity of these new contracts is just over 1 MW. This brought the total number of HCI contracts to 44 (for 66 facilities), with a total combined contract capacity of close to 1,069 MW.

In January 2010, the Government of Ontario entered into a Green Energy Investment Agreement (GEIA) with Samsung C&T Corporation and Korea Electric Power Corporation (Korean Consortium or KC). Under the terms of the GEIA, the Korean Consortium agreed to develop 2,500 MW of wind and solar renewable generation projects in Ontario in five phases. Under this agreement, the Korean Consortium and its project companies have successfully executed phase 1 and phase 2 for six power purchase agreements (PPAs) with the OPA to develop four wind and two solar projects with a combined contract capacity of 1,070 MW. The forecasted commercial operation date for phase 1 of these facilities, which consists of one solar and two wind contracts for a combined capacity of 520 MW, is early 2014. Phase 2, which also consists of one solar and two wind contracts for a combined capacity of 550 MW, is scheduled to achieve commercial operation by late 2014.

To obtain further information on this initiative, please visit:

<http://www.powerauthority.on.ca/news/power-purchase-agreements-signed-korean-consortium>.

Contracts Achieved Commercial Operation

During this quarter, 1,856 contracts in the renewable energy programs with a combined contract capacity of 78 MW achieved commercial operation. Of these, there were six solar Renewable Energy Standard Offer Program (RESOP) contracts with a combined capacity of 55 MW, 40 Feed-in Tariff (FIT) Program contracts with a combined capacity of 7 MW and 1,810 microFIT Program contracts with a combined capacity of 16 MW.

Contracts Terminated

During the third quarter of 2011, seven RESOP contracts with a combined capacity of approximately 34 MW were terminated due to contract counterparties' failure to meet contract requirements.

Feed-In Tariff Program Update

As of the end of the third quarter of 2011, there were 1,952 FIT Program contracts executed with a combined capacity of 4,528 MW.

On July 4, 2011, the OPA announced that it would offer contracts to 25 large-scale FIT Program projects representing 1,046 MW of capacity. As of the end of the third quarter 2011, 24 of these contract offers have been executed. In the Bruce transmission area, 13 of the 14 contract offers have been executed, accounting for 650 MW of the 750 MW. In the west of London transmission area, all 11 of the contract offers have been executed, accounting for 296 MW.

For more information, please visit:

<http://fit.powerauthority.on.ca/allocating-capacity-and-offering-fit-contracts-bruce-milton-enabled-projects>

<http://fit.powerauthority.on.ca/projects-enabled-bruce-milton-transmission-line-offered-contracts>.

Additional Details

For further information on the OPA's electricity supply contracts, visit:

<http://www.powerauthority.on.ca/current-electricity-contracts>.

For further information on the OPA's FIT and microFIT Programs, visit:

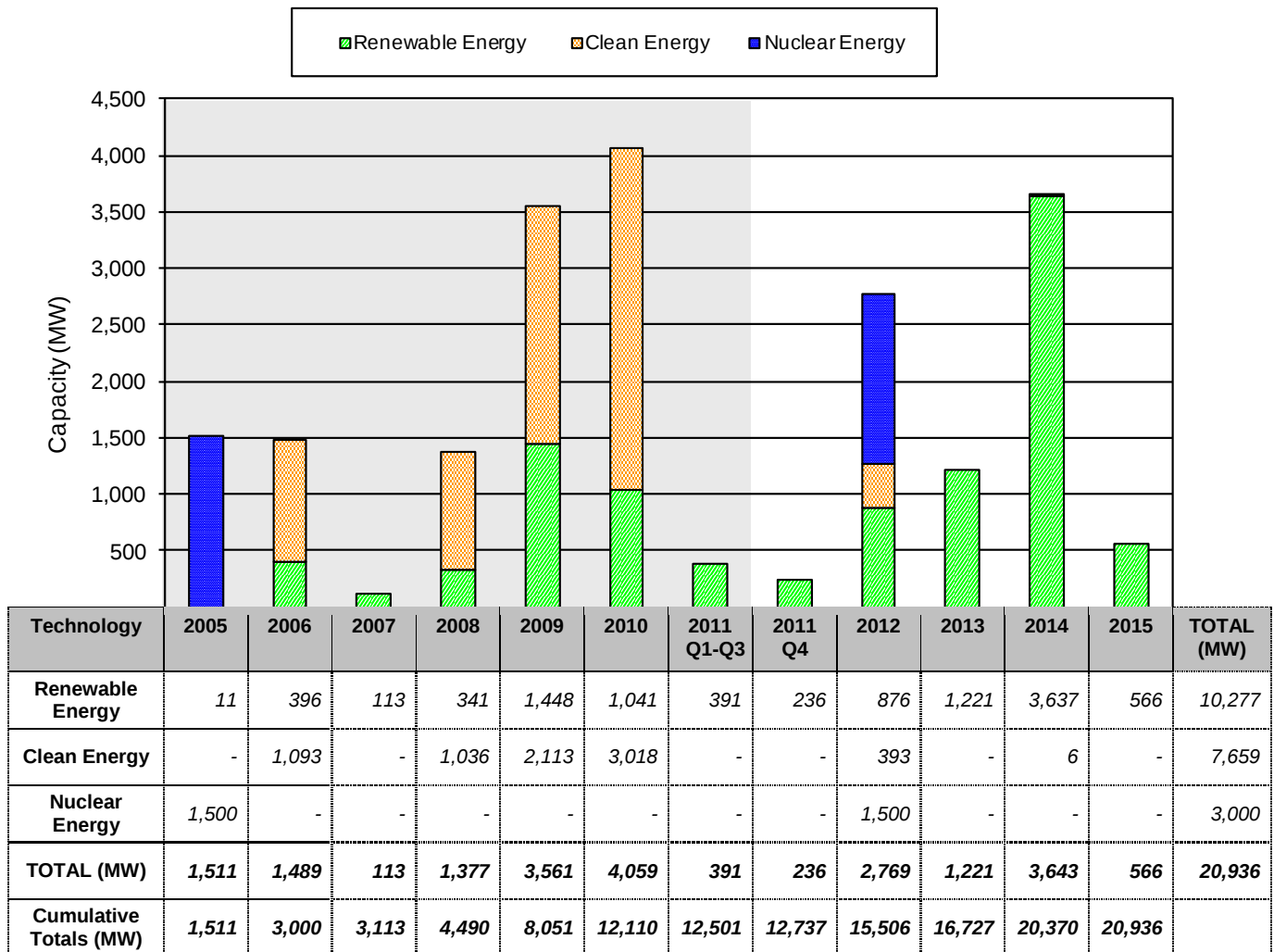
<http://fit.powerauthority.on.ca>.

