

FEBRUARY 18, 2015 |

ISO NEW ENGLAND

Preliminary ISO-NE Annual Energy & Seasonal Peak Forecast 2015-2024

Planning Advisory Committee



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Notes

- RSP and CELT are used interchangeably when referring to the load forecast.
- FCM is short hand for the passive demand resources (PDR) from the Forward Capacity Market.
- When the forecast is labeled CELT it means the “gross” forecast before the PDR have been netted out.
- The data needed for the winter peak model has just become available, and the winter peak model and forecast will be done within two weeks.
- A portion of the 2015 PV forecast (behind-the-meter) will be treated as a reduction to the load forecast, but the 2015 PV forecast is being developed – and will be discussed at the 2/27 DGFWG meeting, and is not reflected in this presentation.
- The preliminary 2015 EE forecast will be presented to the EEFWG on 2/19.

Agenda

- Highlights
- 2014 Weather Normal Energy and Summer Peak
- Economic Forecast
- Preliminary 2015 CELT/RSP ISO-NE Annual Energy & Seasonal Peak Forecast
- State and Subarea forecasts will be developed over the next six weeks



Highlights

- Compared to RSP14, the economic forecast shows less growth in 2015, higher growth 2016-2018, and the similar growth for the remaining years.
- The RSP15 forecast continues to use real gross domestic product (GDP) for energy forecasting, with federal efficiency standards subtracted from the energy forecast.
- Updated economic and historical weather inputs have resulted in: forecasts that have virtually the same growth rates as last year; and, the 50/50 summer peak is about 220 MW lower than last year in 2015, but only 50 MW lower by 2023.
- The Load Forecast Committee reviewed the forecast on February 11 without objection.
- No changes in forecast methodology used for RSP15

2014 Weather Normal Energy and Summer Peak



Weather Normal 2014 Energy and Changes from Weather Normal 201 Energy (GWh)

- After adjusting for weather and weekday/weekend, energy demand is down by 0.5% compared to the weather normal 2013 energy
- After reconstituting for FCM PDR, energy demand is up by 0.6% compared to 2013
- The reconstituted 2014 weather normal energy for Passive Demand Resources (PDR) 138,047 GWh, is 0.2% (343 GWh) lower than the April 2014 forecast of 138,390 GWh

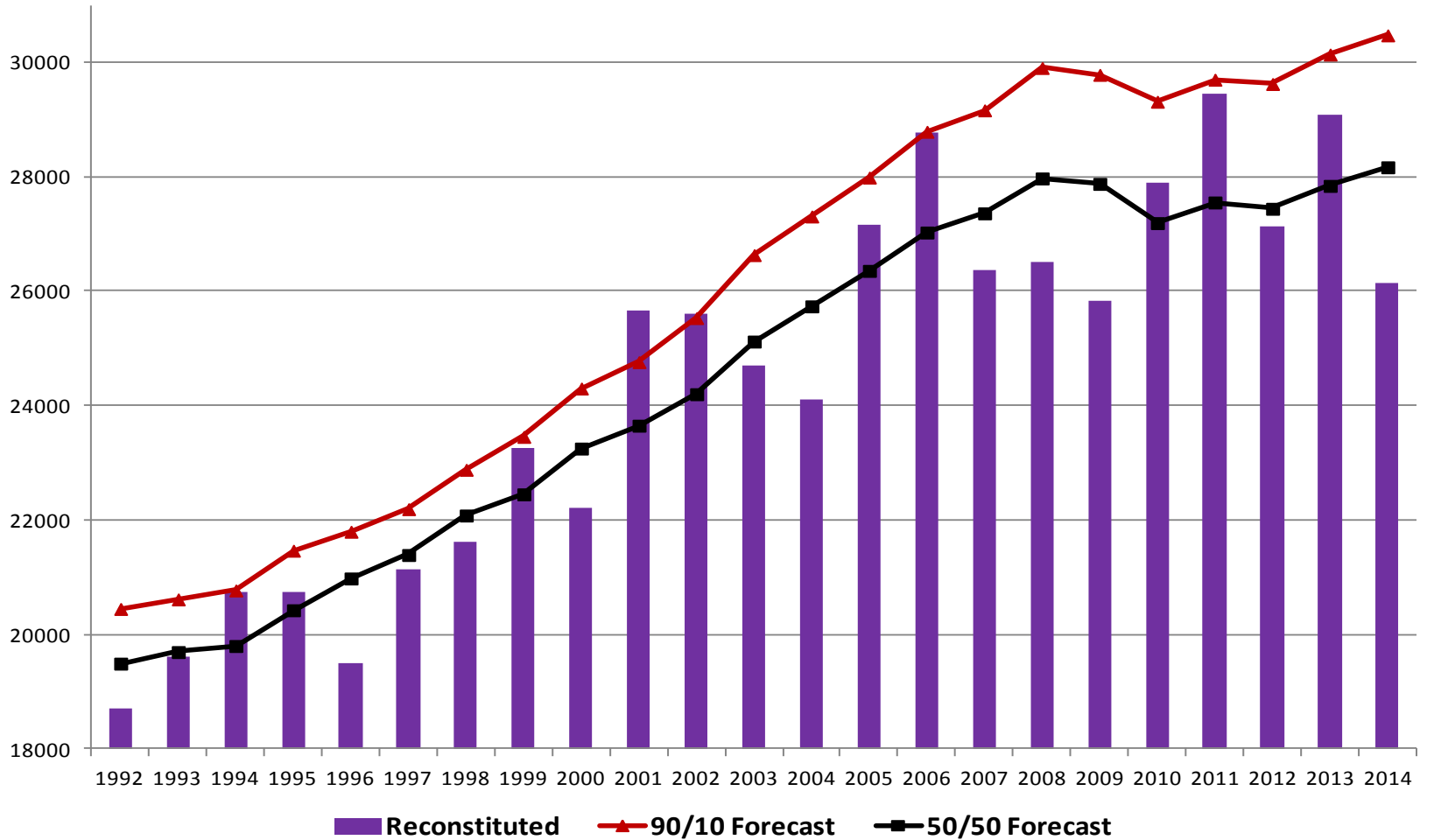
	<u>2013</u>	<u>2014</u>	<u>GWh</u> <u>Change</u>	<u>%</u> <u>Change</u>
Weather Normal Energy	127,754	127,114	-640	-0.5
Passive Demand Resources	9,439	10,933	1,494	15.9
Weather Normal Energy + PDR	137,193	138,047	854	0.6



Weather Normal 2014 Summer Peak Load

- The 50/50 weather normalized peak load for the summer of 2014 is 27,970 MW
 - 0.7% (197 MW) lower than the 2014 CELT 50/50 summer forecast of 28,165
- The 90/10 weather normalized peak load for the summer of 2014 is 30,280 MW
 - 0.6 (190 MW) lower than the 2014 CELT 90/10 forecast of 30,470 MW
- The ISO New England Control Area actual summer peak load of 24,443 MW, occurred on July 2.
 - After reconstitution for the OP4 active demand resources, the FCM passive demand resources, and the Energy Market Price Responsive Demand the peak was 26,140 MW.

