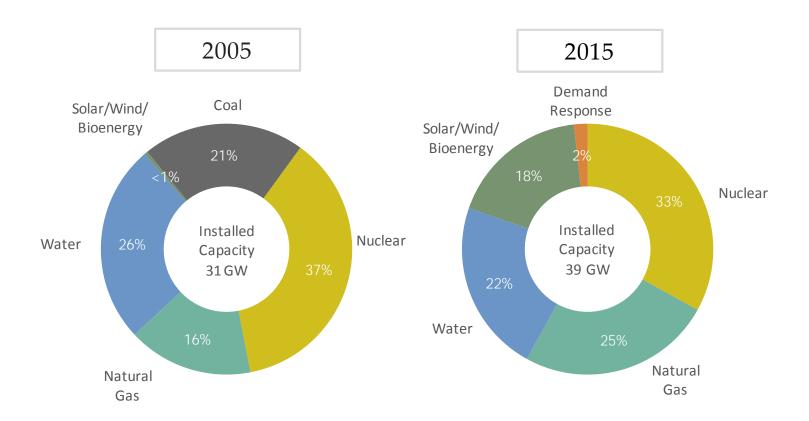
Data Tables for the OPO Technical Report

August 2016



Figure 1: Ontario Installed Supply Mix in 2005 and 2015



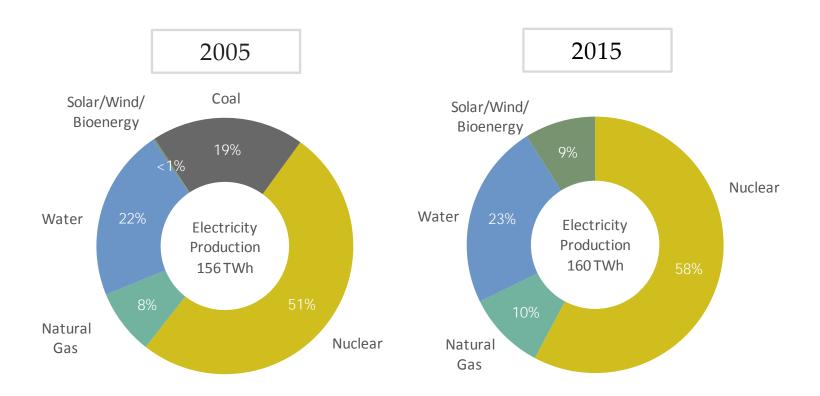


Data for Figure 1: Ontario Installed Supply Mix in 2005 and 2015

MW	2005	2015
Nuclear	11,397	13,014
Natural Gas & Oil	4,976	9,852
Water	7,910	8,768
Solar/Wind/Bioenergy	134	7,068
Coal	6,434	0
Demand Response	0	690



Figure 2: Ontario Electricity Production in 2005 and 2015



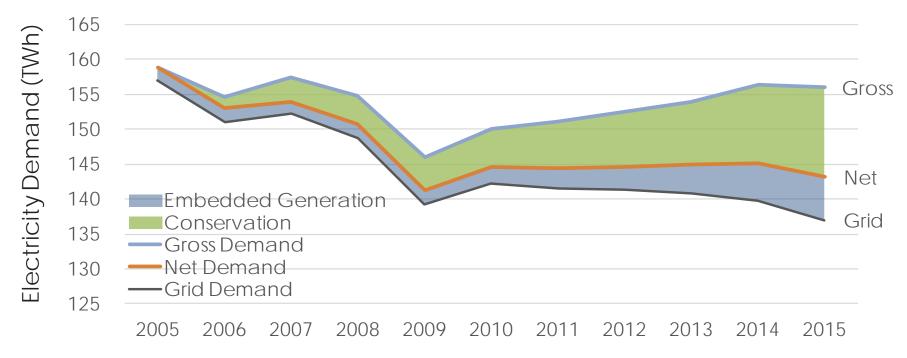


Data for Figure 2: Ontario Electricity Production in 2005 and 2015

TWh	2005	2015
Nuclear	79.0	92.3
Natural Gas & Oil	12.9	15.9
Water	34.0	37.3
Solar/Wind/Bioenergy	0.3	14.2
Coal	30.0	0.0



Figure 3: Historical Ontario Energy Demand



Gross Demand is the total demand for electricity services in Ontario prior to the impact of conservation programs

Net Demand is Ontario Gross Demand minus the impact of conservation programs Grid Demand is Ontario Net Demand minus the demand met by embedded generation. It is equal to the energy supplied by the bulk system to wholesale customers and local distribution companies



Data for Figure 3: Historical Ontario Energy Demand

TWh	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Gross Demand	158.8	154.4	157.3	154.7	146.0	149.9	151.0	152.3	153.8	156.2	155.8
Conservation	0.0	1.6	3.5	4.0	4.9	5.4	6.7	7.9	8.9	11.3	12.8
Net Demand	158.8	152.8	153.8	150.6	141.1	144.5	144.3	144.5	144.8	144.9	143.0
Embedded Generation	1.8	1.7	1.6	2.0	2.0	2.3	2.8	3.2	4.1	5.1	6.0
Grid Demand	157.0	151.1	152.2	148.7	139.2	142.2	141.5	141.3	140.7	139.8	137.0



Figure 4: Conservation Savings in 2015

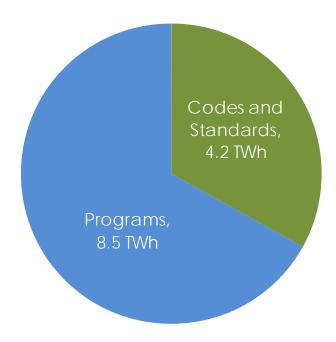
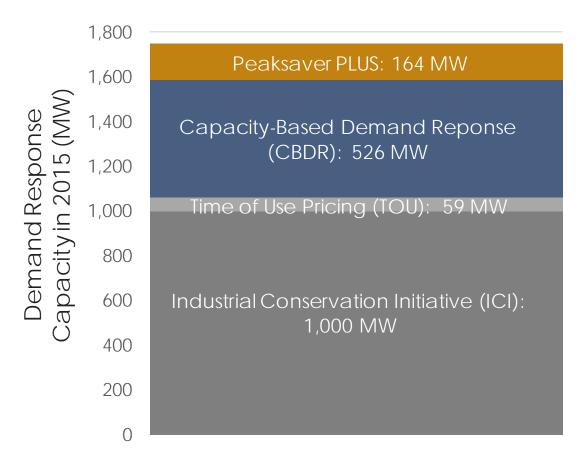




