Summary tables for all three sectors (Res/Com/Ind):

Table 1. Theoretical Technical Potential Savings for Residential and Non-Residential Sectors

	Residential	Non-Residential	Total
2020 Summer Peak (MW)	4,998	3,227	8,225
Technical Summer Peak Savings (MW)	1,434	1,857	3,292
% of Summer Peak	29%	58%	40%
2020 Winter Peak (MW)	5,652	3,025	8,677
Technical Winter Peak Savings (MW)	2,627	1,788	4,415
% of Winter Peak	46%	59%	51%

Results Compare from 2013 Revision

	Residential	Non-Residential	Total
Summer Peak (MW)	4,713	2,277	6,990
Summer Peak Savings (MW)	735	270	1,005
% of Summer Peak	16%	12%	14%
Winter Peak (MW)	5,262	1,546	6,808
Winter Peak Savings (MW)	868	89	957
% of Winter Peak	16%	6%	14%

Results Compare from ITRON 2009

	Residential	Non-Residential	Total
Summer Peak (MW)	4,698	2,307	7,005
Summer Peak Savings (MW)	734	272	1,006
% of Summer Peak	16%	12%	14%
Winter Peak (MW)	5,175	1,599	6,774
Winter Peak Savings (MW)	856	92	948
% of Winter Peak	17%	6%	14%

Table 2. Summer Peak Demand by Segment by Sector

Residential

Segment	MW	% of Sector Peak
Single Family	3,575	72%
Multi-Family	910	18%
Mobile Home/Other	513	10%
Total	**4,998**	**100%**

GS

Segment	MW	% of Sector Peak
0-15,000 kWh	153	47%
15,001-25,000 kWh	63	20%
25,001-50,000 kWh	56	17%
50,000 kWh+	51	16%
Total	**324**	**100%**

GSD

Segment	MW	% of Sector Peak
0-50 kW	677	23%
51-300 kW	957	33%
301-500 kW	350	12%
501 kW+	919	32%
Total	**2,903**	**100%**

Table 3. Winter Peak Demand by Segment by Sector

Residential

Segment	MW	% of Sector Peak
Single Family	4,063	72%
Multi-Family	959	17%
Mobile Home/Other	630	11%
Total	**5,652**	**100%**

GS

Segment	MW	% of Sector Peak
0-15,000 kWh	126	46%
15,001-25,000 kWh	57	21%
25,001-50,000 kWh	50	18%
50,000 kWh+	38	14%
Total	**271**	**100%**

GSD

Segment	MW	% of Sector Peak
0-50 kW	636	23%
51-300 kW	823	30%
301-500 kW	315	11%
501 kW+	980	36%
Total	**2,754**	**100%**

Table 4. Summer Peak Potential by End Use by Sector (UNADJUSTED)

Residential

End Use	MW	% of Sector Peak
Space Heating	0	0%
Space Cooling	2,932	59%
Water Heater	338	7%
Pool Pump	287	6%
Total	**3,557**	**71%**

GS

End Use	MW	% of Sector Peak
Space Heating	0	0%
Space Cooling	143	44%
Total	**143**	**44%**

GSD

End Use	MW	% of Sector Peak
All	2,903	100%
Total	**2,903**	**100%**

Table 5. Winter Peak Potential by End Use by Sector (UNADJUSTED)

Residential

End Use	MW	% of Sector Peak
Space Heating	3,669	65%
Space Cooling	0	0%
Water Heater	651	12%
Pool Pump	218	4%
Total	**4,538**	**80%**

GS

End Use	MW	% of Sector Peak
Space Heating	86	32%
Space Cooling	0	0%
Total	**86**	**32%**

GSD

End Use	MW	% of Sector Peak
All	2,754	100%
Total	**2,754**	**100%**

Table 6. Summer Peak Potential by End Use by Sector (ADJUSTED FOR EXISTING DR)

Residential

End Use	MW	% of Sector Peak

GS

End Use	MW	% of Sector Peak

GSD

End Use	MW	% of Sector Peak

Space Heating	0	0%
Space Cooling	2,127	43%
Water Heater	246	5%
Pool Pump	209	4%
Total	**2,581**	**52%**

