

NE Region Facing Decreased Power Demand

The idea of a future “energy cost crisis” brought on by a failure to build enough infrastructure to keep up with power demand is a scary prospect indeed. But new information – quietly released by grid operator ISO New England – paints a vastly different, more optimistic picture of our energy situation.

Demand for energy from our power grid is not going up. It is going down.

If our policymakers pay attention, this news will put a halt to efforts by Associated Industries of Massachusetts and companies like Kinder Morgan to initiate a massive fossil fuel infrastructure buildout, at ratepayer expense.

Every month ISO-NE releases issues a public report on power demand. The latest report, for the month of July, shows declining electricity demand in the 6-state ISO New England region. The drop in power demand from July 2014 to July of 2015 was 1.9%.

A likely reason for this decline is the remarkable advance in lighting technology, combined with government incentives and mandates. People are not using heat-producing incandescent bulbs this summer as much as they were previously. This means that with identical weather conditions, power demand for lighting is reduced, and our A/C units have to run less often.

The ISO data¹ is corrected for weather variations, meaning that the decline in power demand was not due to cooler weather. In fact, July weather conditions were almost identical in both years. The decline is not just a one-month phenomenon, but a continuous one.

As the chart shows, the 12-month “rolling total” for energy usage from August 2014 to July 2015 was 126 thousand gigawatt hours. This compares with our peak regional energy consumption of 134 thousand gigawatt hours over 12 months ending mid-2008. The demand reduction is six percent in just seven years.

Fewer power plants are needed than predicted: continued reductions of 1% per year from 2015 to 2018 would save us 1.1 gigawatts in power demand. The ISO now uses 28 gigawatts as its benchmark for power use in the region at the peak of a major heat wave.

It only gets better: power demand decreased more rapidly in the most recent year, a likely consequence of faster adoption of solar, whose output offsets energy use on the grid. An additional 2% in savings from 2015 through 2018 is likely, as solar trends continue and as utilities contract for more competitively priced wind power to meet state renewable portfolio standard mandates. That would offset another 0.55 gigawatts of

ISO Net Energy for Load Report, 8/10/2015

Year	Month	Monthly Actual NEL (GWh)	Pct Chg Month Prior Yr	Y-T-D NEL (GWh)	Y-T-D Pct Chg Prior Yr	12 Mo Rolling NEL (GWh)	Pct Chg 12-Mo Roll Prior Yr	Normalized NEL (GWh)	Pct Chg Normal Prior Yr
2015	JUL	12,077	-1.4%	74,784	-0.4%	126,872	-1.1%	11,970	-1.9%
2015	JUN	10,146	-2.4%	62,707	-0.2%	127,039	-2.0%	10,456	-2.7%
2015	MAY	9,710	2.6%	52,561	0.2%	127,293	-2.3%	9,514	0.6%
2015	APR	9,218	-2.5%	42,851	-0.3%	127,046	-2.7%	9,175	-2.1%
2015	MAR	10,869	-1.5%	33,633	0.3%	127,280	-2.5%	10,594	-1.5%
2015	FEB	11,032	5.4%	22,764	1.2%	127,448	-2.1%	10,343	0.7%
2015	JAN	11,732	-2.4%	11,732	-2.4%	126,885	-2.3%	11,503	-2.3%
2014	DEC	10,945	-4.8%	127,175	-1.7%	127,175	-1.7%	11,100	-2.3%
2014	NOV	9,968	-1.7%	116,230	-1.4%	127,730	-0.9%	9,928	-1.2%
2014	OCT	9,710	-1.6%	106,262	-1.4%	127,904	-0.7%	9,636	-1.9%
2014	SEP	10,236	1.2%	96,552	-1.3%	128,061	-0.5%	9,986	0.0%
2014	AUG	11,229	-3.0%	86,316	-1.6%	127,943	-0.6%	11,882	-0.5%
2014	JUL	12,244	-10.3%	75,087	-1.4%	128,287	-1.3%	12,207	-0.8%
2014	JUN	10,400	-5.0%	62,843	0.5%	129,689	0.5%	10,745	-0.6%
2014	MAY	9,463	-3.8%	52,443	1.7%	130,233	1.1%	9,453	-2.3%

Weather normalized drop in usage, to one year prior, May 2014 to April 2015: 1.3%
 Warm months normalized drop in usage (not including Dec – March): 1.2%
 Cold months normalized drop in usage (December-March): 1.4%

summer power demand. These reductions contrast with ISO’s own planning predictions of a 2%, or 0.5 gigawatt increase in demand.

Adding it all up, our region’s energy demand by the end of 2018 will likely be 2.15 gigawatts below ISO-NE projections. This reduced demand **greatly exceeds the anticipated loss of power generation from the planned retirement of Brayton Point, a coal plant.** It is the demand equivalent of four gas-fired power plants using over half a billion cubic feet per day of gas at peak.

Winter reductions in power demand are also occurring, but not quite at the rate that may be possible. This may be because our state has yet to prioritize upgrades to outdoor night lighting (halogen & sodium vapor) to LEDs.

While the data from ISO-NE on reduced regional power demand is encouraging, the leadership of the organization and its planning committees seem reluctant to acknowledge that energy efficiency standards and decentralized power generation is fundamentally changing New England’s power landscape. Failure to acknowledge and embrace this trend will result in the imposition of hidden taxes on ratepayers to fund unneeded subsidies for gas power plant generation, to serve a need that simply does not exist.

¹ ISO-NE monthly “Net Energy Peak Load” report, www.iso-ne.com/isoexpress/web/reports/operations/-/tree/net-ener-peak-load, accessed 8/10/2015.

² ISO energy efficiency forecast, http://www.iso-ne.com/static-assets/documents/2015/04/iso_ne_final_2015_ee_forecast_19_2024.pdf, page 40, accessed 8/10/2015.

Figure 1

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Year	Month	Monthly Actual NEL (GWh)	Pct Chg Month Prior Yr	Y-T-D NEL (GWh)	Y-T-D Pct Chg Prior Yr	12 Mo Rolling NEL (GWh)	Pct Chg 12-Mo Roll Prior Yr	Normalized NEL (GWh)	Pct Chg Normal Prior Yr
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