Figure 5: Demand Response Capacity in 2015



Peaksaver PLUS and CBDR can controlled by system operators. These programs are treated elsewhere as supply resources totalling 690 MW

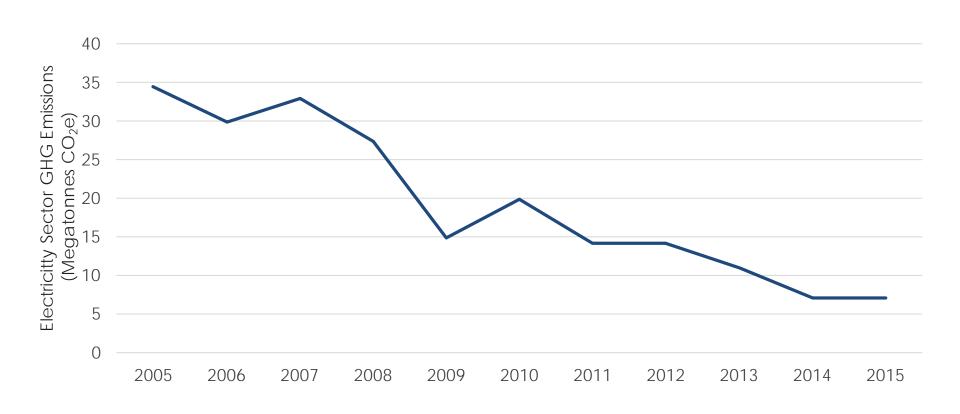
TOU pricing and ICI reflect customer response to prices. These programs are considered as part of the net demand forecast

Data for Figure 5: Demand Response Capacity in 2015

Category	MW
του	59
ICI	1,000
Peaksaver PLUS	164
CBDR	526



Figure 6: Electricity Sector GHG Emissions



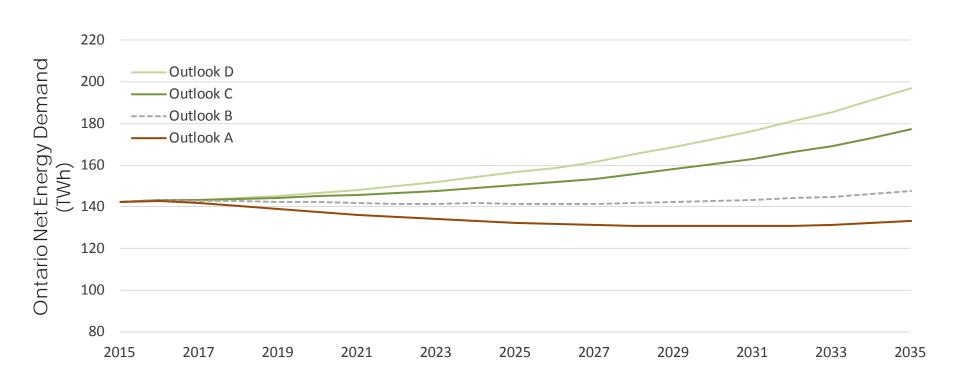
Note: GHG emissions for 2015 is an estimate

Data for Figure 6: Electricity Sector GHG Emissions

MT CO ₂ e	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Electricity Sector GHG	34.5	29.9	32.9	27.4	14.9	19.8	14.2	14.2	10.9	7 1	7 1
Emissions	54.5	29.9	32.9	27.4	14.9	19.0	14.2	14.2	10.9	7.1	7.1



Figure 8: Ontario Net Energy Demand across Demand Outlooks





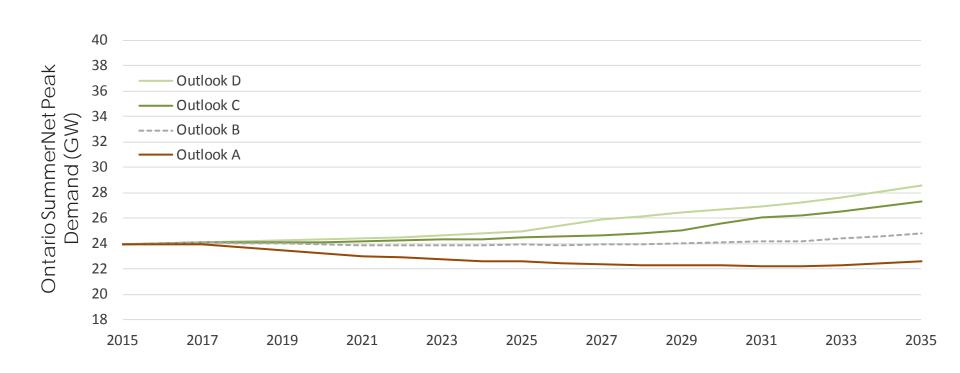
Data for Figure 8: Ontario Net Energy Demand across Demand Outlooks

Energy (TWh)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook A	142.5	143.0	141.9	140.6	138.9	137.7	136.1	135.0	134.1	133.5	132.5
Outlook B	142.5	143.4	142.9	142.7	142.2	142.2	141.7	141.6	141.5	141.7	141.5
Outlook C	142.5	143.5	143.2	143.7	144.2	145.1	145.6	146.6	147.7	149.3	150.4
Outlook D	142.5	143.5	143.2	144.3	145.3	146.9	148.1	149.9	151.9	154.4	156.5

Energy (TWh)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook A	131.7	131.2	131.0	130.8	130.7	130.7	131.0	131.5	132.3	133.4
Outlook B	141.2	141.5	142.1	142.4	142.8	143.3	144.0	145.0	146.3	147.8
Outlook C	151.7	153.5	155.9	158.0	160.5	163.1	166.2	169.4	173.1	177.1
Outlook D	158.8	161.7	165.3	168.6	172.4	176.3	181.0	185.6	191.0	196.7