Commercial Operation Chart

The following chart shows the progress of the OPA's contracted generation facilities.

The shaded area reflects capacity that was in commercial operation. The unshaded area reflects the current forecast.

Chart 6 and Table 1 – Commercial Operation Actual and Forecasted MW



Renewable Energy supply

As of the end of the third quarter of 2011, the OPA was managing 9,984 renewable energy contracts with a combined capacity of 10,277 MW, of which 7,928 MW are from wind, solar and bioenergy and the remaining 2,349 MW are from hydroelectric. This capacity has been procured by a number of different methods, including competitive procurements, standard offers and the FIT Program.

Chart 7 – Under Development
6,536 MW

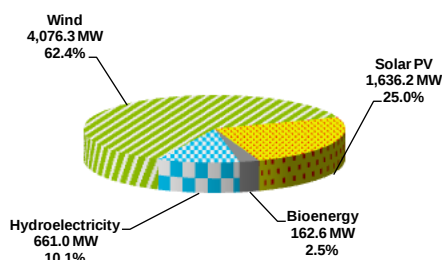


Chart 8 – In Commercial Operation
3,741 MW

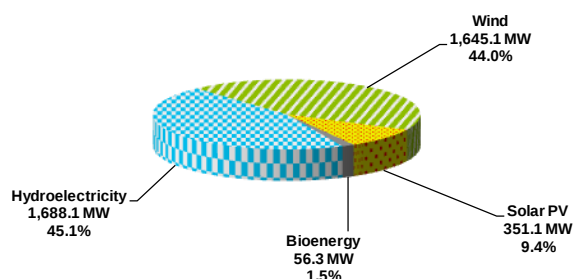


Table 2 – Renewable Energy Supply – Contract and Capacity Summary

Energy Source	Contract Type	No. of Contracts	New Capacity Post-2003 (MW)		Total Capacity Pre and Post-2003 (MW)		Total In-Service and Under Development (MW)
			In-Service	Under Development	In-Service	Under Development	
Hydroelectricity	FIT	49	0.0	188.1	0.0	188.1	188.1
	RESOP	16	28.2	0.0	28.2	0.0	28.2
	RES	3	31.0	20.0	31.0	20.0	51.0
	HCI	44	0.0	0.0	1,053.9	14.9	1,068.8
	HESA	4	62.9	438.0	575.0	438.0	1,013.0
	Subtotal	116	122.1	646.1	1,688.1	661.0	2,349.1
Wind	FIT	77	0.8	3,042.4	0.8	3,042.4	3,043.2
	RESOP	37	233.8	65.0	233.8	65.0	298.8
	RES	15	1,410.5	98.9	1,410.5	98.9	1,509.4
	KC	4	0.0	870.0	0.0	870.0	870.0
	Subtotal	133	1,645.1	4,076.3	1,645.1	4,076.3	5,721.4
Bioenergy	FIT	49	8.4	50.2	8.4	50.2	58.6
	RESOP	22	38.8	27.4	38.8	27.4	66.2
	CHP III	3	0.0	85.0	0.0	85.0	85.0
	RES	3	9.1	0.0	9.1	0.0	9.1
	Subtotal	77	56.3	162.6	56.3	162.6	218.9
Solar	FIT	1,777	15.2	1,223.3	15.2	1,223.3	1,238.5
	microFIT	7,822	67.6	0.0	67.6	0.0	67.6
	RESOP	57	268.3	212.9	268.3	212.9	481.2
	KC	2	0.0	200.0	0.0	200.0	200.0
	Subtotal	9,658	351.1	1,636.2	351.1	1,636.2	1,987.3
Subtotal			2,175	6,521	3,741	6,536	
Total		9,984	8,696		10,277		10,277

Renewable Energy Programs

FIT Program

At the end of the third quarter of 2011, the OPA had received 9,486 FIT Program applications with a combined capacity of 20,460 MW and had executed 1,952 FIT Program contracts with a combined capacity of 4,528 MW, of which more than 24 MW have achieved commercial operation.

Chart 9 – Feed-In Tariff Contracts Executed
4,528 MW

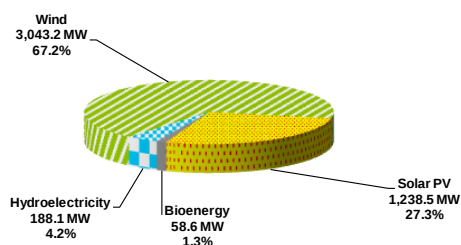


Table 3 – FIT Program – Contract and Capacity Summary

Feed-In Tariff Program Contracts		
Energy Source	No. of Contracts	Capacity (MW)
Hydroelectricity	49	188.1
Wind	77	3,043.2
Bioenergy	49	58.6
Solar PV	1,777	1,238.5
Total	1,952	4,528.4

The status of some of the FIT Program contracts was as follows.

Adelaide Wind Energy Centre (60.0 MW wind) – Kerwood Wind, Inc.

- Renewable Energy Approval (REA) process underway
- System Impact Assessment (SIA) and Customer Impact Assessment (CIA) processes underway

Bluewater Wind Energy Centre (60.0 MW wind) – Varna Wind, Inc.

- REA process underway
- SIA and CIA processes underway

Bornish Wind Energy Centre (73.5 MW wind) – Bornish Wind, LP

- REA process underway
- SIA and CIA processes underway

Bow Lake Phase 1 and 2 (60.0 MW wind) – Bow Lake Phase 1 Wind Farm Ltd and Bow Lake Phase 2 Wind Farm Ltd.

- REA process underway

Clean Breeze Wind Park (12.5 MW wind) – Clean Breeze Wind Park LP

- REA process underway
- Major equipment procurement process underway

Comber East and West Wind Projects (combined - 165.6 MW wind) – Comber Wind Limited Partnership



Figure 1 – Completed substation connected to the transmission system and energized.



Figure 2 – Transmission system completed.