ISO-NE Summer Peaks (MW) Actual Peaks (Reconstituted for OP4 and Passive DR) and 50/50 & 90/10 Forecasts

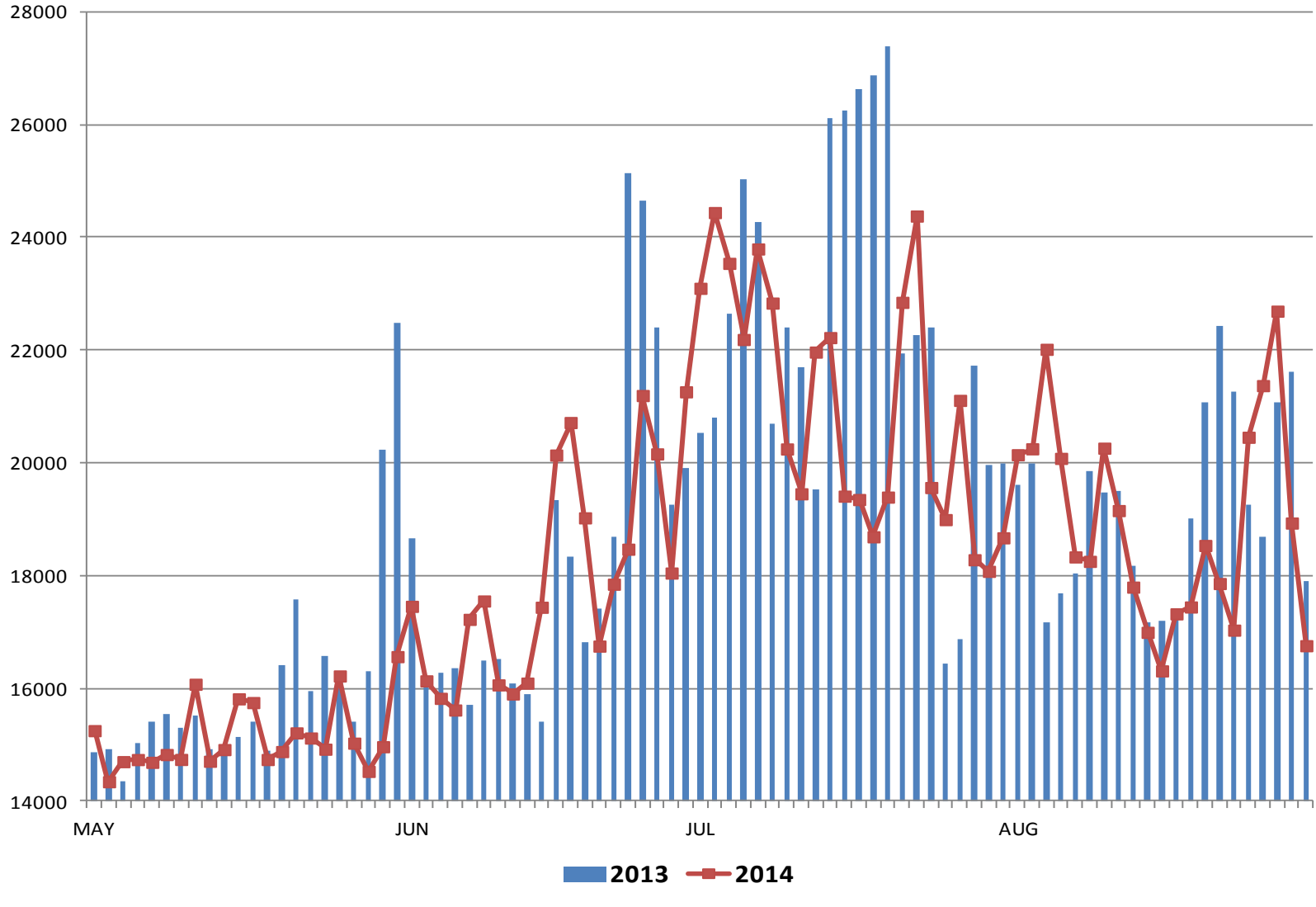


The following slides compare: the 2013 and 2014 summer daily peaks and weather; and, the 2013/14 and 2014/2015 winter weather.

