

BEFORE THE  
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (ENERGYNORTH : Docket No. DG 14-380  
NATURAL GAS) CORP. D/B/A LIBERTY :  
UTILITIES :  
Petition for Approval of a Firm Transportation :  
Agreement With Tennessee Gas Pipeline :  
Company, LLC :

REDACTED

EXHIBITS

OF

MELISSA WHITTEN

ON BEHALF OF THE

THE STAFF OF THE NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

May 8, 2015

Docket No. DG 14-380

Exhibit MW-1

Resume

Of

Melissa Whitten

## **Melissa Whitten**

*Consultant*

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Melissa Whitten joined La Capra Associates in 2009 with more than 25 years of experience in energy management and energy and financial consulting. Her work experience includes six years as Director of Gas Supply, Transportation and Storage for a progressive, fast-growing natural gas utility in the Northwest, plus several years with a major electric utility in the Boston area and an early pioneer in independent power project development. She has significant experience in supply, transportation and storage management, including supplier evaluation and selection through competitive bidding and one-on-one contract negotiations, contract portfolio optimization, and commercial and industrial target market development. She also has done project consulting research in the areas of employment, output, price and interest rate forecasting and cogeneration project feasibility, as well as lending risk and M&A analyses of depository institutions for the corporate finance sector.

### **PROFESSIONAL EXPERIENCE**

- Managed short- and long- term supply, transportation and storage contracts and innovative peak sharing services for \$100 million portfolio, selecting and negotiating with vendors for supply from four major natural gas supply basins across the US and Canada.
- Reviewed and evaluated natural gas utility accelerated infrastructure replacement programs and supporting long-term capital plans, leak rates, risk ranking systems, and rate recovery mechanisms filed by gas utilities in two states
- Evaluated gas utility long-term forecast and supply plans in three jurisdictions including their plans for growth through conversions plus pipeline capacity restructuring decisions to relinquish long-haul pipeline and storage capacity in favor of direct field access and participation in downstream pipeline expansion projects to access more Marcellus gas supply.
- Conducted annual RFPs for natural gas supply and carried out one-on-one negotiations for supply, transportation and storage assets, including utility and industrial customers; awarded contracts and monitored accounting and financial performance through contract close.
- Optimized portfolio performance, renegotiating existing and structuring new supply contracts, as well as storage and pipeline capacity release transactions to offset firm contract costs and recover incremental value for ratepayers.
- Analyzed impact of unconventional shale gas supplies and associated necessary expansion of gathering and transmission facilities on the delivered cost of gas supply to the Northeast region in general and New England markets in particular.

- Evaluated impact of proposed new pipeline rate structures and expansion plans, participating in shipper interest groups to achieve operations and settlement objectives.
- Negotiated customized long-term contracts with industrial customers.
- Reviewed Purchase Gas Cost filings for various utilities in five state jurisdictions.
- Supervised two staff members and coordinated team of daily gas schedulers.

**Testimony Submitted:**

- Before FERC in Northwest Pipeline rate case analysis of benefits of postage stamp rate and conjunctive billing rights.
- Before Texas Railroad Commission on optimization of supply portfolio and use of financial hedging, in opposition to utility filed rate increase for municipal customers.
- Testified before the Massachusetts Department Public Utilities on gas margins sharing policy, as well as before the Maryland Public Service Commission in Purchased Gas Cost filings.
- Testified on supply planning as part of request for approval of local distribution company Integrated Resource Plan in two state jurisdictions.

**EMPLOYMENT HISTORY**

<b>La Capra Associates, Inc.</b> <i>Consultant</i>	Boston, MA 2009 – Present
<b>EMDEC Energy Management Decisions</b> <i>Consultant</i>	Hopkinton, MA 2000 – 2001
<b>Cascade Natural Gas Corporation</b> <i>Director, Gas Supply, Transportation &amp; Storage</i>	Seattle, WA 1993-1999
<b>J. Makowski Associates, Inc.</b> <i>Senior Associate</i>	Boston, MA 1990 -1993
<b>Boston Edison Company (now NStar)</b> <i>Forecast and Budget Analyst</i>	Boston, MA 1987 -1988
<b>Applied Expert Systems</b> <i>Analyst/ Developer</i>	Cambridge, MA 1986 -1987
<b>Data Resources Inc. (now Global Insight)</b> <i>Senior Economist</i> 1980	Lexington, MA -

1986

**EDUCATION:**

**University of Rochester**

Rochester, NY

*Wm. E. Simon Graduate School of Business*

*M.B.A. Finance and Information Systems*

1993

**University of Massachusetts**

Boston, MA

*B.A. Economics*

1979

**OTHER:**

Econometric modeling, finance and economic policy, systems and database design and management. Member of the Board of Directors of the Northeast Energy and Commerce Association (NECA) as well as the Finance, Fuels, Power Markets, and Renewable Energy sub-committees.