Conestogo Wind Energy Centre (23.0 MW wind) – Conestogo Wind, LP

- REA process underway
- SIA and CIA processes underway
- Engineering and surveying work underway

Conestogo Wind Energy Centre 1 (69.0 MW wind) – Invenergy Wind Canada ULC

- Land lease negotiations underway
- SIA and CIA processes underway
- Major equipment procurement process underway

East Durham Wind Energy Centre (23.0 MW wind) – East Durham Wind, Inc.

- REA process underway
- SIA and CIA processes underway

Fairview Wind Farm (18.4 MW wind) – wpd Canada Corp.

- REA process underway
- Domestic content plan submitted

Goshen Wind Energy Centre (102.0 MW wind) – Goshen Wind, Inc.

- REA process underway
- SIA and CIA processes underway

Goulais Wind Farm (25.0 MW wind) – Confederation Power Inc.

- REA process underway
- Design and engineering work continues

Grand Valley Wind Farms (Phase 2) (10.8 MW wind) – Grand Valley 1 Limited Partnership

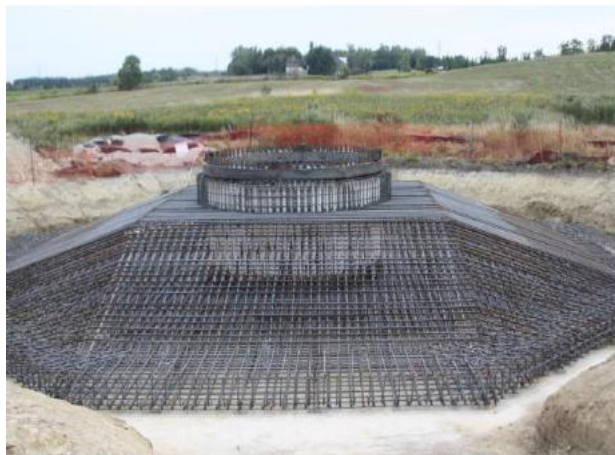


Figure 3 – Rebar installation for turbine foundation underway. Certificate of Approval for air (CoA) and Notice to Proceed (NTP) have been issued.



Figure 4 – Anchor bolt assembly ready for placement. Major equipment deliveries commenced. Construction has commenced at three of the five turbine sites.

Grand Valley Wind Farms (Phase 3) (40.0 MW wind) – Grand Valley 2 Limited Partnership

- REA process underway
- Major equipment procurement process underway
- Design and engineering work continues
- Domestic content plan activities underway

Grey Highlands Clean Energy (20.0 MW wind) – Grey Highlands Clean Energy LP

- REA process underway
- Major equipment procurement process underway

Gunn's Hill Wind Farm (25.0 MW wind) – Gunn's Hill Windfarm Inc.

- REA process underway
- Domestic content plan submitted

Index Energy Mills Road Corporation (17.8 MW biomass) – Index Energy Mills Road Corporation

- SIA and CIA processes completed
- Major equipment procurement process underway
- Design and engineering work continues

Jericho Wind Energy Centre (150.0 MW wind) – Jericho Wind, Inc.

- REA process underway
- SIA and CIA processes underway

McLean's Mountain Wind Farm (50.0 MW wind) – McLean's Mountain Wind LP

- REA process underway
- Engineering, Procurement and Construction (EPC) contract and major equipment procurement process underway
- Domestic content plan complete

Niagara Region Wind Farm (230.0 MW wind) – Niagara Region Wind Corporation

- REA process underway
- Major equipment procurement process underway
- Domestic content waiver agreement submitted

Ostrander Point Wind Energy Park (24.0 MW wind) – Gilead Power Corporation

- REA process underway
- SIA and CIA processes nearing completion
- EPC contract and major equipment procurement process underway

Plateau I & II Wind (18.0 MW wind) – International Power Canada, Inc.

- REA process underway
- Major equipment procurement process underway
- Switching station work and collector system routing completed
- 10 of 18 turbines erected

Pointe-Aux-Roches Wind (48.6 MW wind) – Pointe-Aux-Roches Wind Inc.



Figure 5 – Sub-station construction and transmission connections completed. All turbines pre-commissioned 100% complete. Construction for collector system 98% completed.

Pukwis Community Wind Park (20.0 MW wind) – Pukwis Wind Partner I Inc. and Pukwis Energy Co-operative

- REA process underway
- Project financing discussion underway

South Branch Wind Farm (30.0 MW wind) – South Branch Windfarm Inc.

- REA process underway
- Domestic content plan submitted

St. Columban 1 Wind Energy Project (18.0 MW wind) – St. Columban Energy LP

- SIA and CIA processes underway
- Major equipment procurement process underway

- Design and Engineering work underway
- Domestic content plan underway

St. Columban 2 Wind Energy Project (15.0 MW wind) – St. Columban Energy LP

- SIA and CIA processes underway
- Major equipment procurement process underway
- Design and Engineering work underway
- Domestic content plan underway

Sumac Ridge Wind Farm (11.5 MW wind) – wpd Canada Corporation

- REA process underway
- SIA and CIA processes underway
- Major equipment procurement process underway
- Design and engineering work underway

Summerhaven Wind Energy Centre (125.0 MW wind) – Summerhaven Wind, LP

- REA process underway
- Design and engineering work underway

White Pines Wind Farm (60.0 MW wind) – wpd Canada Corporation/White Pines Wind Farm Incorporated

- REA process underway
- SIA and CIA processes underway
- Project site plan complete

ZEP Wind Farm Ganaraska (20.0 MW wind) – ZEP Wind Farm Ganaraska LP

- REA process underway
- Major equipment procurement process continues

microFIT

The microFIT Program is designed for small renewable power projects that have a generating capacity of 10 kW or less.

At the end of the third quarter of 2011, the OPA had received more than 41,000 microFIT Program applications with a combined capacity of 379 MW. A total of 7,822 microFIT contracts had been executed with a combined capacity of approximately 68 MW. All of these 68 MW are in commercial operation.

Renewable Energy Standard Offer Program

As of the end of the third quarter of 2011, the OPA had 132 contracts for facilities greater than 10 kW in size, representing a combined capacity of 874 MW, of which 569 MW have achieved commercial operation.

The total RESOP capacity was reduced by 34 MW due to the termination of seven contracts as a result of contract counterparties' failure to meet contract requirements.