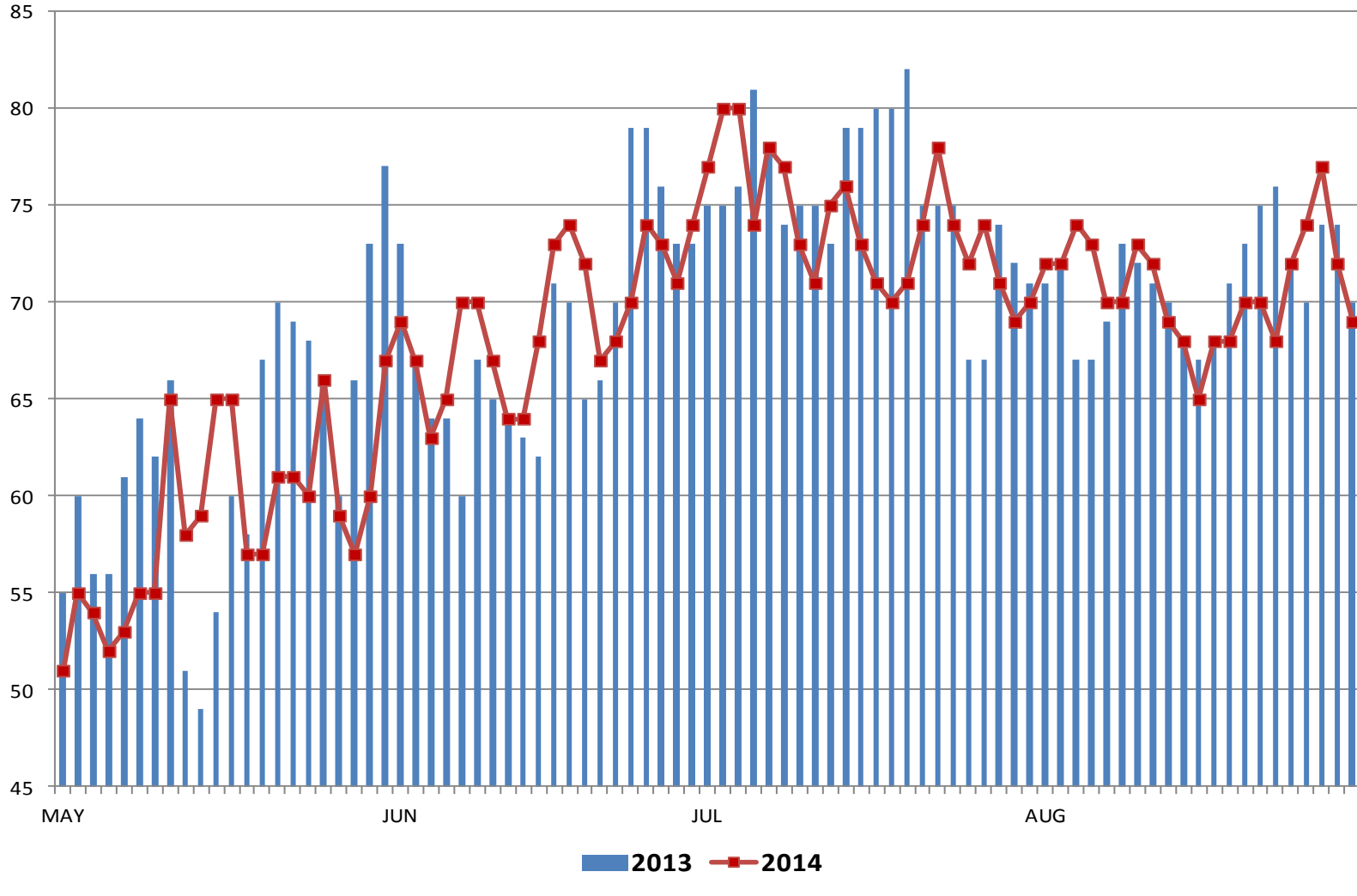


ISO-NE Summer Weekday Daily Peaks (MW)

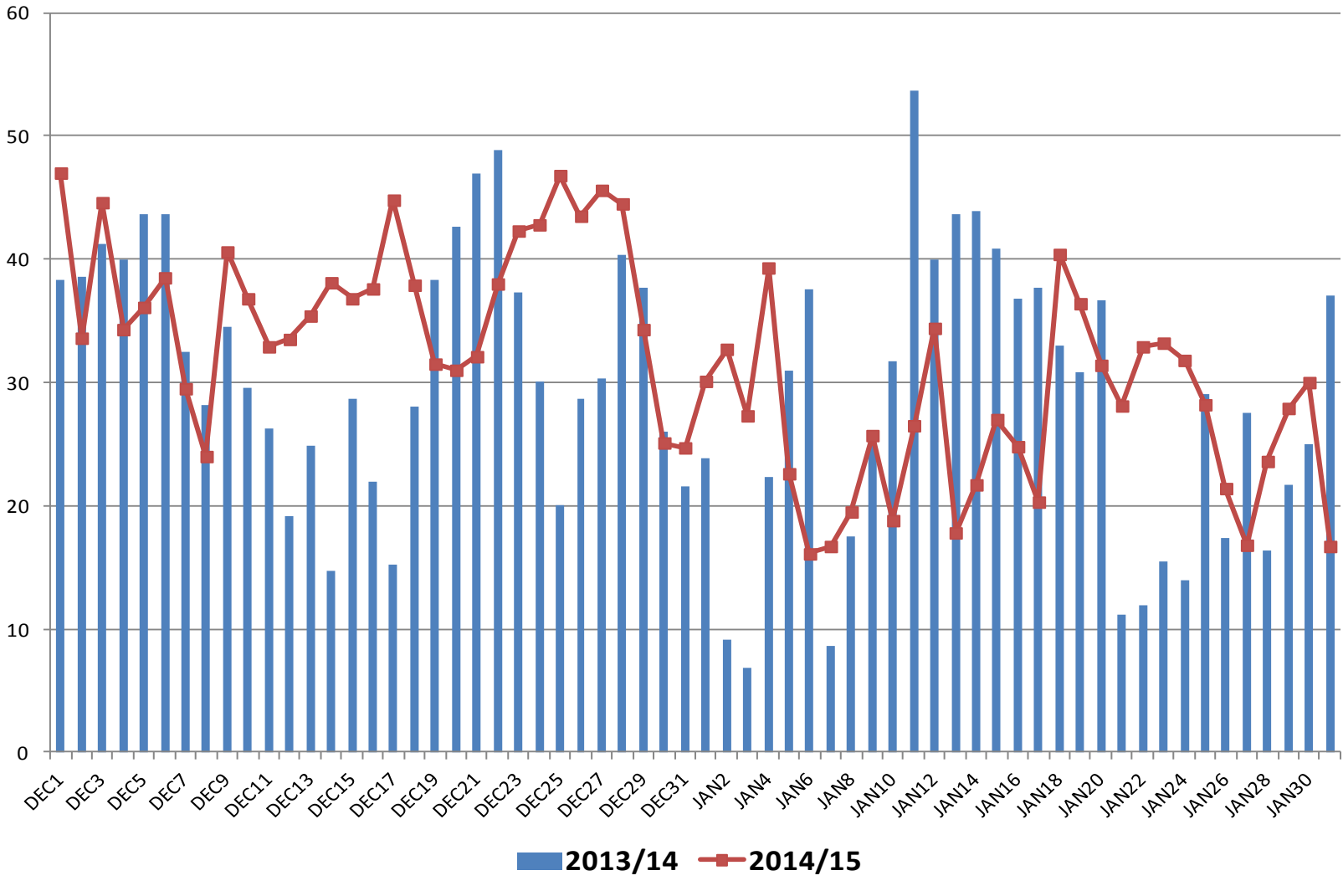
50/50 Net of PDR: 2013CELT 26690 2014CELT 26658