Space Heating	0	0%
Space Cooling	143	44%
Total	**143**	**44%**

All	2,266	78%
Total	**2,266**	**78%**

Table 7. Winter Peak Potential by End Use by Sector (ADJUSTED FOR EXISTING DR)

Residential

End Use	MW	% of Sector Peak
Space Heating	2,663	47%
Space Cooling	0	0%
Water Heater	474	8%
Pool Pump	159	3%
Total	**3,295**	**58%**

GS

End Use	MW	% of Sector Peak
Space Heating	86	32%
Space Cooling	0	0%
Total	**86**	**32%**

GSD

End Use	MW	% of Sector Peak
All	1,950	71%
Total	**1,950**	**71%**

Table 8. Summer Peak Potential by End Use by Sector (ADJUSTED FOR EE MEASURES AND FOR EXISTING DR)

Residential

End Use	MW	% of Sector Peak
Space Heating	0	0%
Space Cooling	1,066	21%
Water Heater	188	4%
Pool Pump	181	4%
Total	**1,434**	**29%**

GS

End Use	MW	% of Sector Peak
Space Heating	0	0%
Space Cooling	104	32%
Total	**104**	**32%**

GSD

End Use	MW	% of Sector Peak
All	1,754	60%
Total	**1,754**	**60%**

Table 9. Winter Peak Potential by End Use by Sector (ADJUSTED FOR EE MEASURES AND FOR EXISTING DR)

Residential

End Use	MW	% of Sector Peak
Space Heating	2,196	39%
Space Cooling	0	0%
Water Heater	354	6%
Pool Pump	76	1%
Total	**2,627**	**46%**

GS

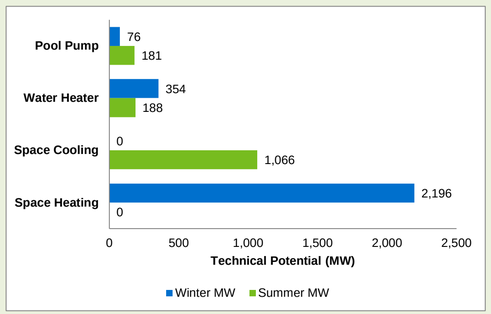
End Use	MW	% of Sector Peak
Space Heating	73	27%
Space Cooling	0	0%
Total	**73**	**27%**

GSD

End Use	MW	% of Sector Peak
All	1,715	62%
Total	**1,715**	**62%**

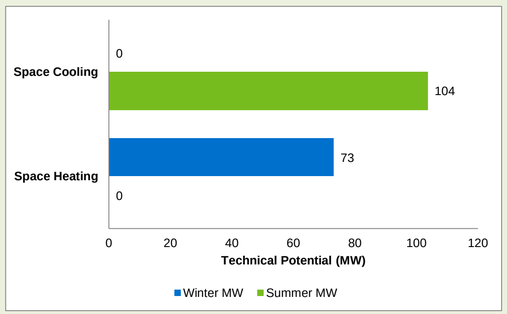
Residential

End Use	Summer MW	Winter MW
Space Heating	0	2,196
Space Cooling	1,066	0
Water Heater	188	354
Pool Pump	181	76
Total	**1,434**	**2,627**



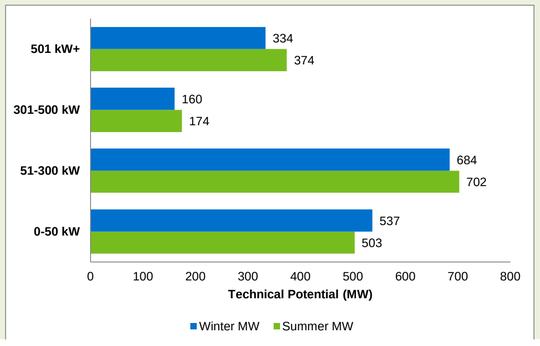
GS

End Use	Summer MW	Winter MW
Space Heating	0	73
Space Cooling	104	0
Total	**104**	**73**