Chart 10 – Total RESOP Capacity
874 MW

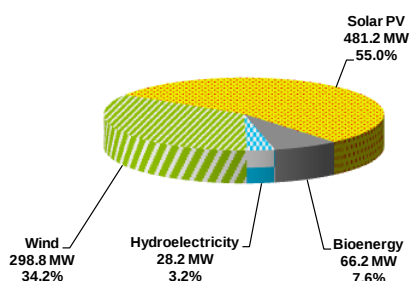


Chart 11 – Total RESOP Capacity in Commercial Operation
569 MW

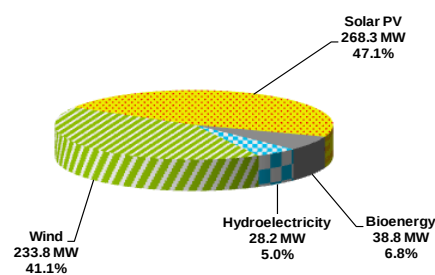


Table 4 – RESOP – Contract and Capacity Summary

Renewable Energy Standard Offer Program Contracts				
Energy Source	No. of Contracts in Commercial Operation	Capacity (MW)	No. of Contracts under Development	Capacity (MW)
Hydroelectricity	16	28.2	0	0.0
Wind	30	233.8	7	65.0
Bioenergy	17	38.8	5	27.4
Solar PV	35	268.3	22	212.9
Total	98	569.1	34	305.3

Other Procurement Processes for Renewable Energy

In addition to the FIT Program and RESOP, at the end of the third quarter of 2011, the OPA had 3,737 MW of renewable energy supply capacity under contract. Under these contracts, 3,080 MW were in commercial operation and 657 MW were under development.

Chart 12 – Under Development
657 MW

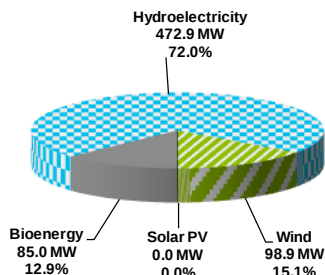
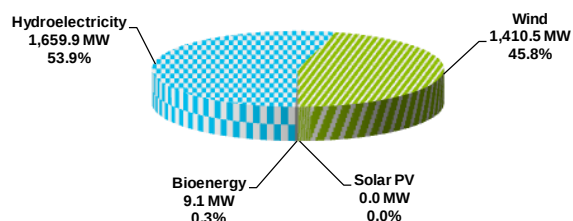


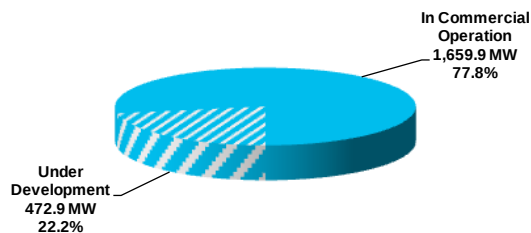
Chart 13 – In Commercial Operation
3,080 MW



Hydroelectricity Contracts

In addition to the FIT Program and RESOP, the OPA had 2,133 MW of hydroelectric capacity contracted through direct negotiations with owners or operators or other procurement processes. This capacity was procured under the Hydroelectric Contract Initiative (HCI) directive, the Hydroelectric Energy Supply Agreement (HESA) directive and two separate renewable energy supply directives. As of the end of the third quarter of 2011, 1,660 MW were in commercial operation and 473 MW were at various stages of development.

Chart 14 – Total Hydroelectric Capacity
2,133 MW



Lower Mattagami Hydroelectric Station Expansion (924 MW with 491 MW under development) – Ontario Power Generation and Moose Cree First Nation Partnership – Kapuskasing: Mattagami River

Harmon Generating Station (78.0 MW)



Figure 6 – The cofferdam was completed. Excavation of overburden, drilling and blasting operations have started in the de-watered area.

Kipling Generating Station (78.0 MW)



Figure 7 – One of the cofferdam cells is almost complete. Cleaning of the footprint for other cofferdam cells is in progress.

Little Long Generating Station (67.0 MW)



Figure 8 – The curved wood draft tube forms were in place and rebar was being installed in preparation for the draft tube pour. Other completed concrete pours include the penstock intake walls and invert, the central draft tube pier, and the east and west tailrace walls.

Smoky Falls Generating Station (268.0 MW)



Figure 9 – Concrete pours were completed in the service bay, intake and draft tube areas.

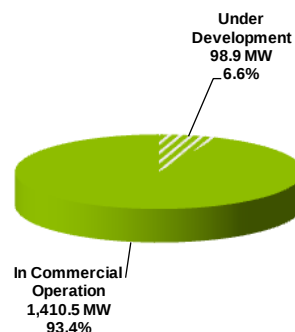
Island Falls Generating Station (20.0 MW) – Yellow Falls Power LP – Smooth Rock Falls: Mattagami River

- Project received environmental approval from the Ministry of the Environment

Wind Contracts

In addition to the FIT Program and RESOP, the OPA had 1,509 MW of wind capacity under contract that was procured through three renewable energy supply directives. A total of 1,411 MW have achieved commercial operation. The remaining contract, which has a capacity of 99 MW, was at the final stage of construction and commissioning.

Chart 15 – Total Wind Capacity
1,509 MW



Greenwich Wind Farm (98.9 MW) – Enbridge Inc. – District of Thunder Bay

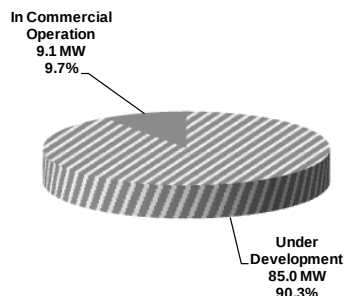


Figure 10 – Aerial view of the Greenwich wind turbine site. 43 Siemens turbines with a capacity of 2.3 MW each were fully assembled; 36 of these have been commissioned.

Bioenergy Contracts

By third quarter end, the OPA had 94 MW of non-program contracted capacity generated by biomass and landfill waste, procured under ministerial directives. This capacity adopts combined heat and power technology that uses renewable biomass as a fuel. A total of 9.1 MW of this capacity was in commercial operation and the remaining 85 MW were under development.