Figure 9: Ontario Net Summer Peak Demand across Demand Outlooks





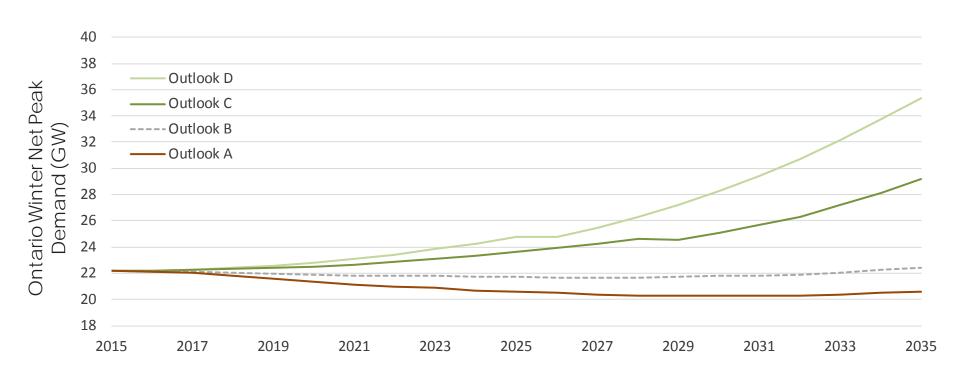
Data for Figure 9: Ontario Net Summer Peak Demand across Demand Outlooks

Summer Peak Demand (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook A	23,965	23,971	23,900	23,705	23,465	23,216	23,029	22,879	22,777	22,628	22,568
Outlook B	23,965	24,046	24,083	24,041	23,993	23,916	23,889	23,881	23,890	23,868	23,918
Outlook C	23,965	24,048	24,088	24,108	24,124	24,112	24,152	24,216	24,298	24,353	24,486
Outlook D	23,965	24,048	24,088	24,166	24,242	24,291	24,393	24,520	24,667	24,788	24,987

Summer Peak Demand (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook A	22,453	22,372	22,295	22,292	22,258	22,231	22,198	22,317	22,436	22,586
Outlook B	23,882	23,918	23,940	24,030	24,082	24,133	24,171	24,369	24,568	24,792
Outlook C	24,549	24,680	24,804	25,049	25,550	26,022	26,199	26,551	26,902	27,276
Outlook D	25,446	25,921	26,124	26,410	26,667	26,937	27,197	27,633	28,071	28,532



Figure 10: Ontario Net Winter Peak Demand across Demand Outlooks





Data for Figure 10: Ontario Net Winter Peak Demand across Demand Outlooks

Winter Peak Demand (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook A	22,159	22,093	22,020	21,825	21,574	21,338	21,143	20,976	20,864	20,694	20,602
Outlook B	22,159	22,140	22,143	22,072	21,985	21,898	21,841	21,799	21,778	21,718	21,718
Outlook C	22,159	22,190	22,251	22,315	22,395	22,501	22,661	22,863	23,105	23,326	23,626
Outlook D	22,159	22,190	22,251	22,385	22,560	22,783	23,083	23,442	23,862	24,273	24,779

Winter Peak Demand (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook A	20,483	20,394	20,315	20,316	20,295	20,282	20,260	20,375	20,488	20,622
Outlook B	21,659	21,668	21,672	21,746	21,794	21,844	21,875	22,052	22,229	22,422
Outlook C	23,911	24,265	24,633	24,513	25,085	25,695	26,330	27,185	28,144	29,167
Outlook D	24,742	25,492	26,277	27,226	28,296	29,451	30,683	32,158	33,716	35,379



Table 1: Assumptions across Demand Outlooks

Sector	Outlook A	Outlook B	Outlook C	Outlook D
Residential (52 TWh in 2015)	48 TWh in 2035	51 TWh in 2035	Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (58 TWh in 2035)*	Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (64TWh in 2035)
Commercial (51 TWh in 2015)	49 TWh in 2035	54 TWh in 2035	Oil heating switches to heat pumps, electric space and water heating gain 25% of gas market share (63 TWh in 2035)	Oil heating switches to heat pumps, electric space and water heating gain 50% of gas market share (69 TWh in 2035)
Industrial (35 TWh in 2015)	29 TWh in 2035	35 TWh in 2035	5% of 2012 fossil energy switches to electric equivalent (43 TWh in 2035)	10% of 2012 fossil energy switches to electric equivalent (51 TWh in 2035)
Electric Vehicles (<1 TWh in 2015)	2 TWh in 2035	3 TWh in 2035	2.4 million electric vehicles (EVs) by 2035 (8 TWh in 2035)	2.4 million EVs by 2035 (8 TWh in 2035)
Transit (<1 TWh in 2015)	1 TWh in 2035	1 TWh in 2035	Planned projects, 2017-2035 (1 TWh in 2035)	Planned projects, 2017-2035 (1 TWh in 2035)
Other**	5 TWh	5 TWh	5 TWh	5 TWh
Total*** (143 TWh in 2015)	133 TWh in 2035	148 TWh in 2035	177 TWh in 2035	197 TWh in 2035

Note: Outlooks C and D assume the same economic drivers as Outlook B.