GSD

Segment	Summer MW	Winter MW
0-50 kW	503	537
51-300 kW	702	684
301-500 kW	174	160
501 kW+	374	334
Total	**1,754**	**1,715**



	Residential	Non-Residential	Total
2020 Summer Peak (MW)	4,998	3,227	8,225
Technical Summer Peak Savings (MW)	1,434	1,857	3,292
% of Summer Peak	29%	58%	40%
2020 Winter Peak (MW)	5,652	3,025	8,677
Technical Winter Peak Savings (MW)	2,627	1,446	4,073
% of Winter Peak	46%	48%	47%

	2020 Summer Peak (MW	Technical Summer Peak S	% of Summer Peak	2020 Winter Peak (MW)	Technical Winter Peak Savings (MW	% of Winter Peak
Residential	4,998	1,434	29%	5,652	2,627	46%
Non-Residential	3,227	1,857	58%	3,025	1,446	48%
Total	8,225	3,292	40%	8,677	4,073	47%

DEF Technical Potential - 2018 Study (Scaled to 2020)

	Res Curtailable Load (MW)	GS Curtailable Load (MW)	GSD Curtailable Load (MW)	Non-Res Curtailable	Total Curtailable Load (MW)	System Load (MW)	% of System Load
Summer	2,581	143	2,502	2,645	5,510	9,193	56.9%
Winter	3,295	86	2,352	2,438	6,024	9,537	60.1%

DEF Technical Potential - 2009 Study

	Res Curtailable Load (MW)	GS Curtailable Load (MW)	GSD Curtailable Load (MW)	Non-Res Curtailable	Total Curtailable Load (MW)	Res Baseline	NonRes Baseline	System Load (MW)	% of System Load
Summer	734	252	20	272	1,006	4,698	2,307	7,005	14.4%
Winter	856	86	6	92	948	5,175	1,599	6,773	14.0%

DEF Technical Potential - 2014 Study

	Res Curtailable Load (MW)	GS Curtailable Load (MW)	GSD Curtailable Load (MW)	Non-Res Curtailable	Total Curtailable Load (MW)	Res Baseline	NonRes Baseline	System Load (MW)	% of System Load
Summer	735	250	20	270	1,005	4,713	2,277	6,990	14.4%
Winter	868	83	6	89	957	5,262	1,546	6,809	14.1%

Winter Peak Loads (kW)

	Res Segments Heating Load (kW)		GS Segments Heating Load (kW)		GSD Segments Total Load (kW)		Residential Pool Pump and Water Heater Load			
Population	Single Family	1,452,979	0-15,000 kWh	33,176	0-50 kW	492,511	SF Pool Pump	-	SF Water Heater	222,274
	Multi-Family	424,913	15,001-25,000 kWh	15,473	51-300 kW	627,324	MF Pool Pump	-	MF Water Heater	115,215
	Mobile Home/Other	269,782	25,001-50,000 kWh	12,912	301-500 kW	147,008	MH Pool Pump	-	MH Water Heater	44,367
	Total	2,147,674	50,001 kWh +	7,911	501 kW +	305,876	Total Pool Pump	128,049	Total Water Heater	381,856
			Total	69,471	Total	1,572,719				

Summer Peak Loads by End Use (kW)

	Res Segments Cooling Load (kW)		GS Segments Cooling Load (kW)		GSD Segments Total Load (kW)		Residential Pool Pump and Water Heater Load			
Population	Single Family	1,410,266	0-15,000 kWh	83,177	0-50 kW	613,870	SF Pool Pump	-	SF Water Heater	135,188
	Multi-Family	342,967	15,001-25,000 kWh	22,811	51-300 kW	857,049	MF Pool Pump	-	MF Water Heater	70,074
	Mobile Home/Other	254,687	25,001-50,000 kWh	13,982	301-500 kW	212,383	MH Pool Pump	-	MH Water Heater	26,984
	Total	2,007,919	50,001 kWh +	15,228	501 kW +	456,451	Total Pool Pump	197,257	Total Water Heater	232,246
			Total	135,198	Total	2,139,753				