Chart 16 – Total Bioenergy Capacity
94 MW



Becker Cogeneration Plant (15.0 MW) – Becker Cogeneration Plant – Hornepayne

- Becker and Hydro One continue to work on a solution to connect the facility to the grid

St. Marys Renewable Energy Centre (30.0 MW) – St. Marys Renewable Energy LP – Sault Ste. Marie

- REA process underway
- Major equipment procurement process underway
- Project financing underway

Thunder Bay Condensing Turbine Project (40.0 MW) – AbiBow Canada Inc. – Thunder Bay

- Major turbine control equipment refurbishment and replacement in progress
- Demolition and refurbishment of existing building to house new turbine in progress
- Project financing complete

Clean Energy Supply

As of the end of the third quarter of 2011, the OPA was managing 7,659 MW of clean energy supply capacity, generated mainly by natural gas-fired facilities. This capacity included 6,687 MW from simple/combined-cycle facilities and 972 MW from non-renewable combined heat and power (CHP) facilities.

Chart 17 – Under Development
399 MW

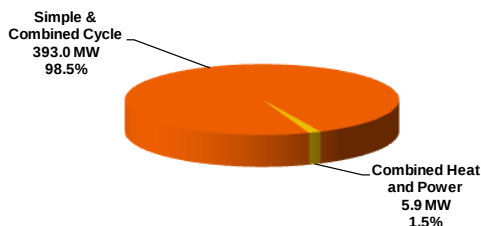
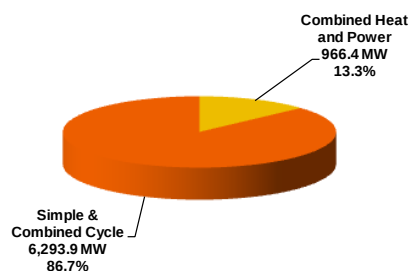


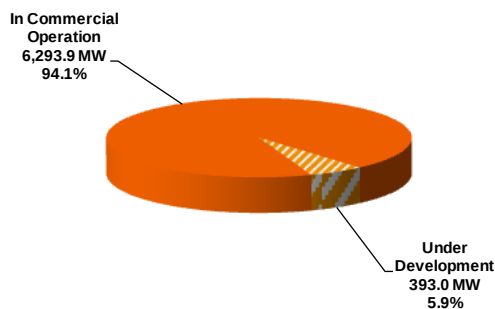
Chart 18 – In Commercial Operation
7,260 MW



Simple/Combined Cycle Contracts

The OPA had 6,687 MW of clean energy supply capacity generated by simple/combined-cycle facilities under contract, with 6,294 MW already in commercial operation.

Chart 19 – Total Simple/Combined-Cycle Capacity
6,687 MW



York Energy Centre (393.0 MW) – York Energy Centre LP – Township of King



Figure 11 – Aerial view of the York Energy Centre. Major equipment installation near completion. Control/warehouse building structure erected and interior finishing was nearing completion.

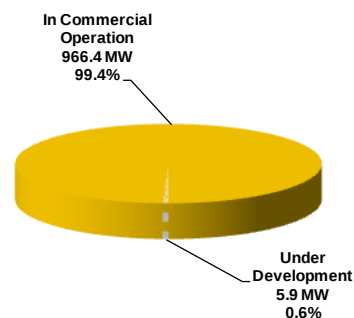


Figure 12 – Installation of conductors in the switch yard now completed and undergoing equipment testing.

Combined Heat and Power (CHP) Contracts

The OPA had 972 MW of non-renewable CHP capacity under contract. Of the total 972 MW, 966 MW have achieved commercial operation and 6 MW were under various stages of development. In this quarter, Trent Valley Cogeneration Plant entered into another five-year contract term with the OPA. The average contract capacity of this facility was reduced by 1.65 MW from 8.3 MW to 6.65 MW.

*Chart 20 – Total CHP Capacity
972 MW*



Birchmount Energy Centre (2.6 MW) – Markham
District Energy Centre Inc. – Markham



Figure 13 – Powerhouse building completed. Equipment installation inside the powerhouse in progress.

Bur Oak Energy Centre (3.3 MW) – Markham
District Energy Centre Inc. – Markham



Figure 14 – Powerhouse construction is underway.

Nuclear Energy Supply

Bruce A Restart and Refurbishment

The OPA had 3,000 MW of nuclear energy supply capacity under contract; 1,500 MW came from the restart of units 1 and 2, which were under refurbishment. Expected commercial operation for the two units is 2012.

The other 1,500 MW came from units 3 and 4, which were presently in operation. These two units will be refurbished when they reach their end of service life.

Bruce A Units 1 and 2 Restart (1,500 MW) – Bruce Power – Tiverton

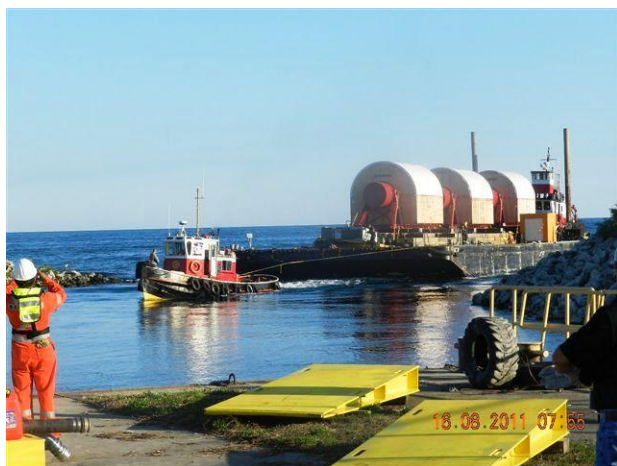


Figure 15 – New turbine rotors arrived at the site in August.



Figure 16 – The last of 5,760 new fuel bundles was loaded into the Unit 2 reactor in July. Fuel loading is a major milestone in the restart project.