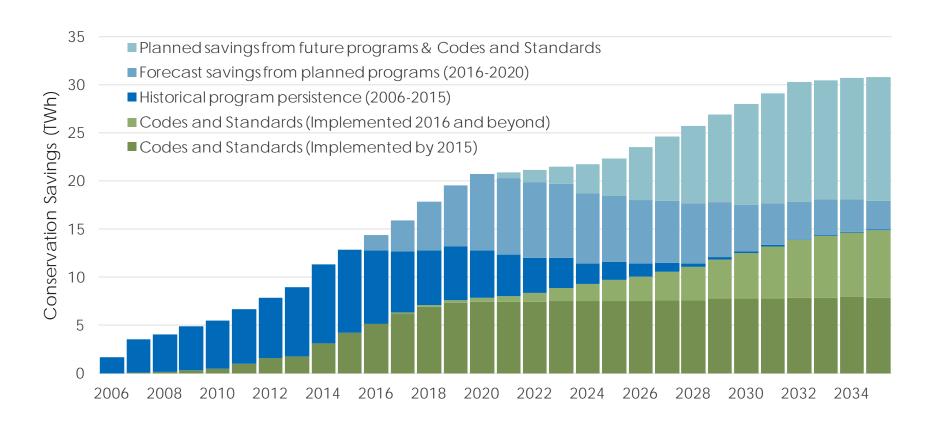


^{*} By 2035, of the number of natural gas fuelled space and water heating equipment being sold in Outlook B (due to existing equipment reaching end of life and new additions driven by growth in the residential and commercial sectors), 25 percent of this stock in Outlook C and 50 percent in Outlook D is replaced with air-source heat pumps.

^{**} Others = Agriculture, Remote Communities, Generator Demand, IEI and Street Lighting

^{***} Total may not add up due to rounding

Figure 11: Conservation Achievement and Outlook to Meet the 2013 LTEP Target





Data for Figure 11: Conservation Achievement and Outlook to Meet the 2013 LTEP Target

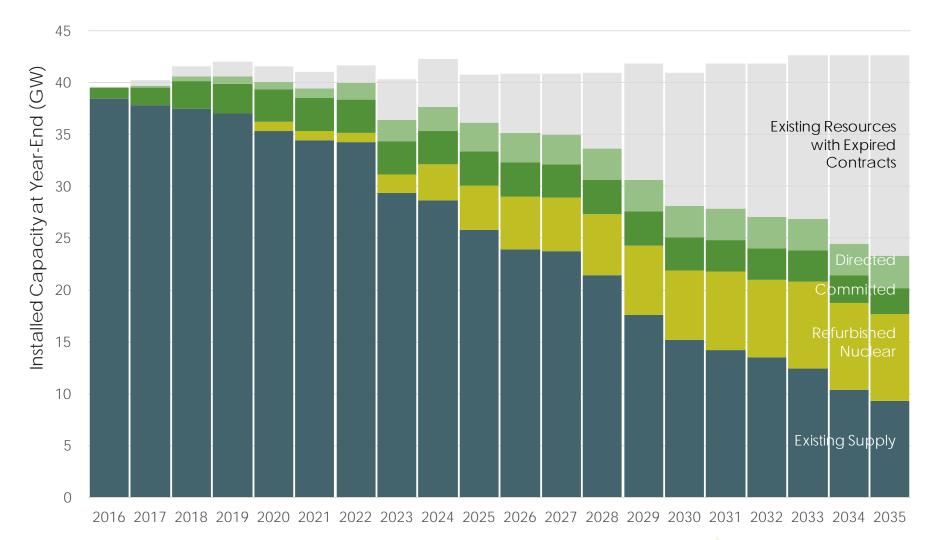
Savings (TWh)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Codes and Standards (Implemented by 2015)	-	0.1	0.2	0.3	0.5	1.0	1.6	1.8	3.1	4.2
Codes and Standards (Implemented 2016 and beyond)	-	-	-	-	1	-	-	-	-	-
Historical program persistence (2006-2015)	1.6	3.4	3.9	4.6	5.0	5.7	6.3	7.1	8.1	8.6
Forecast savings from planned programs (2016-2020)	-	-	-	-	1	-	-	-	-	-
Planned savings from future programs & Codes and										
Standards	_	-	-	-	ı	•	-	1	-	-

Savings (TWh)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Codes and Standards (Implemented by 2015)	5.2	6.3	6.9	7.3	7.4	7.4	7.4	7.5	7.5	7.5
Codes and Standards (Implemented 2016 and beyond)	0.0	0.0	0.2	0.3	0.4	0.6	0.9	1.4	1.8	2.2
Historical program persistence (2006-2015)	7.5	6.4	5.7	5.5	4.9	4.4	3.6	3.1	2.1	1.9
Forecast savings from planned programs (2016-2020)	1.6	3.3	5.0	6.4	7.9	8.0	7.8	7.7	7.3	6.8
Planned savings from future programs & Codes and	_	_	_	_	-	0.6	13	1.8	3.0	3.9
Standards						3.	1.5	1.0	3.0	J.J

Savings (TWh)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Codes and Standards (Implemented by 2015)	7.5	7.6	7.6	7.7	7.8	7.8	7.8	7.8	7.9	7.9
Codes and Standards (Implemented 2016 and beyond)	2.6	3.0	3.4	4.1	4.8	5.4	6.0	6.4	6.7	7.0
Historical program persistence (2006-2015)	1.4	0.9	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0
Forecast savings from planned programs (2016-2020)	6.6	6.4	6.2	5.7	4.8	4.3	4.0	3.7	3.4	3.0
Planned savings from future programs & Codes and Standards	5.5	6.7	8.1	9.1	10.5	11.5	12.4	12.4	12.6	12.8



Figure 12: Outlook for Installed Capacity to 2035





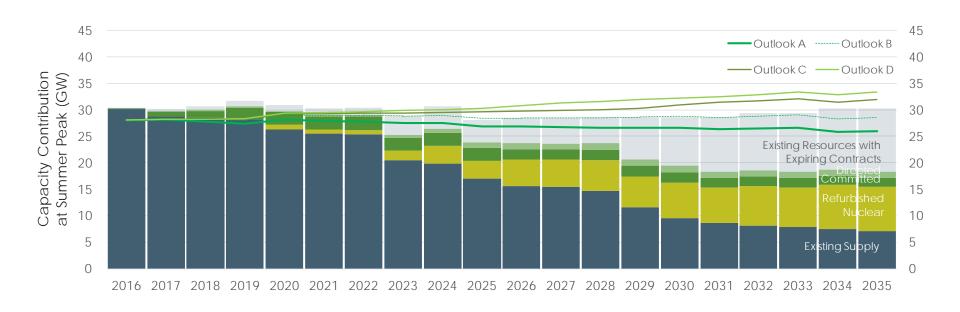
Data for Figure 12: Outlook for Installed Capacity to 2035