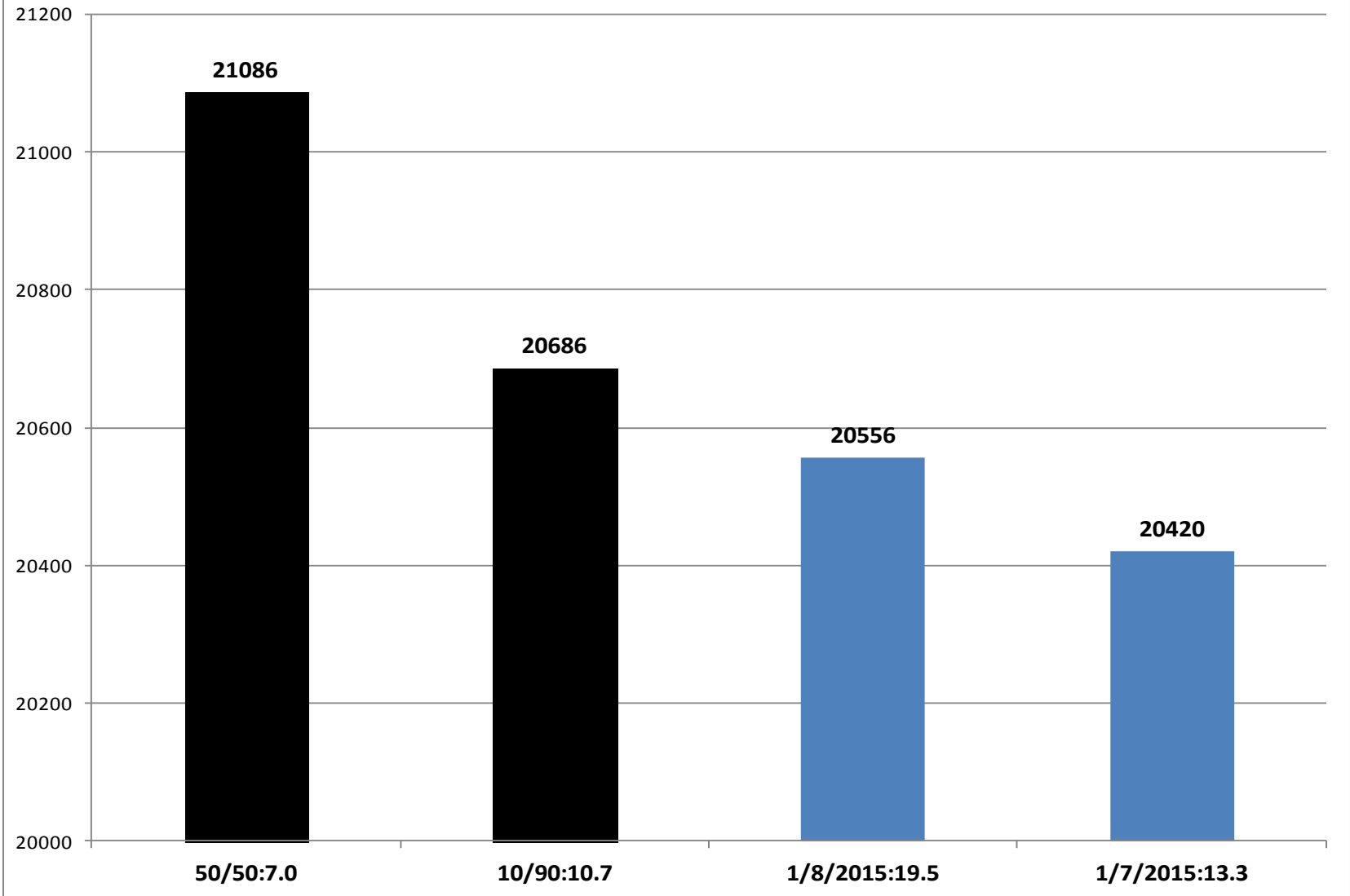
ISO-NE Summer WTHI at Time of Weekday Daily Peaks
Expected WTHI at 50/50 Peak is 80
WTHI: Three Day Weighted Temperature/Humidity Index



New England Winter Daily 6PM Temperatures (F)



2014/2015 Selected Winter Daily Peaks (MW) 2014 CELT 10/90 and 50/50 ISO-NE Forecasts Net of EE