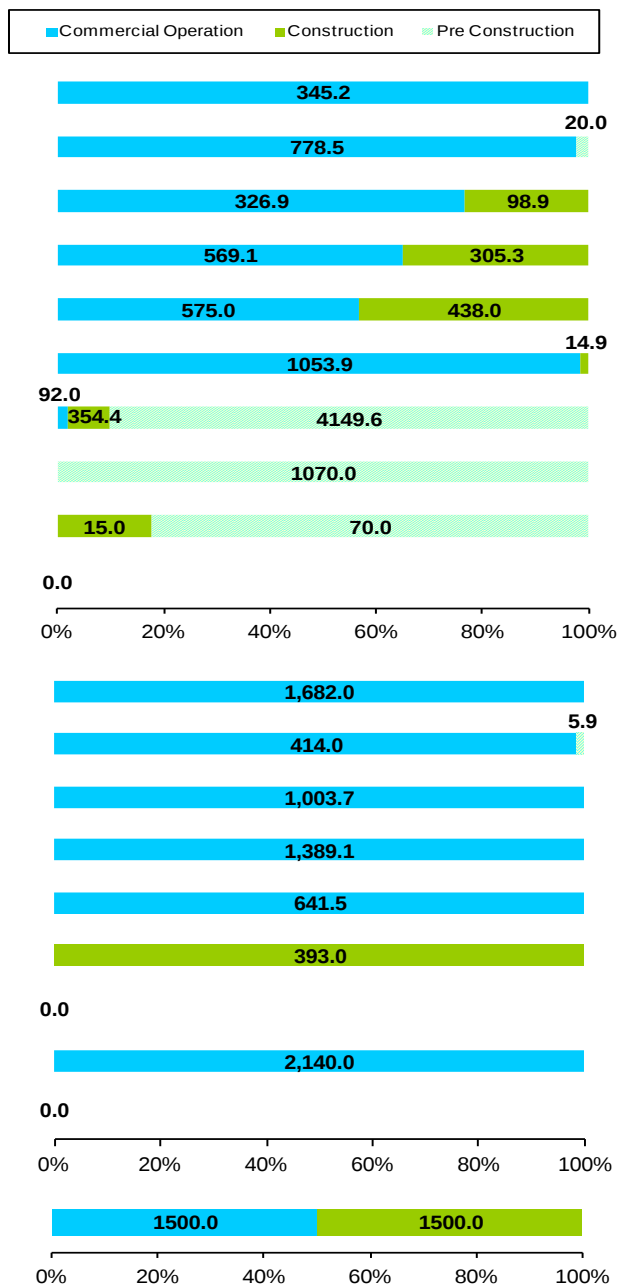
Electricity Supply Procurement Status

The OPA was established by *The Electricity Restructuring Act, 2004*. One of its mandates is to engage in activities to support the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario. The following provides the status of the OPA's electricity supply procurements. Further information is available on these procurements at www.powerauthority.on.ca.

Table 5 – Capacity Sought and Procured

Procurement Category	Procurement Method	Capacity Sought (MW)	Capacity Procured (MW)
RENEWABLE ENERGY			
300 MW Renewable Energy Supply (RES) I	RFP	300	345
1,000 MW RES II	RFP	1,000	799
2,000 MW RES III	RFP	2,000	426
Renewable Energy Standard Offer Program (RESOP)	Standard Offer	874‡	874
OPG Waterpower Energy Supply (HESA)	Negotiation	530	1,013*
Existing Waterpower Facilities (HCI)	Negotiation/Standard Offer	1,069‡	1,069
FIT Program (with 67.6 MW microFIT)	Standard Offer	4,596‡	4,596
Korean Consortium	Negotiation	2,500	1,070
Combined Heat and Power (Renewable) **	RFP	100	85
Atikokan Biomass Energy Supply Agreement (ABESA)	Negotiation	TBC†	TBC†
Total		12,969	10,277
CLEAN ENERGY			
2,500 MW Clean Energy Supply	RFP	2,500	1,682***
Combined Heat and Power (CHP)	RFP	1,000	420
Early Movers Clean Energy Supply	Negotiation	1,315	1,004
Downtown Toronto and Goreway	Negotiation	1,350	1,389
Western GTA Supply	RFP	600	642
Northern York Region Supply	RFP	350	393****
Durham & York Region Energy from Waste	Negotiation	TBC†	TBC†
Lennox GS	Negotiation	2,140	2,140
Thunder Bay GS Conversion to Natural Gas	Negotiation	TBC†	TBC†
Total		9,255	7,669
NUCLEAR ENERGY			
Bruce A Restart & Refurbishment	Negotiation	3,000	3,000
Total		3,000	3,000
Procurement Total MW		25,224	20,946

Chart 21 – Capacity Developmental Stages



* Including 486 MW of existing capacity.

** A new directive dated November 23, 2010 for 1,000 MW of CHP (both natural gas and renewable) replaced all of the previous directives for CHP projects.

*** Including 10 MW Demand Response contract.

**** The directive specified "to procure a simple (single)-cycle gas-fired electricity generation facility with a rated generation capacity of approximately 350 MW and not more than 400 MW."

† To be confirmed

‡ Target capacity was not specified for RESOP, HCI and FIT Program in their corresponding directives. Therefore, capacity sought reflects capacity procured to date.

Appendices

I: Contracted Facilities in Commercial Operation

Energy Source		Contract Facility	Average Contract Capacity (MW)	Commercial Operation/ Term Commence-ment Date	Contract Expiry Date	COD Year	Sub-total	Total
Renewable Energy	Hydroelectricity	FIT (combined contract capacity)	0.0	/			1,688	3,741
		RESOP (combined contract capacity)	28.2	2007+	2027+			
		Andrews Generating Station	47.0	01-Dec-09	Q4 2029	2009		
		Appleton Eco Power Centre	1.4	01-Jan-11	Q4 2030	2011		
		Aubrey Falls Generating Station	162.0	01-Dec-09	Q4 2029	2009		
		Barrie Small Hydro Limited	0.1	17-Jul-10	Q3 2030	2010		
		Brewers Mills	0.9	1-May-10	Q2 2030	2010		
		Burk's Falls	1.1	1-May-10	Q2 2030	2010		
		Calm Lake Generating Station	9.0	01-Dec-09	Q4 2029	2009		
		Campellford-Seymour Electric Generation Inc. – Plant No. 1	2.0	01-Jan-10	Q4 2029	2010		
		Chaudiere No. 2. Generating Station	8.4	01-Apr-10	Q1 2030	2010		
		Chaudiere No. 4 Generating Station	9.3	01-Apr-10	Q1 2030	2010		
		Clergue Generating Station	52.0	01-Dec-09	Q4 2029	2009		
		Current River Hydro	0.5	01-Mar-10	Q1 2030	2010		
		Devil's Gap Generating Station	0.5	01-Jun-10	Q2 2030	2010		
		Dunford Generating Station	45.0	01-Dec-09	Q4 2029	2009		
		Enerdu Power Systems Ltd.	0.3	01-Mar-11	Q1 2031	2011		
		Fort Frances Generating Station	10.0	01-Dec-09	Q4 2029	2009		
		Gananoque	0.7	01-May-10	Q2 2030	2010		
		Galetta Eco Power Centre	1.6	01-Jan-11	Q4 2030	2011		
		Gartshore Generating Station	23.0	01-Dec-09	Q4 2029	2009		
		Glen Miller Generating Station	8.0	19-Dec-05	Q4 2025	2005		
		Harmon Generating Station	141.0	22-Jun-10	Q4 2065	1965		
		Harris Generating Station	12.0	01-Dec-09	Q4 2029	2009		
		Healey Falls Generating Station	15.7	07-Apr-10	Q2 2060	2010		
		Heywood Generating Station	7.2	01-Jan-10	Q4 2029	2010		
		High Falls Generating Station #1	0.8	01-Oct-10	Q3 2030	2010		
		Hogg Generating Station	18.0	01-Dec-09	Q4 2029	2009		
		Hollingsworth Generating Station	23.0	01-Dec-09	Q4 2029	2009		
		Hound Chute Generating Station	9.5	07-Dec-10	Q4 2060	2010		
		Hurdman Dam	0.6	01-Jun-11	Q2 2031	2011		
		Iroquois Falls Generating Station	29.0	01-Dec-09	Q4 2029	2009		
		Island Falls Generating Station	38.0	01-Dec-09	Q4 2029	2009		
		Jones Falls	2.4	01-May-10	Q2 2030	2010		