Installed Capacity (MW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Existing Supply	38,417	37,868	37,510	37,056	35,307	34,425	34,288	29,405	28,620	25,756
Committed, Not Yet Online	1,078	1,678	2,655	2,811	3,194	3,194	3,230	3,229	3,244	3,244
Directed Procurements	0	125	433	683	683	963	1,563	2,047	2,287	2,767
Expired Contracts	32	581	939	1,492	1,548	1,548	1,684	3,875	4,661	4,689
Refurbished Nuclear	0	0	0	0	881	881	881	1,762	3,465	4,346

Installed Capacity (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing Supply	23,903	23,789	21,440	17,599	15,155	14,254	13,471	12,443	10,401	9,345
Committed, Not Yet Online	3,244	3,244	3,244	3,239	3,238	3,021	3,021	2,991	2,696	2,517
Directed Procurements	2,855	2,855	3,033	3,033	3,033	3,033	3,033	3,033	3,033	3,033
Expired Contracts	5,719	5,832	7,376	11,221	12,843	13,961	14,744	15,803	18,140	19,375
Refurbished Nuclear	5,127	5,127	5,900	6,722	6,722	7,544	7,544	8,366	8,366	8,366



Figure 13a: Available Supply at the Time of Peak Demand Relative to Total Resource Requirements (Summer)





Data for Figure 13a: Available Supply at the Time of Peak Demand Relative to Total Resource Requirements (Summer)

Capacity Contribution at Summer Peak (MW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Existing Supply	30,122	28,724	28,477	28,198	26,336	25,456	25,337	20,497	19,793	16,951
Refurbished Nuclear	0	0	0	0	878	878	878	1,756	3,453	3,453
Committed, Not Yet Online	183	899	1,305	2,147	2,360	2,427	2,451	2,451	2,452	2,452
Directed Procurements	0	17	199	318	136	255	315	559	752	993
Expired Contracts	31	477	725	1,087	1,252	1,263	1,381	3,560	4,265	4,276

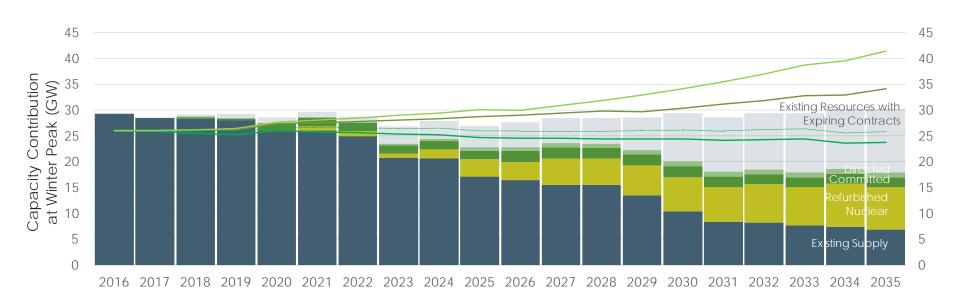
Capacity Contribution at Summer Peak (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing Supply	15,558	15,510	14,666	11,601	9,596	8,682	8,128	7,904	7,503	7,145
Refurbished Nuclear	5,084	5,084	5,851	5,851	6,670	6,670	7,488	7,488	8,307	8,307
Committed, Not Yet Online	1,952	1,952	1,952	1,950	1,949	1,823	1,752	1,746	1,726	1,701
Directed Procurements	1,056	1,056	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176
Expired Contracts	4,850	4,898	4,940	8,009	9,195	10,235	10,861	11,091	11,511	11,894

Resource Requirement at Summer Peak (MW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook A	28,070	28,130	27,711	27,383	28,186	27,944	27,769	27,649	27,475	26,953
Outlook B	28,157	28,345	28,104	28,000	29,006	28,950	28,941	28,951	28,925	28,505
Outlook C	28,137	28,183	28,207	28,225	29,212	29,258	29,332	29,429	29,493	29,648
Outlook D	28,137	28,183	28,275	28,363	29,421	29,540	29,689	29,861	30,002	30,235

Resource Requirement at Summer Peak (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook A	26,821	26,728	26,639	26,636	26,597	26,565	26,527	26,664	25,802	25,973
Outlook B	28,465	28,505	28,531	28,635	28,694	28,753	28,796	29,024	28,253	28,510
Outlook C	29,723	29,876	30,021	30,307	30,894	31,445	31,653	32,065	31,476	31,912
Outlook D	30,772	31,327	31,566	31,900	32,200	32,517	32,821	33,331	32,843	33,383



Figure 13b: Available Supply at the Time of Peak Demand Relative to Total Resource Requirements (Winter)





Data for Figure 13b: Available Supply at the Time of Peak Demand Relative to Total Resource Requirements (Winter)

Capacity Contribution at Winter Peak (MW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Existing Supply	29,268	28,448	28,239	27,981	26,020	25,980	24,983	20,696	20,649	17,057
Refurbished Nuclear	0	0	0	0	0	878	878	878	1,756	3,453
Committed, Not Yet Online	0	0	314	349	1,279	1,587	1,587	1,614	1,613	1,617
Directed Procurements	0	0	2	99	157	8	49	200	367	573
Expired Contracts	31	151	512	769	1,100	1,149	1,267	3,408	3,456	4,216