2016 Technical Potential with DR Adjustment

	Peak Day	Peak Hour (HE)	Residential Curtailable Load (MW)	Total Residential Load (MW)*	GS Curtailable Load (MW)	GS Total Load (MW)	GSD Curtailable Load (MW)	Total Curtailable Load (MW)	System Load (MW)	% of System Load
Summer	22-Aug-16	17	2,437	4,678	135	322	2,140	4,712	8,680	54.3%
Winter	25-Jan-16	8	2,658	4,774	69	228	1,573	4,300	7,691	55.9%

2016 Technical Potential Without DR Adjustment

	Peak Day	Peak Hour (HE)	Residential Heating/Cooling Curtailable Load (MW)	Residential Water Heater Curtailable Load	Residential Pool Pump Curtailable Load	GS Heating/Cooling Curtailable Load	GSD Curtailable Load (MW)			
Summer	22-Aug-16	17	2,768	319	271	135	2,741			
Winter	25-Jan-16	8	2,959	525	176	69	2,221			

ADJUSTED TP RESULTS for Both EE and DR

RES						SMB			LCI		
Housing Type	Winter Res Heating (kW)	Summer Res Cooling (kW)	Summer Res Pool Pump (kW)	Summer Res Water Heater (kW)	Winter Res Pool Pump (kW)	Vinter Res Water Heater (kW	Segment	SMB Heating (kW)	SMB Cooling (kW)	Segment	.CI Winter kW	CI Summer kW
Single Family	1,485,571	748,362	181,081	109,332	76,380	206,218	0-15,000 kWh	34,849	63726	0-50 kW	537,123	503,124
Multi Family	434,444	181,996		56,672		106,893	15,001-25,000 kWh	16,253	17477	51-300 kW	684,147	702,432
Mobile Home/Other	275,834	135,150		21,823		41,162	25,001-50,000 kWh	13,563	10,712	301-500 kW	160,325	174,068
							50,001 kWh +	8,309	11,667	501 kW +	333,583	374,104

%Diff between 2016 and 2020 system peak (from 10 year site plan):

Summer:	6%
Winter:	24%

0-50 kW	44,938
51-300 kW	10,922
301-500 kW	1,067
501 kW +	1,160
Total	58,087

2016 Peak Load By Segments (No Disaggregation)

Customer Counts (ALL CUSTOMERS INCL. DR)		Avg Winter Peak	Avg Summer Peak	Winter Peak Load	Summer Peak Load
Single Family	924,706	3.54	3.65	3,276,173	3,375,723
Multi-Family	431,225	1.79	1.99	773,276	858,797
Mobile Home/Other	168,898	3.01	2.87	508,315	484,677
Total	1,524,829			4,557,764	4,719,197
0-15,000 kWh	124,529	0.81	1.16	101,423	144,434
15,001-25,000 kWh	14,816	3.09	4.04	45,761	59,837
25,001-50,000 kWh	7,474	5.40	7.10	40,387	53,073
50,001 kWh +	3,032	10.18	15.94	30,855	48,315
Total	149,851			218,425	305,660
0-50 kW	44,938	11.42	14.23	513,097	639,577
51-300 kW	10,922	60.75	82.75	663,570	903,836
301-500 kW	1,067	237.70	309.67	253,703	330,511
501 kW +	1,160	681.51	747.82	790,611	867,531
Total	58,087			2,220,982	2,741,455

Table 4-7: 2013 Forecast Refresh of iTron DR Technical Potential Study

Summer System Peak					Winter System Peak				
Baseline	High		Low		Baseline	High		Low	
(MW)	(MW)	(%)	(MW)	(%)	(MW)	(MW)	(%)	(MW)	(%)

Table 4-7: 2009 DR Technical Potential in PEF by Sector, DR Enabling Technology/Tariff, and Scenario