Energy Source		Contract Facility	Average Contract Capacity (MW)	Commercial Operation/ Term Commence-ment Date	Contract Expiry Date	COD Year	Sub-total	Total
		Kagawong Generating Station	0.8	01-Jan-10	Q4 2029	2010		
		Kenora Generating Station	6.0	01-Dec-09	Q4 2029	2009		
		Kingston Mills	1.9	01-May-10	Q2 2030	2010		
		Kipling Generating Station	155.0	22-Jun-10	Q4 2065	1966		
		Lac Seul/Ear Falls Generating Station	29.3	18-Feb-09	Q1 2059	2009		
		Little Long Generating Station	137.0	22-Jun-10	Q4 2065	1963		
		London Street Generating Station	4.1	01-Jan-10	Q4 2029	2010		
		Lower Sturgeon Generating Station	14.0	21-Nov-10	Q4 2060	2010		
		MacKay Generating Station	62.0	01-Dec-09	Q4 2029	2009		
		Maple Hill	0.6	01-Dec-10	Q4 2030	2010		
		Matthias Generating Station	3.0	01-Jan-10	Q4 2029	2010		
		McPhail Generating Station	13.0	01-Dec-09	Q4 2029	2009		
		Minden Generating Station	4.0	01-Jan-10	Q4 2029	2010		
		Mission Generating Station	16.0	01-Dec-09	Q4 2029	2009		
		Moose Rapids Generating Station	1.4	01-Jan-11	Q4 2030	2011		
		Norman Generating Station	10.0	01-Dec-09	Q4 2029	2009		
		Parry Sound PowerGen Corporation – Cascade Street Generating Station	1.2	01-Mar-10	Q1 2030	2010		
		Rayner Generating Station	46.0	01-Dec-09	Q4 2029	2009		
		Red Rock Falls Generating Station	41.0	01-Dec-09	Q4 2029	2009		
		Renfrew Power Generation Inc. – Lower Plant	1.0	01-Jan-10	Q4 2029	2010		
		Renfrew Power Generation Inc. – Upper Plant	1.0	01-Jan-10	Q4 2029	2010		
		Rideau Falls	2.0	01-May-10	Q2 2030	2010		
		Sandy Falls Generating Station	5.5	27-Oct-10	Q4 2060	2010		
		Scone Generator	0.1	01-Jan-10	Q4 2029	2010		
		Scott Falls Generating Station	22.0	01-Dec-09	Q4 2029	2009		
		Shand Dam Generating Station	0.7	01-Sep-10	Q3 2030	2010		
		Smoky Falls Generating Station	53.0	22-Jun-10	Q4 2065	1905		
		Steephill Generating Station	16.0	01-Dec-09	Q4 2029	2009		
		Stewart Generating Station	0.2	05-Jun-10	Q2 2030	2010		
		Sturgeon Falls Generating Station	7.0	01-Dec-09	Q4 2029	2009		
		Swift Rapids Generating Station	7.9	01-Jan-10	Q4 2029	2010		
		Tembec, Smooth Rock Falls Facilities	8.0	14-Mar-10	Q1 2030	2010		
		Truisler Chute Generating Station	0.6	01-Jun-11	Q2 2031	2011		
		Tweed Generating Station	0.2	01-Nov-10	Q4 2030	2010		
		Twin Falls Generating Station	22.0	01-Dec-09	Q4 2029	2009		
		Umbata Falls Generating Station	23.0	12-Nov-08	Q4 2028	2008		

