

The New England Electrical Grid in 2020

How Much Cleaner and Smarter

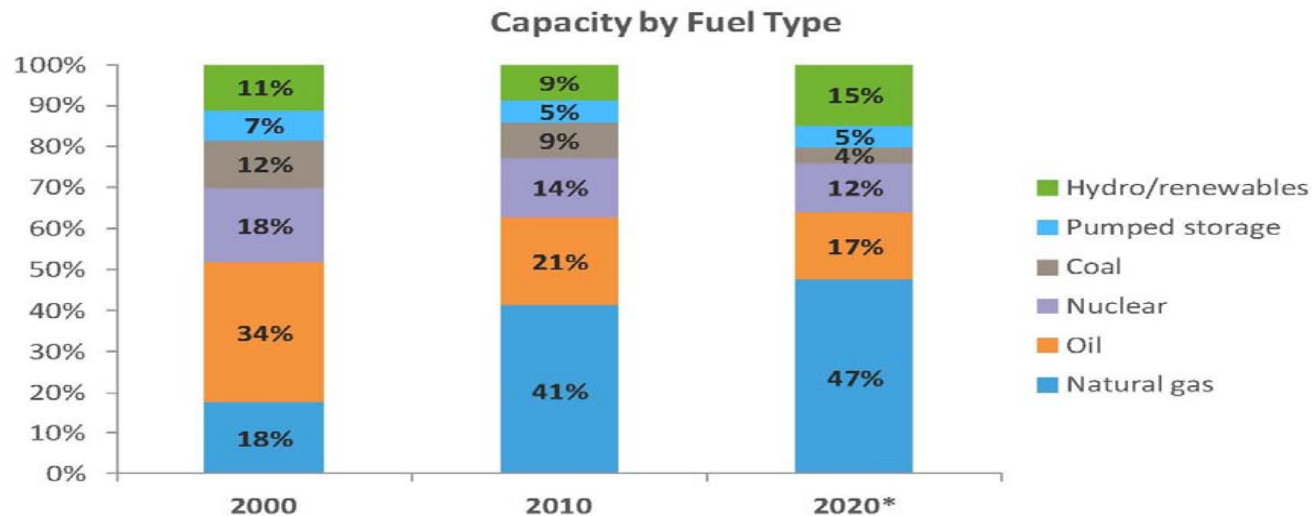
Resources Assumed to be “At Risk” of Retirement

Unit	Unit Type	MW Maximum Assumed	In-service Date	Age in 2020	Unit	Unit Type	MW Maximum Assumed	In-service Date	Age in 2020
BRAYTON POINT 1	Coal	261	01-Aug-63	57	MONTVILLE 6	Oil	418	01-Jul-71	49
BRAYTON POINT 2	Coal	258	01-Jul-64	56	MOUNT TOM 1	Coal	159	01-Jun-60	60
BRAYTON POINT 3	Coal	643	01-Jul-69	51	MYSTIC 7 GT	Oil	615	01-Jun-75	45
BRAYTON POINT 4	Oil	458	01-Dec-74	46	NEW HAVEN HBR	Oil	483	01-Aug-75	45
BRIDGEPORT HBR 2	Oil	190	01-Aug-61	59	NEWINGTON 1	Oil	424	01-Jun-74	46
BRIDGEPORT HBR 3	Coal	401	01-Aug-68	52	NORWALK HBR 1	Oil	173	01-Jan-60	60
CANAL 1	Oil	597	01-Jul-68	52	NORWALK HBR 2	Oil	179	01-Jan-63	57
CANAL 2	Oil	599	01-Feb-76	44	SCHILLER 4	Coal	51	01-Apr-52	68
MERRIMACK 1	Coal	121	01-Dec-60	60	SCHILLER 6	Coal	51	01-Jul-57	63
MERRIMACK 2	Coal	343	30-Apr-68	52	W. SPRINGFIELD 3	Oil	111	01-Jan-57	63
MIDDLETOWN 2	Oil	123	01-Jan-58	62	YARMOUTH 1	Oil	56	01-Jan-57	63
MIDDLETOWN 3	Oil	248	01-Jan-64	56	YARMOUTH 2	Oil	56	01-Jan-58	62
MIDDLETOWN 4	Oil	415	01-Jun-73	47	YARMOUTH 3	Oil	122	01-Jul-65	55
MONTVILLE 5	Oil	85	01-Jan-54	66	YARMOUTH 4	Oil	632	01-Dec-78	42
TOTAL 8,281 MW									



ISONE Planning Expectations

Electric Grid is Undergoing Rapid Transformation



* Resources in 2020 assume approx. 5,000 MW of new resources proposed in the ISO Queue as of April 2013 (primarily natural gas and wind); and approx. 3,200 MW of non-price retirement requests for coal, oil and nuclear resources as of October 2013.



EPA Rules 2014: Implications for NE Electrical Grid 2020

Nuclear units at risk?

Will they survive 316(b) ISONE is planning on it

How at Risk are the NE Oil plants (22%, 2012)?

ISONE has 17% of capacity as oil in 2020

Will 2014 coal (8%, 2012) be online in 2020

ISO expects 4% coal in 2020

A new coal plant in USA by 2020 or even 2030?

Not likely in NE, more likely 2030 than 2020 elsewhere

Might NGas capacity be affected?

The culprit could be 316b