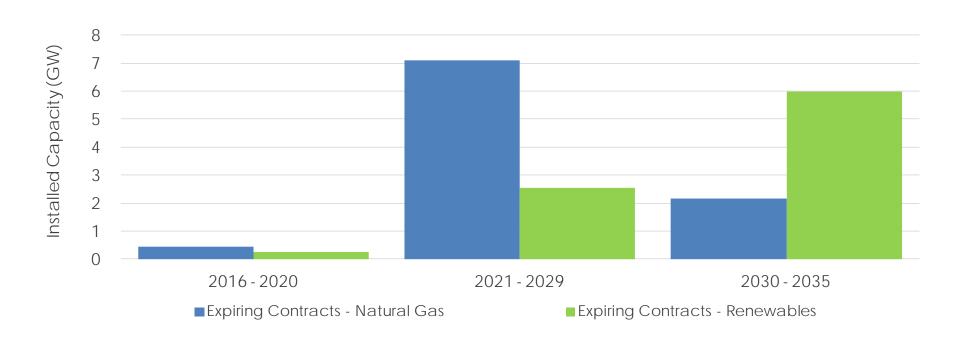
Capacity Contribution at Winter Peak (MW)	2,026	2,027	2,028	2,029	2,030	2,031	2,032	2,033	2,034	2,035
Existing Supply	16,459	15,525	15,471	13,385	10,337	8,366	8,128	7,633	7,384	6,814
Refurbished Nuclear	3,453	5,084	5,084	5,851	6,670	6,670	7,488	7,488	8,307	8,307
Committed, Not Yet Online	2,117	2,117	2,117	2,114	2,113	2,113	1,906	1,902	1,895	1,790
Directed Procurements	741	807	791	936	936	936	936	936	936	936
Expired Contracts	4,815	4,929	5,000	6,271	9,320	10,472	10,917	11,416	11,672	12,347

Resource Requirement at Winter Peak (MW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook A	25,870	25,917	25,514	25,176	25,987	25,737	25,542	25,411	25,212	24,693
Outlook B	25,926	26,063	25,802	25,657	26,643	26,554	26,505	26,480	26,411	25,975
Outlook C	25,962	26,033	26,108	26,202	27,326	27,514	27,749	28,033	28,292	28,643
Outlook D	25,962	26,033	26,191	26,395	27,656	28,007	28,428	28,918	29,399	29,992

Resource Requirement at Winter Peak (MW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook A	24,555	24,453	24,363	24,364	24,339	24,325	24,299	24,431	23,561	23,715
Outlook B	25,908	25,919	25,922	26,008	26,063	26,120	26,156	26,359	25,563	25,785
Outlook C	28,976	29,390	29,820	29,680	30,349	31,063	31,806	32,806	32,928	34,125
Outlook D	29,948	30,826	31,745	32,854	34,106	35,457	36,899	38,625	39,448	41,393



Figure 14: Installed Capacity of Future Contract Expirations

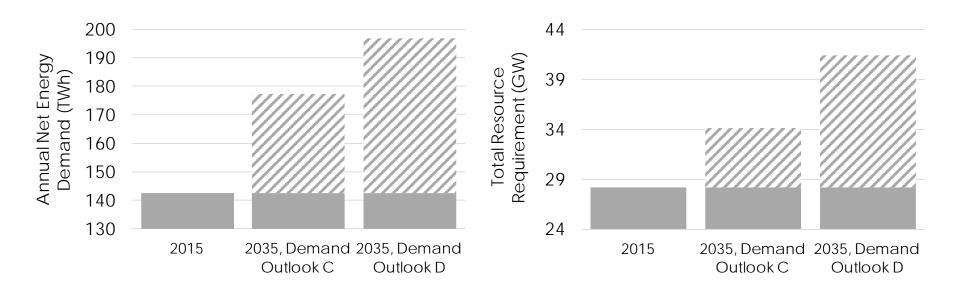


Data for Figure 14: Installed Capacity of Future Contract Expirations

(MW)	2016 - 2020	2021 - 2029	2030 - 2035
Expiring Contracts - Natural Gas	449	7,106	2,161
Expiring Contracts - Renewables	238	2,550	5,993
TOTA	L 687	9,656	8,154



Figure 15: Electricity Supply Requirements in Outlooks C and D



Data for Figure 15: Electricity Supply Requirements in Outlooks C and D

	2015	2035, Outlook C	2035, Outlook D
Annual Energy (TWh)	142.5	177.1	196.7
Total Resource Requirement (MW)	28,157	34,125	41,393

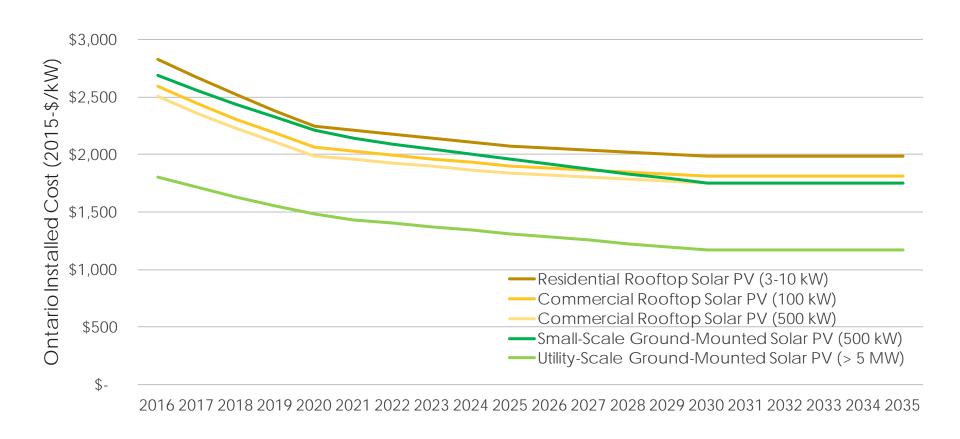


Table 2: Current Technology Characteristics

	Capacity	Energy	Operating Reserve	Load Following	Frequency Regulation	Capacity Factor	Contribution to Winter Peak	Contribution to Summer Peak	LUEC (\$/MWh)
Conservation	Yes	Yes	No	No	No	Depends on Measure	Depends on Measure	Depends on Measure	\$30-50
Demand Response	Yes	No	Yes	Yes	Limited	N/A	60-70% 80-85%		N/A
Solar PV	Limited	Yes	No	Limited	No	15%	3-5%	20-35%	\$140-290
Wind	Limited	Yes	No	Limited	No	30-40%	20-30%	11%	\$65-210
Bioenergy	Yes	Yes	Yes	Limited	No	40-80%	85-90%	85-90%	\$160-260
Storage	Yes	No	Yes	Yes	Yes	Depends on technology/application	Depends on technology/ application	Depends on technology/ application	Depends on technology/application
Waterpower	Yes	Yes	Yes	Yes	Yes	30-70%	67-75%	63-71%	\$120-240
Nuclear	Yes	Yes	No	Limited	No	70-95%	90-95%	95-99%	\$120-290
Natural Gas	Yes	Yes	Yes	Yes	Yes	up to 65%	95%	89%	\$80-310