Energy Source		Contract Facility	Average Contract Capacity (MW)	Commercial Operation/ Term Commence-ment Date	Contract Expiry Date	COD Year	Sub-total	Total
		Washburn	0.2	01-May-10	Q2 2030	2010		
		Wawaitin Generating Station	15.0	22-Nov-10	Q4 2060	2010		
		Wells Generating Station	239.0	01-Dec-09	Q4 2029	2009		
		West Nipissing Power Generation	6.5	01-Mar-10	Q1 2030	2010		
		635294 Ontario Inc.	0.5	01-Feb-10	Q1 2030	2010		
		1149377 Ontario Limited	2.3	01-Jan-10	Q4 2029	2010		
	Wind	FIT (combined contract capacity)	0.8	2010+	2030+		1,645	
		RESOP (combined contract capacity)	233.8	2007+	2027+			
		Enbridge Ontario Wind Farm	181.5	19-Feb-09	Q1 2029	2009		
		Erie Shores Wind Farm	99.0	24-May-06	Q2 2026	2006		
		Gosfield Wind Project	50.6	16-Sep-10	Q3 2030	2010		
		Kingsbridge I Wind Power Project	39.6	16-Mar-06	Q1 2026	2006		
		Kruger Energy Chatham Wind Project	99.4	01-Jan-11	Q4 2030	2011		
		Kruger Energy Port Alma Wind Power Project	101.2	31-Oct-08	Q4 2028	2008		
		Melancthon I Wind Plant	67.5	04-Mar-06	Q1 2026	2006		
		Melancthon II Wind Plant	132.0	24-Nov-08	Q4 2028	2008		
		Prince I Wind Power Project	99.0	21-Sep-06	Q3 2026	2006		
		Prince II Wind Power Project	90.0	19-Nov-06	Q4 2026	2006		
		Raleigh Wind Energy Centre	78.0	29-Jan-11	Q1 2031	2011		
		Ripley Wind Power Project	76.0	22-Dec-07	Q4 2027	2007		
		Talbot Wind Farm	98.9	16-Dec-10	Q4 2030	2010		
		Wolfe Island Wind Project	197.8	26-Jun-09	Q2 2029	2009		
	Bioenergy	FIT (combined contract capacity)	8.4	2010+	2030+		56	
		RESOP (combined contract capacity)	38.8	2007+	2027+			
		Eastview Landfill Gas Energy Plant	2.5	18-Aug-05	Q3 2025	2005		
		Hamilton (Digester Gas) Cogeneration Project	1.6	10-Jul-06	Q3 2026	2006		
		Trail Road Landfill Generating Facility	5.0	31-Jan-07	Q1 2027	2007		
	Solar PV	FIT (microFIT) (combined contract capacity)	82.8	2010+	2030+		351	
		RESOP (combined contract capacity)	268.3	2007+	2027+			
Clean Energy	Simple/ Combined Cycle	Brighton Beach Power Station	541.3	01-Jan-06	Q4 2024	2006	6,294	7,260
		Goreway Station	839.1	04-Jun-09	Q2 2029	2009		
		Greenfield Energy Centre	1,005.0	16-Oct-08	Q4 2028	2008		
		Halton Hills Generating Station	641.5	01-Sep-10	Q3 2030	2010		
		Lennox Generating Station	2,140.0	01-Oct-09	Q4 2011	1976		
		Portlands Energy Centre	550.0	22-Apr-09	Q2 2029	2009		
		St. Clair Energy Centre	577.0	30-Mar-09	Q1 2029	2009		

Energy Source		Contract Facility	Average Contract Capacity (MW)	Commercial Operation/ Term Commence-ment Date	Contract Expiry Date	COD Year	Sub-total	Total
	Combined Heat and Power	Essar Cogeneration Facility	63.0	13-Jun-09	Q2 2029	2009	966	
		Durham College District Energy Project	2.3	11-Mar-08	Q1 2028	2008		
		East Windsor Cogeneration	84.0	06-Nov-09	Q4 2029	2009		
		Great Northern Tri-Gen Facility	11.3	31-Oct-08	Q4 2028	2008		
		GTAA Cogeneration Plant	90.0	01-Feb-06	Q1 2026	2006		
		London Cogeneration Facility	12.0	31-Dec-08	Q4 2028	2008		
		Sarnia Regional Cogeneration Plant	444.0	01-Jan-06	Q2 2024	2006		
		Sudbury District Energy Cogeneration Plant	5.0	01-Jan-06	Q4 2024	2006		
		Sudbury District Energy, Hospital Cogeneration	6.7	01-Jan-06	Q4 2024	2006		
		Thorold Cogen	236.4	28-Mar-10	Q1 2030	2010		
		Trent Valley Cogeneration Plant	6.7	01-Jan-06	Q4 2015	2006		
		Warden Energy Centre	5.0	04-Jun-08	Q2 2028	2008		
Nuclear Energy	Nuclear	Bruce A Unit 3	750.0	31-Oct-05	TBD	2005	1,500	1,500
		Bruce A Unit 4	750.0	31-Oct-05	TBD	2005		
TOTAL								12,501

II: Contracted Facilities under Development

Energy Source		Contract Facility	Average Contract Capacity (MW)	Target Commercial Operation Date	Contract Expiry Date	Sub-Total	Total
Renewable Energy	Hydroelectricity	FIT (combined contract capacity)	188.1	2011+	2031+	661	6,536
		RESOP (combined contract capacity)	0.0	2011+	2031+		
		Bracebridge Falls Generating Station	2.6	Q1 2012	Q2 2030		
		Casselman Generating Station	0.5	Q4 2011	Q4 2031		
		Harmon Generating Station	78.0	Q4 2015	Q4 2065		
		Island Falls Generating Station	20.0	TBD	TBD		
		Kipling Generating Station	78.0	Q4 2015	Q4 2065		
		Little Long Generating Station	67.0	Q4 2015	Q4 2065		
		Smoky Falls Generating Station	215.0	Q4 2015	Q4 2065		
		Stanley Adamson Powerhouse	3.9	Q2 2013	Q2 2033		
		Twin Falls Generating Station	5.0	Q1 2012 – Q1 2014	Q4 2029		
		Wilson's Falls	2.9	Q1 2012	Q2 2030		
	Wind	FIT (combined contract capacity)	3,042.4	2011+	2031+	4,076	
		RESOP (combined contract capacity)	65.0	2011+	2031+		
		Armow Wind Project	180.0	Q4 2014	2034?		
		Grand Renewable Energy Park	150.0	Q1 2014	2034?		
		Greenwich Wind Farm	98.9	Q4 2011	Q4 2031		
		K2	270.0	Q4 2014	2034?		
		South Kent Wind Project	270.0	Q1 2014	2034?		
	Bioenergy	FIT (combined contract capacity)	50.2	2011+	2031+	163	
		RESOP (combined contract capacity)	27.4	2011+	2031+		
		Becker Cogeneration Plant	15.0	TBD	TBD		
		St. Marys Renewable Energy Centre	30.0	Q2 2014	Q2 2024		
		Thunder Bay Condensing Turbine Project	40.0	Q1 2013	Q1 2023		
	Solar PV	FIT (combined contract capacity)	1,223.3	2011+	2031+	1,636	
		RESOP (combined contract capacity)	212.9	2011+	2031+		
		Grand Renewable Energy Park	100.0	Q1 2014	2034?		
		Kingston Solar Project	100.0	Q4 2014	2034?		
Clean Energy	Simple/ Combined Cycle	York Energy Centre	393.0	Q3 2012	Q3 2032	393	399
	Combined Heat and Power	Birchmount Energy Centre	2.6	Q3 2014	Q3 2034	6	
		Bur Oak Energy Centre	3.3	Q3 2014	Q3 2034		
Nuclear Energy	Nuclear	Bruce A Unit 1	750.0	Q3 2012	TBD	1,500	1,500
		Bruce A Unit 2	750.0	Q1 2012	TBD		
TOTAL							8,435



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