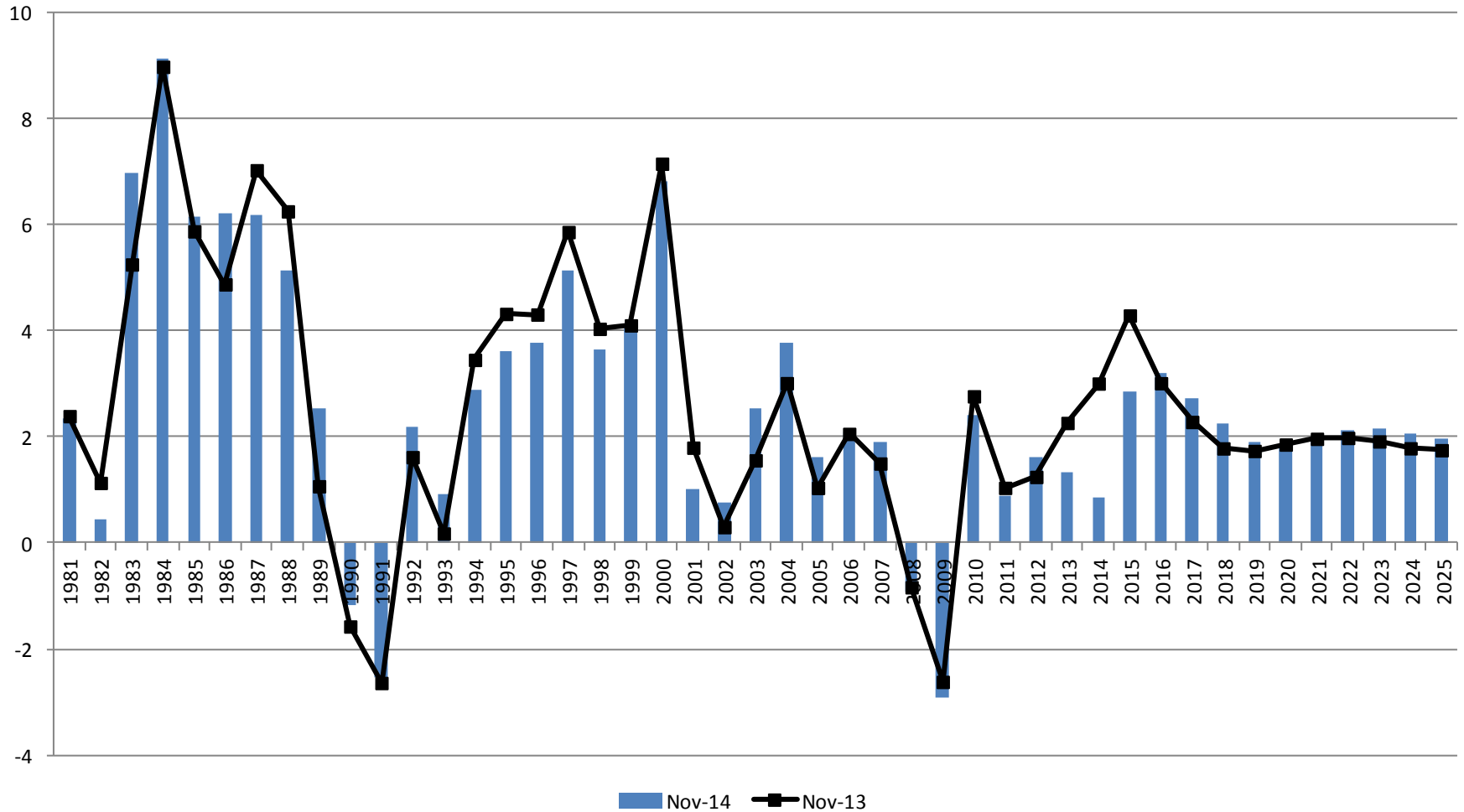
Economic Forecast



Moody's 2014 and 2013 Forecasts

New England Real Gross Regional Product Annual Percent Changes

2015-2024 CAGR: Nov14 2.25% Nov13 2.04%



Preliminary 2015 CELT/RSP ISO-NE Annual Energy & Seasonal Peak Forecast



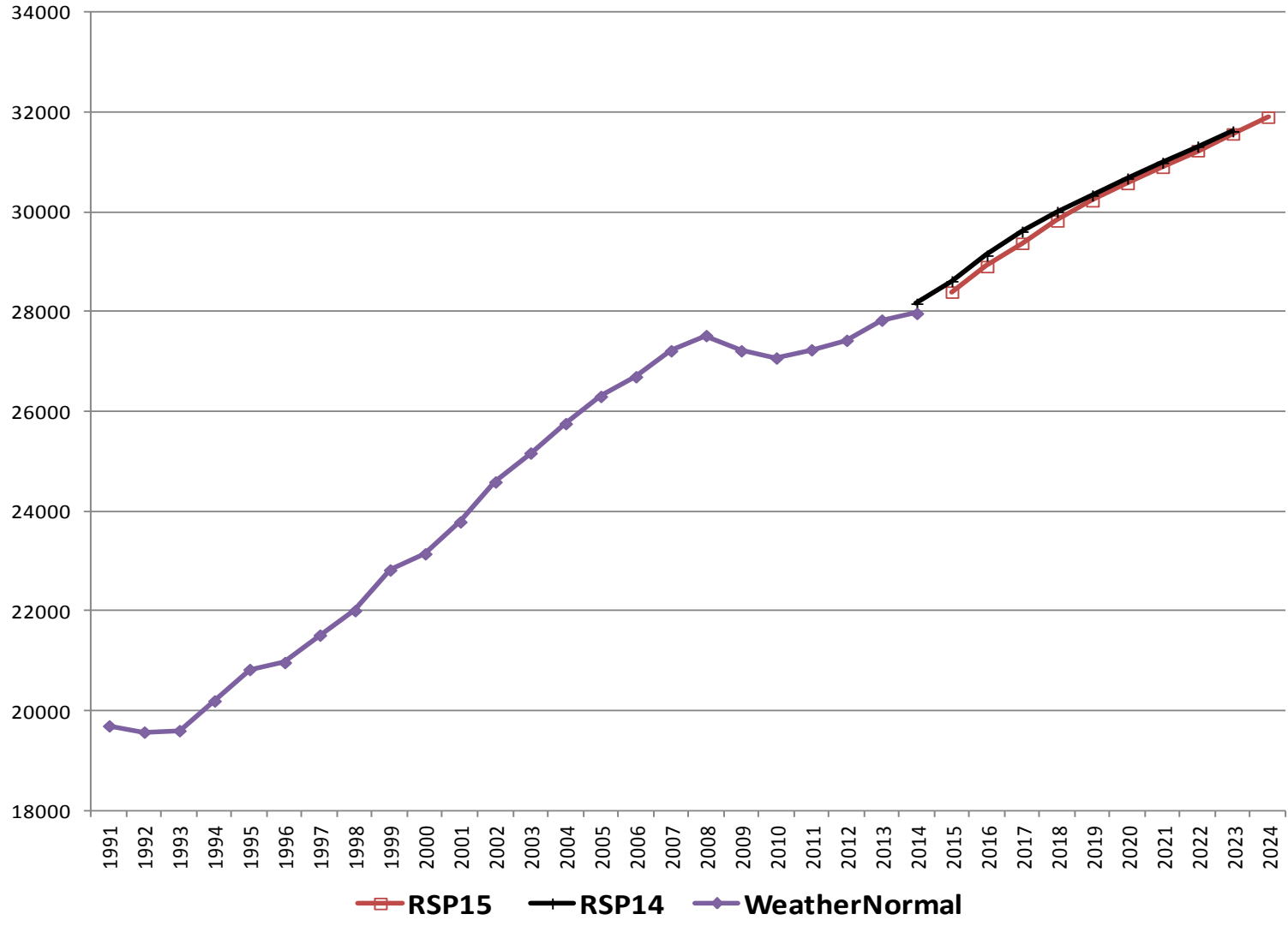
ISO-NE 2015 CELT & RSP Load Forecast with 2014 Passive Demand Resources									
	Summer	Summer	Summer	Summer	Summer		Annual	Energy	Annual
	50/50	90/10	Passive	50/50	90/10		CELT	Passive	Energy
	CELT	CELT	Demand	Peak	Peak		Energy	Demand	Net PDR
	Peak	Peak	Resource	Net PDR	Net PDR			Resource	
ISONE									
2015	28397	30746	1685	26712	29061		138746	9955	128791
2016	28909	31291	1839	27070	29452		140442	10909	129533
2017	29375	31791	2089	27286	29702		142200	11862	130338
2018	29824	32274	2328	27496	29946		143824	13626	130198
2019	30228	32711	2553	27675	30158		145232	15285	129947
2020	30575	33091	2764	27811	30327		146563	16844	129719
2021	30900	33450	2962	27938	30488		147918	18306	129612
2022	31232	33815	3148	28084	30667		149346	19679	129667
2023	31568	34184	3322	28246	30862		150814	20967	129847
2024	31904	34554	3484	28420	31070		152280	21990	130290
CAGR	1.3	1.3		0.7	0.7		1.0		0.1