Figure 16: Installed Solar PV Cost Projections in Ontario





Data for Figure 16: Installed Solar PV Cost Projections in Ontario

Installed Cost (\$/kW)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential Rooftop Solar PV	2,828	2,670	2,521	2,380	2,246	2,211	2,176	2,142	2,109	2,075
(3-10 kW)	2,020	2,070	2,321	2,300	2,240	2,211	2,170	2,142	2,103	2,073
Commercial Rooftop Solar PV	2,592	2,447	2,310	2,181	2,059	2,026	1,995	1,963	1,932	1,902
(100 kW)	2,392	2,447	2,310	2,101	2,059	2,020	1,995	1,903	1,932	1,902
Commercial Rooftop Solar PV	2,502	2,362	2,230	2,105	1,987	1,956	1,926	1,895	1,866	1 026
(500 kW)	2,302	2,302	2,230	2,105	1,907	1,950	1,920	1,095	1,000	1,836
Small-Scale Ground-Mounted	2,689	2,560	2,437	2,320	2,209	2,140	2,092	2,046	2,000	1.056
Solar PV (500 kW)	2,069	2,300	2,437	2,320	2,209	2,140	2,092	2,046	2,000	1,956
Utility-Scale Ground-	1,800	1,714	1,631	1,553	1,478	1,432	1,400	1,369	1 220	1 200
Mounted Solar PV (> 5 MW)	1,000	1,/14	1,031	1,555	1,478	1,432	1,400	1,509	1,339	1,309

Installed Cost (\$/kW)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential Rooftop Solar PV	2,056	2,037	2,018	1,999	1,981	1,981	1,981	1,981	1,981	1,981
(3-10 kW)	2,030	2,037	2,010	1,999	1,501	1,501	1,501	1,501	1,501	1,501
Commercial Rooftop Solar PV	1,884	1,867	1,850	1,832	1,815	1,815	1,815	1,815	1,815	1,815
(100 kW)	1,004	1,007	1,650	1,032	1,015	1,015	1,015	1,015	1,015	1,015
Commercial Rooftop Solar PV	1 010	1 002	1 705	1 760	1 752	1 752	1 752	1 752	1 752	1 753
(500 kW)	1,819	1,802	1,785	1,769	1,752	1,752	1,752	1,752	1,752	1,752
Small-Scale Ground-Mounted	1 01 4	1 072	1 022	1 702	1 752	1 752	1 752	1 752	1 752	1 752
Solar PV (500 kW)	1,914	1,872	1,832	1,792	1,753	1,753	1,753	1,753	1,753	1,753
Utility-Scale Ground-	1 201	1 252	1 220	1 100	1 172	1 172	1 172	1 172	1 172	1 172
Mounted Solar PV (> 5 MW)	1,281	1,253	1,226	1,199	1,173	1,173	1,173	1,173	1,173	1,173



Figure 17: Existing Interconnections

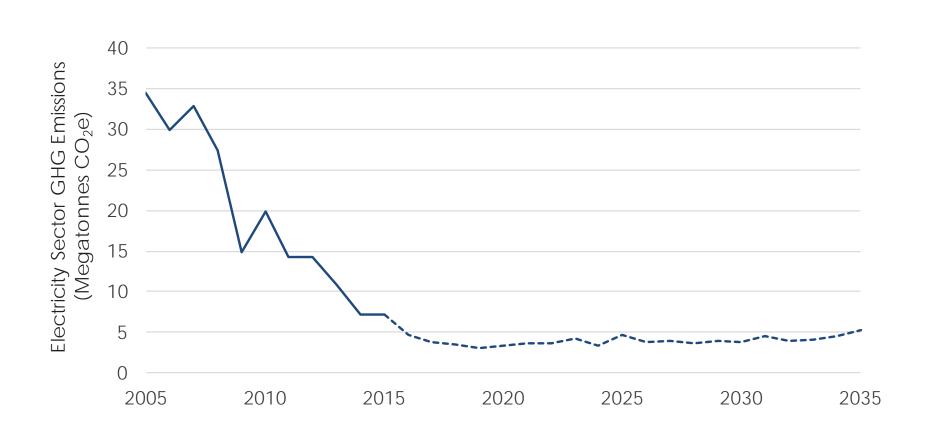


Table 3: Status and Drivers of Transmission Projects in Outlook B

			Driv	vers	
Projects	Status	Maintaining Bulk System Reliability	Addressing Regional Reliability and Adequacy Needs	Achieving 2013 Long- Term Energy Plan (LTEP) Policy Objectives	Facilitating Interconnections with Neighbouring Jurisdictions
East-West Tie Expansion	Expected to be in service in 2020	X		X	
Line to Pickle Lake	Plan is complete; Expected to be in service in early 2020.		X	X	
Remote Community Connection Plan	Draft technical report released; development work underway for connection of 16 communities; engagement with communities is ongoing.		X	X	
Northwest Bulk Transmission Line	Hydro One is carrying out early development work to maintain the viability of the option.	Х		Х	
Supply to Essex County Transmission Reinforcement	Expected In-service date of 2018		х		
West GTA Bulk reinforcement	Plan is being finalized.	Х			
Guelph Area Transmission Refurbishment	Expected to be in service in 2016		Х		
Remedial Action Scheme (RAS) in Bruce and Northwest	Under development. Northwest RAS targeted for late 2016 in-service; Bruce RAS early 2017	Х			
Clarington 500/230kV transformers	Expected to be in service in 2018	Х			
Ottawa Area Transmission Reinforcement	Project has been initiated; expected to be in service 2020.		Х		х
Richview to Manby Transmission Reinforcement	Expected to be in service in 2020		Х		