Sector	DR-Enabling Technology and Tariff	Summer System Peak						Winter System Peak															
		Baseline	High			Low		Baseline	High			Low											
		(MW)	(MW)		(%)	(MW)	(%)	(MW)	(MW)	(%)		(MW)	(%)										
Residential	A/C Cycling Switch w/ flat rate		97		2.1%	175	3.7%		105	2.0%	189	3.6%		52	1.1%	9	0.2%		11	0.2%	2	0.0%		
	A/C Shedding Switch w/ flat rate		157		3.3%	282	6.0%		169	3.3%	304	5.9%		80	1.7%	14	0.3%		89	1.7%	16	0.3%		
	Smart Thermostats for A/C w/ CPP		282		6.0%	56	864		304	5.9%	61	1.2%	4,713	735	15.6%	556	11.8%	5,262	868	16.5%	621	11.8%		
	On-Off Switching via low-power wireless networks for water heating w/ CPP		65		1.4%	13	0.3%		180	3.5%	36	0.7%		108	6.2%	31	1.8%		53	4.7%	15	1.3%		
	On-Off Switching via low-power wireless networks for pool systems w/ CPP		51		1.1%	10	0.2%		10	0.2%	2	0.0%		142	8.2%	142	8.2%		30	2.7%	30	2.7%		
	In-home displays and pre-set control strategies w/ CPP		82		1.7%	16	0.3%		89	1.7%	18	0.3%	1,734	250	14.4%	172	9.9%	1,125	83	7.4%	45	4.0%		
	Total Residential	4,698	734		15.6%	553	11.8%	5,175	856	16.5%	609	11.8%		9	1.6%	3	0.5%		4	1.0%	1	0.3%		
Commercial	Automated control strategies w/ CPP		109		6.2%	31	1.8%		55	4.7%	16	1.3%		11	2.0%	11	2.0%		2	0.4%	2	0.4%		
	Direct load control system		144		8.2%	144	8.2%		31	2.7%	31	2.7%	543	20	3.6%	13	2.4%	421	6	1.4%	3	0.7%		
	Total Commercial	1,757	252		14.4%	175	9.9%	1,166	86	7.4%	47	4.0%	6,990	1,004	14.4%	741	10.6%	6,809	957	14.0%	669	9.7%		
Industrial	Automated control Strategies w/ CPP		9		1.6%	3	0.5%		4	1.0%	1	0.3%												
	Direct load control system		11		2.0%	11	2.0%		2	0.4%	2	0.4%												
	Total Industrial	550	20		3.6%	13	2.4%	433	6	1.4%	3	0.7%												
TOTAL		7,005	1,006		14.4%	741	10.6%	6,773	948	14.0%	659	9.7%												

DEF Peak Demand Forecast (from 10 year site plan)

DUKE ENERGY FLORIDA

SCHEDULE 3.1.1
HISTORY AND FORECAST OF SUMMER PEAK DEMAND (MW)
BASE CASE

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
HISTORY:										
2007	10,931	1544	9,387	334	291	239	45	177	110	9,735
2008	10,592	1512	9,080	500	284	255	66	192	110	9,185
2009	10,853	1618	9,235	262	291	271	84	211	110	9,624
2010	10,242	1272	8,970	271	304	298	96	234	110	8,929
2011	9,972	934	9,038	227	317	329	97	256	110	8,636
2012	9,788	1080	8,708	262	328	358	98	280	124	8,337
2013	9,581	581	9,000	317	341	382	101	298	124	8,017
2014	10,067	814	9,253	232	355	404	108	313	132	8,523
2015	10,058	772	9,286	303	360	435	124	324	80	8,431
2016	10,593	947	9,646	235	366	466	100	333	80	9,014
FORECAST:										
2017	10,537	751	9,785	225	372	499	78	340	80	8,943
2018	10,700	753	9,948	255	378	530	82	346	80	9,030
2019	11,095	1,004	10,092	272	384	554	87	351	80	9,368
2020	11,219	965	10,254	292	390	575	91	354	80	9,436
2021	11,082	715	10,367	314	396	594	95	357	80	9,246
2022	11,191	715	10,476	316	402	610	99	359	80	9,325
2023	11,299	715	10,583	316	408	625	103	360	80	9,407
2024	11,405	715	10,690	303	414	638	108	361	80	9,501
2025	11,482	716	10,766	276	420	653	112	361	80	9,579
2026	11,565	716	10,849	276	426	667	116	362	80	9,637

