

STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

Docket No. DG 21-008

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

Petition for Approval of a Firm Transportation Agreement with Tennessee Gas Pipeline Company, LLC

RECORD REQUEST:

Please provide a comparison of the following metrics on a historical (i.e., since 2013/14) and forecast basis: annual, peak day, and Design Day demand; and number of customers. Where available, please provide the data by residential and commercial and industrial segments.

RESPONSE:

Please see the requested information below. Liberty provided historical data starting in 2013/14, because that data represents the first year of the 2013/14 – 2017/18 Least Cost Integrated Resource Plan, which was developed by Liberty after acquiring the Company from National Grid.

Chart 1 shows the Company's normalized actual annual demand and forecasted annual demand, with the data underlying Chart 1 provided in Tables 1 and 2. As shown in Tables 1 and 2, the compound annual growth rates ("CAGR") over the forecast period are generally lower than what has been experienced in the historical period.

Chart 1: Normalized Actual Demand and Demand Forecast (Dth)¹

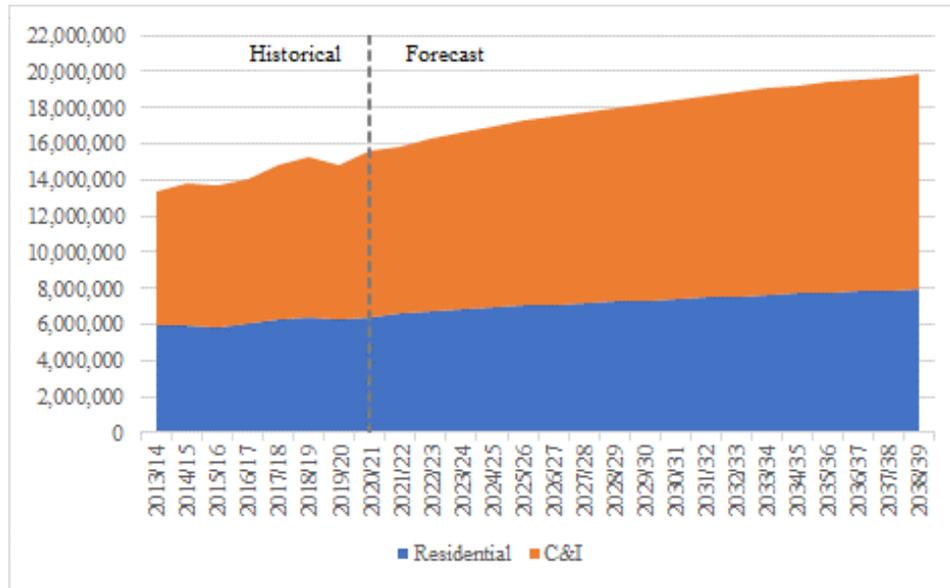


Table 1: Historical Normalized Actual Demand and Number of Customers²

Split-Year	Normalized Actual Demand (Dth)			Average Number of Customers		
	Residential	C&I	Total	Residential	C&I	Total
2013/14	5,960,047	7,373,141	13,333,188	75,985	11,113	87,098
2014/15	5,917,975	7,905,654	13,823,629	78,349	11,583	89,933
2015/16	5,873,477	7,830,169	13,703,646	78,742	11,613	90,355
2016/17	6,085,808	7,971,220	14,057,029	79,867	11,737	91,605
2017/18	6,261,771	8,567,187	14,828,959	80,670	11,963	92,632
2018/19	6,417,687	8,891,802	15,309,489	82,013	12,193	94,206
2019/20	6,310,192	8,498,884	14,809,076	83,400	12,428	95,827
2020/21	6,418,834	9,216,699	15,635,533	85,020	13,056	98,077
CAGR (2013/14-2020/21)	1.1%	3.2%	2.3%	1.6%	2.3%	1.7%

¹ Please note, to create a comparable data set between the historical actual and forecasted demand, the presented demand forecast is based on the econometric models plus the out-of-model adjustment for the existing service territory and is adjusted for energy efficiency.

² 2020/21 includes historical actual data for the period November 2020 through February 2021 and forecast data for the period March 2021 through October 2021.