Forecast Comparison Table: 2015RSP/CELT and 2014RSP/CELT

										2015-23 Growth Rate	2015-23 Average Change
	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Energy (GWh)											
RSP15	138746	140442	142200	143824	145232	146563	147918	149346	150814	1.0	1509
RSP14	140430	142335	143985	145385	146620	147830	149055	150295	151525	1.0	1387
Difference	-1684	-1893	-1785	-1561	-1388	-1267	-1137	-949	-711		
50/50 Summer Peak (MW)											
RSP15	28397	28909	29375	29824	30228	30575	30900	31232	31568	1.3	396
RSP14	28615	29130	29610	30005	30335	30675	30990	31315	31620	1.3	376
Difference	-218	-221	-235	-181	-107	-100	-90	-83	-52		
90/10 Summer Peak (MW)											
RSP15	30746	31291	31791	32274	32711	33091	33450	33815	34184	1.3	430
RSP14	30950	31495	32005	32430	32790	33160	33505	33865	34195	1.3	406
Difference	-204	-204	-214	-156	-79	-69	-55	-50	-11		

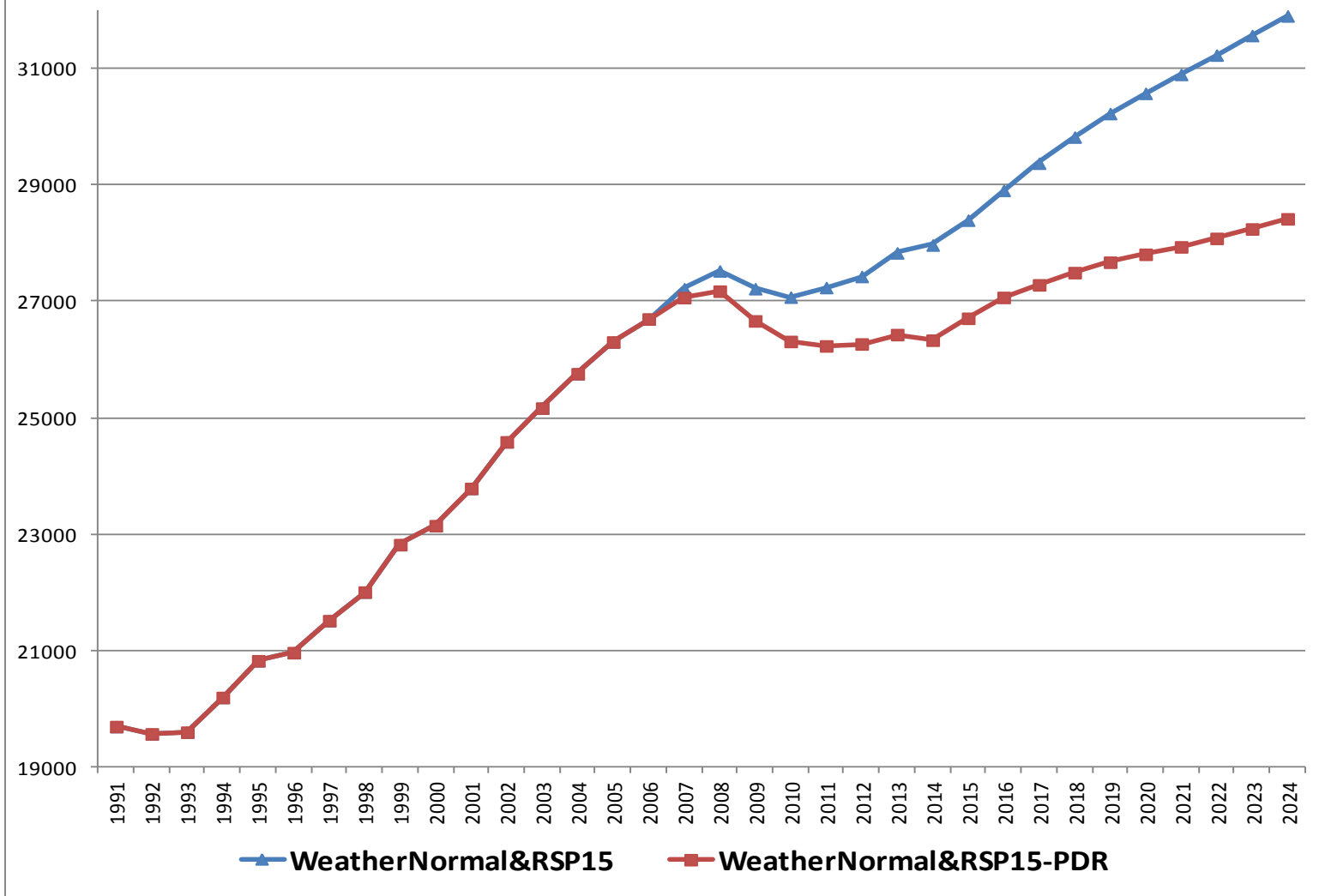
ISO-NE 50/50 SUMMER PEAK (MW)