Historical Values (2007 - 2016):
Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.
Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.
Col. (OTH) =Customer-owned self-service cogeneration.
Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).
Projected Values (2017 - 2026):
Cols. (2) - (4) = forecasted peak without load control, cumulative conservation, and customer-owned self-service cogeneration.
Cols. (5) - (9) = cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.
Col. (OTH) = customer-owned self-service cogeneration.
Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

DUKE ENERGY FLORIDA

SCHEDULE 3.2.1
HISTORY AND FORECAST OF WINTER PEAK DEMAND (MW)
BASE CASE

(1) YEAR	(2) TOTAL	(3) WHOLESALE	(4) RETAIL	(5) INTERRUPTIBLE	(6) RESIDENTIAL LOAD MANAGEMENT	(7) RESIDENTIAL CONSERVATION	(8) COMM. / IND. LOAD MANAGEMENT	(9) COMM. / IND. CONSERVATION	(OTH) OTHER DEMAND REDUCTIONS	(10) NET FIRM DEMAND
HISTORY:										
2006/07	9,894	1,576	8,318	304	671	450	26	127	262	8,055
2007/08	10,982	1,828	9,134	234	763	483	34	133	278	9,036
2008/09	12,089	2,229	9,860	268	759	518	71	148	291	10,034
2009/10	13,694	2,189	11,505	246	651	563	80	163	322	11,670
2010/11	11,343	1,625	9,718	271	661	628	94	180	221	9,288
2011/12	9,721	905	8,816	188	643	686	96	203	206	7,701
2012/13	9,109	831	8,278	287	652	747	97	220	213	6,893
2013/14	9,467	658	8,809	257	654	785	101	229	219	7,222
2014/15	10,648	1,035	9,613	273	669	815	109	236	237	8,308
2015/16	9,678	1,275	8,403	224	681	845	113	240	189	7,386
FORECAST:										
2016/17	11,338	1,197	10,141	203	682	879	74	242	193	9,066
2017/18	11,494	1,198	10,296	230	694	909	78	243	194	9,145
2018/19	11,630	1,198	10,432	246	706	934	82	244	196	9,222
2019/20	12,001	1,408	10,592	264	718	955	86	245	197	9,335
2020/21	11,369	659	10,711	284	730	973	91	246	199	8,848
2021/22	11,481	659	10,823	285	742	989	95	246	200	8,924
2022/23	11,590	659	10,931	285	754	1,004	99	247	201	9,000
2023/24	11,701	659	11,042	274	766	1,018	103	247	202	9,091
2024/25	11,775	659	11,116	250	778	1,033	107	247	203	9,138
2025/26	11,838	660	11,198	250	790	1,047	112	247	204	9,209

Historical Values (2007 - 2016):
Col. (2) = recorded peak + implemented load control + residential and commercial/industrial conservation and customer-owned self-service cogeneration.
Cols. (5) - (9) = Represent total cumulative capabilities at peak. Col. (8) includes commercial load management and standby generation.
Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.
Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).
Projected Values (2017 - 2026):
Col. (2) - (4) = forecasted peak without load control, cumulative conservation, and customer-owned self-service cogeneration.
Cols. (5) - (9) = Represent cumulative conservation and load control capabilities at peak. Col. (8) includes commercial load management and standby generation.
Col. (OTH) = Voltage reduction and customer-owned self-service cogeneration.
Col. (10) = (2) - (5) - (6) - (7) - (8) - (9) - (OTH).

NOTES ON TABLES FOR DASHBOARD

Table 1 Peak demand (Row 6 and Row 9) includes all customers in each segment (both customers enrolled in DR and customers not enrolled in DR), TP (Row 7 and Row 10) is adjusted to exclude DR customers and make EE adjustments

Tables 2-3 Record system peaks for all customers in each segment, this is the total demand for each customer segment during the DEF system peak

Tables 4-5 Record TP for all customers including DR customers - this is not the true TP for DEF, it is just for reference

Tables 6-7 Record TP excluding existing DR customers, but do not include EE adjustment

Tables 8-9 Record TP excluding existing DR customers and include EE adjustment

Peak demands include all customers and have not been adjusted for EE measures