Table 2: Normal Year Demand Forecast and Number of Customers

Split-Year	Normalized Actual Demand (Dth)			Average Number of Customers		
	Residential	C&I	Total	Residential	C&I	Total
2021/22	6,604,790	9,251,922	15,856,712	88,365	14,114	102,479
2022/23	6,736,171	9,514,878	16,251,049	90,177	14,596	104,773
2023/24	6,852,657	9,748,127	16,600,784	91,878	15,029	106,906
2024/25	6,957,917	9,970,494	16,928,410	93,495	15,446	108,941
2025/26	7,056,094	10,184,712	17,240,806	95,024	15,847	110,871
2026/27	7,114,251	10,382,793	17,497,044	96,451	16,222	112,672
2027/28	7,186,394	10,570,216	17,756,609	97,785	16,578	114,363
2028/29	7,262,265	10,745,690	18,007,955	99,020	16,910	115,930
2029/30	7,337,301	10,907,944	18,245,244	100,159	17,220	117,379
2030/31	7,410,085	11,060,088	18,470,173	101,279	17,512	118,790
2031/32	7,484,023	11,197,195	18,681,218	102,348	17,778	120,125
2032/33	7,562,192	11,321,362	18,883,555	103,399	18,022	121,421
2033/34	7,632,289	11,434,415	19,066,704	104,448	18,247	122,695
2034/35	7,688,336	11,536,204	19,224,540	105,504	18,451	123,956
2035/36	7,751,057	11,627,226	19,378,284	106,561	18,636	125,197
2036/37	7,816,087	11,714,288	19,530,375	107,608	18,816	126,423
2037/38	7,885,713	11,806,075	19,691,788	108,653	19,002	127,655
2038/39	7,953,648	11,901,745	19,855,393	109,690	19,194	128,884
CAGR (2021/22-2038/39)	1.1%	1.5%	1.3%	1.3%	1.8%	1.4%

Table 3, below, includes the Design Day demand forecast and associated heating degree days (“HDD”) based on the Commission-approved methodology to develop the Design Day Planning Standard. In addition, the table includes the actual peak day demand (excluding capacity exempt volumes), the HDD on the peak day in each year, and the date of the peak day. There is an important distinction to be made between the Design Day demand forecast and the peak day demand observations. The peak day demand represents the highest actual daily demand in each year regardless of temperature or HDD, whereas the Design Day demand is a forecast of demand assuming extreme and infrequent weather conditions (i.e., 71 HDD). However it is important to note, the Company’s gas supply portfolio is developed to meet customers’ requirements on the Design Day. As shown in Table 3, below, the HDDs associated with the historical peak days range from 53 to 65. The Design Day demand forecast assumes weather conditions of approximately 71 HDDs. Demand and HDDs are positively related, so that as HDDs increase (i.e., the temperature is lower), demand increases.³ As such, the peak day demand observations cannot be directly compared to the forecasted Design Day demand since the HDD levels are different.

³ There are several other factors that may affect peak day demand, including, but not limited to, the day of the week and the weather on days prior to the peak day.

Table 3: Design Day Demand Forecast and Historical Actual Peak Day Demand (Dth)⁴

Split-Year	Forecast			Actual		
	Design Day Demand	Design Day HDD	Notes	Peak Day Demand (Excl. Capacity Exempt)	Peak Day HDD	Date
2013/14	142,542	71	[1]	125,070	64	1/3/2014
2014/15	146,630	71	[1]	133,421	62	2/15/2015
2015/16	149,433	71	[1]	131,555	62	2/14/2016
2016/17	154,799	71	[1]	114,092	54	12/15/2016
2017/18	157,848	71	[2]	140,224	65	1/1/2018
2018/19	164,571	71	[2]	144,299	60	1/21/2019
2019/20	167,643	71	[2]	119,205	53	1/17/2020
2020/21	168,942	71	[2]	126,072	53	1/29/2021
2021/22	174,618	71	[2],[3]			
2022/23	183,409	71	[3]			
2023/24	187,181	71	[3]			
2024/25	190,657	71	[3]			
2025/26	193,952	71	[3]			
2026/27	196,975	71	[3]			
2027/28	199,349	71	[3]			
2028/29	202,008	71	[3]			
2029/30	204,467	71	[3]			
2030/31	206,942	71	[3]			
2031/32	209,168	71	[3]			
2032/33	211,373	71	[3]			
2033/34	213,536	71	[3]			
2034/35	215,447	71	[3]			
2035/36	216,995	71	[3]			
2036/37	218,679	71	[3]			
2037/38	220,381	71	[3]			
2038/39	222,210	71	[3]			

CAGR (2013/14-2020/21) 2.5%

CAGR (2021/22-2038/39) 1.4%

[1] Source: 2013/14-2017/18 Least Cost Integrated Resource Plan, Docket No. DG 13-313

[2] Source: 2017/18-2021/22 Least Cost Integrated Resource Plan, Docket No. DG 17-152

[3] Source: Direct Testimony of Francisco C. DaFonte and William R. Killeen, Docket No. DG 21-008

⁴ Please note, the values in Table 3 (including those prior to 2021/22) are the Company's forecasts of Design Day demand since EnergyNorth's acquisition by Liberty Utilities and do not represent the Company's actual experience.