History 1991-2014 2014RSP 2014-2023 2015RSP 2015-2024

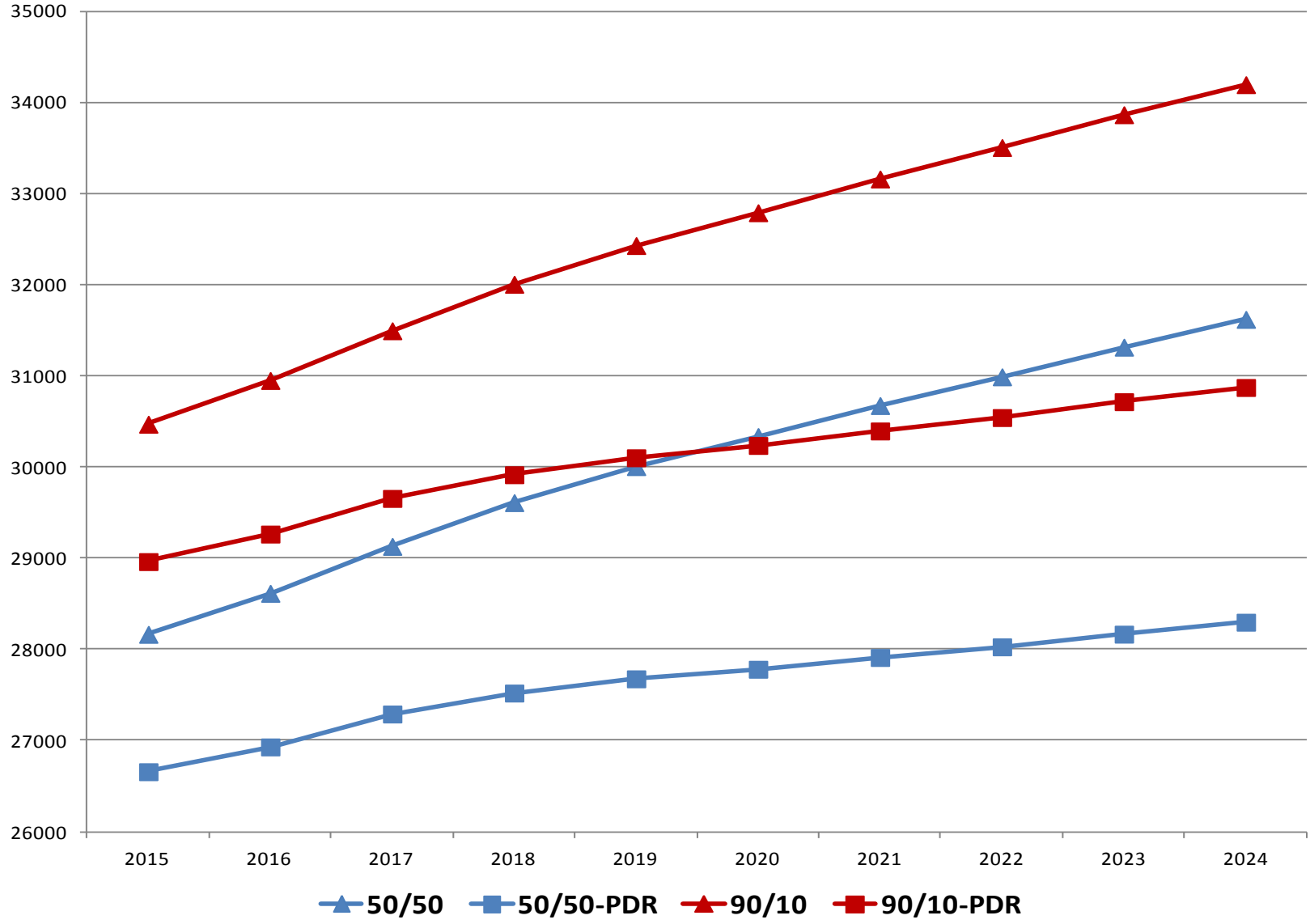


ISO-NE Summer Peak Forecasts (MW)