Figure 18: Electricity Sector GHG Emissions in Outlook B



Data for Figure 18: Electricity Sector GHG Emissions in Outlook B

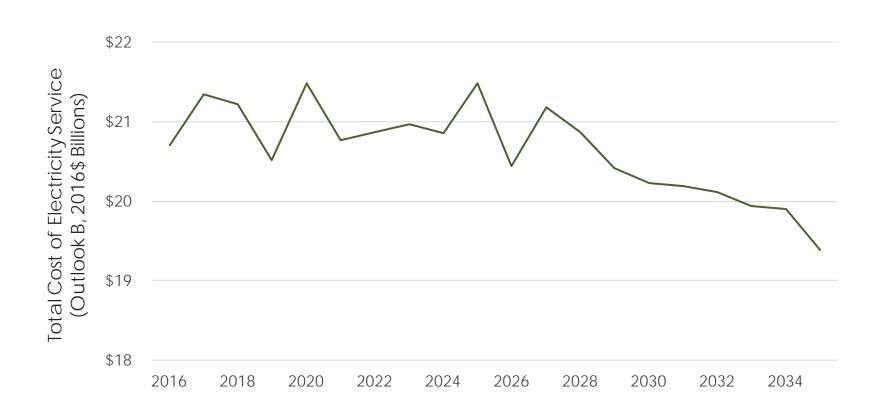
MT CO2e	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Electricity Sector GHG	34.5	29.9	32 Q	27.4	14.9	19.8	14.2	14.2	10.9	7 1	7 1
Emissions	54.5	29.9	32.9	27.4	14.9	19.0	14.2	14.2	10.9	7.1	7.1

MT CO2e	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Forecast GHG Emissions (Outlook B)	4.6	3.8	3.5	3.1	3.4	3.6	3.7	4.2	3.4	4.7

MT CO2e	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Forecast GHG Emissions (Outlook B)	3.8	3.9	3.7	3.9	3.8	4.5	4.0	4.2	4.6	5.3



Figure 19: Total Cost of Electricity Service in Outlook B





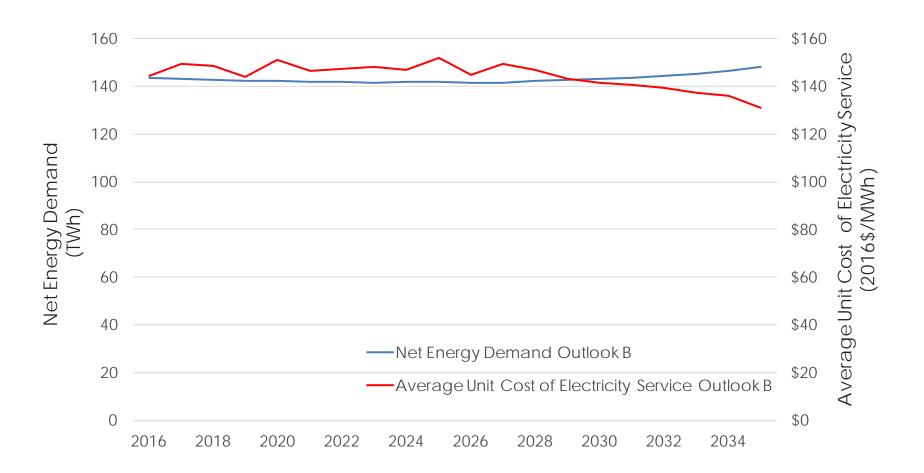
Data for Figure 19: Total Cost of Electricity Service in Outlook B

Total Cost of Electricity Service (2016\$ Billions)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Outlook B	20.7	21.3	21.2	20.5	21.5	20.8	20.9	21.0	20.9	21.5

Total Cost of Electricity Service (2016\$ Billions)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Outlook B	20.4	21.2	20.9	20.4	20.2	20.2	20.1	19.9	19.9	19.4



Figure 20: Average Unit Cost of Electricity Service in Outlook B





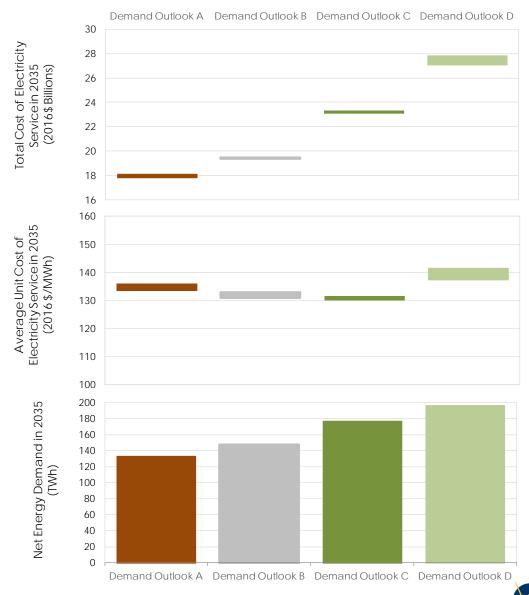
Data for Figure 20: Average Unit Cost of Electricity Service in Outlook B

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Demand Outlook - B (TWh)	143.5	143.0	142.8	142.4	142.4	141.9	141.7	141.6	141.9	141.7
Average Unit Cost - B (2016\$/MWh)	144.3	149.2	148.6	144.1	150.9	146.4	147.2	148.0	147.0	151.7

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Demand Outlook - B (TWh)	141.4	141.6	142.2	142.5	143.0	143.4	144.2	145.1	146.5	148.0
Average Unit Cost - B (2016\$/MWh)	144.6	149.5	146.8	143.3	141.4	140.8	139.5	137.4	135.9	131.0



Figure 21: Cost of Electricity Service across Demand Outlooks



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Data for Figure 21: Cost of Electricity Service across Demand Outlooks

	Outlook A	Outlook B	Outlook C	Outlook D
Minimum System Cost (2016\$ Billions)	17.8	19.4	23.1	27.1
Maximum System Cost (2016\$ Billions)	18.2	19.4	23.3	27.9
Minimum Unit Cost (2016\$/MWh)	134	131	130	137
Maximum Unit Cost (2016\$/MWh)	136	131	132	142
Energy Demand in 2035 (TWh)	133	148	177	197