Weather Normal History 1991-2014 & Prelim 2015RSP 2015-2024

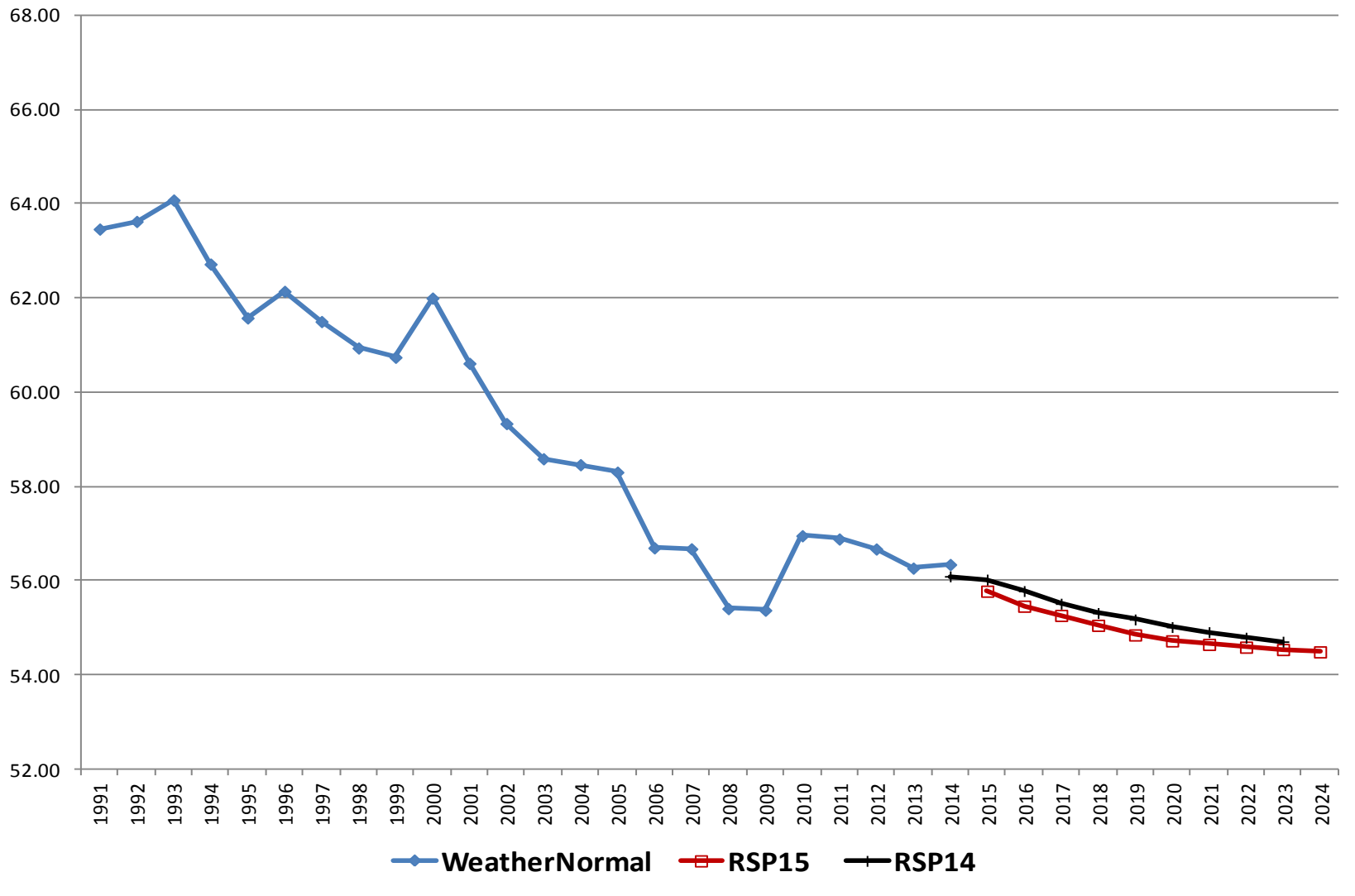


Preliminary 2015 CELT ISO-NE Summer Peak Forecast (MW)



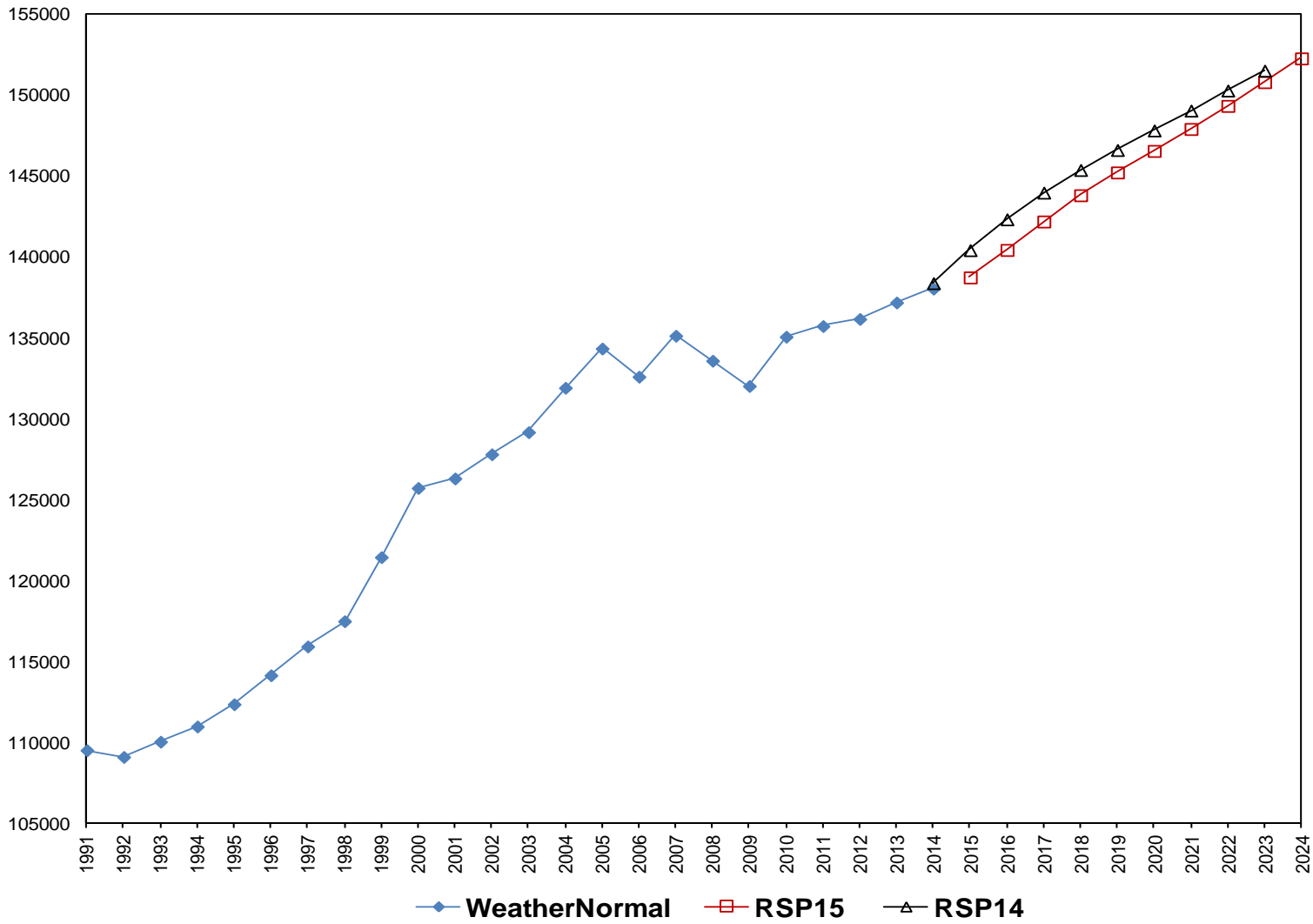
ISO-NE Summer Peak Load Factor

History 1991-2014 2014RSP 2014-2023 2015RSP 2015-2024



ISO-NE ENERGY FORECASTS (GWh)

History 1991-2014 2014RSP 2014-2023 2015RSP 2015-2024



Summary

- Updated economic forecast and historical load and weather inputs have resulted in virtually identical forecasts as last year.
- The 2015 PV forecast is still under development, and some portion of it will be treated as a reduction to the load forecast.