Docket No. DG 14-380

Exhibit MW-2

Summary of  
Direct Testimony

Filed by  
Melissa Whitten

Selected Testimony submitted by Melissa Whitten

- Before the Maryland Public Service Commission:

on behalf of the Maryland Office of Peoples Counsel

Submitted Testimony

- Case No. 9500 Baltimore Gas & Electric, 2013
- Case No. 9510 Columbia Gas of Maryland, 2015
- Case No. 9509 Washington Gas 2015, 2013

Provided live testimony in support of colleague's testimony in  
 Infrastructure Replacement Surcharge (STRIDE) Proceedings

- Case No. 9335 Washington Gas
- Case No. 9332 Columbia Gas of Maryland
- Case No. 9355 Baltimore Gas & Electric

- Before the Massachusetts Public Utility Commission  
 on behalf of the Attorney General's Office

Submitted Testimony

- DPU 14-64, NSTAR Gas Company request for approval of a new contractual arrangement with the affiliate Hopkinton LNG Corp. ("HOPCO"), which owns storage and vaporization facilities in both Hopkinton and Acushnet, MA.
- DPU 14-111, Joint Petition by Massachusetts Gas Utilities for Emergency Authorization to plan for a portion of the Winter 2014/15 gas-supply requirements of capacity-exempt transportation customers converting to Default Service between November 1, 2014 and April 30, 2015.
- DPU 14-130 ... 135, Gas System Enhancement Plan (GSEP) tariff mechanism.

Appeared as a subject matter expert witness in

- DPU 10-62, Investigation by the Department of Public Utilities on its own motion into the ratemaking treatment of gas utility margin sharing.

- Before the Pennsylvania Public Utilities Commission

On behalf of the Pennsylvania Office of Consumer Advocate:

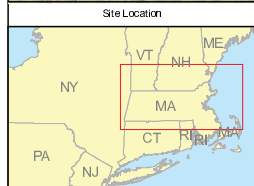
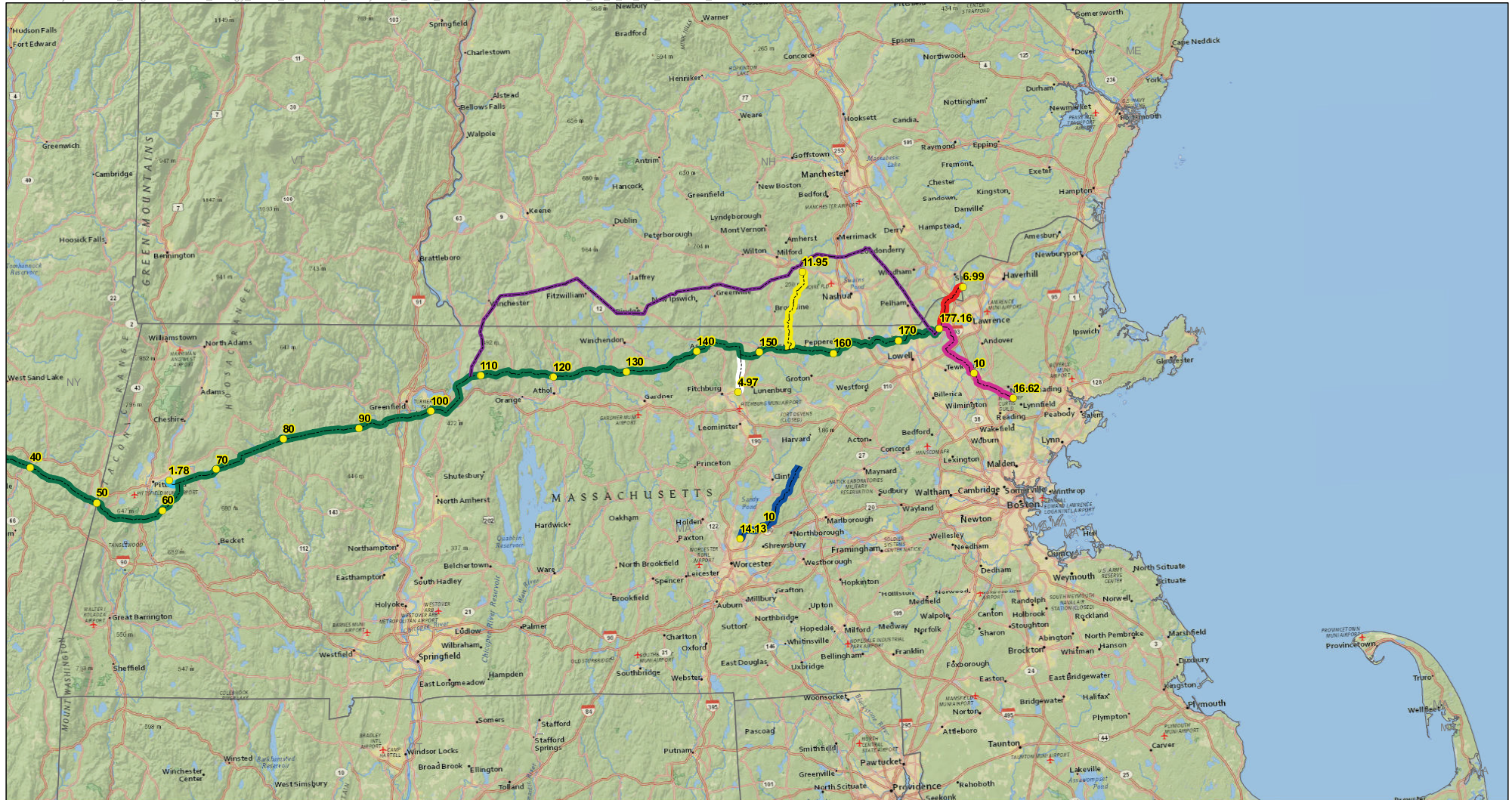
- R-2014-2456648 Peoples TWP LLC Purchased Gas Cost Filing, 2015
- R-2014-2399598, Peoples TWP LLC Purchased Gas Cost Filing, 2014



REDACTED

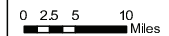
New Hampshire Public Utility Commission  
DG 14-380 Liberty Utilities (EnergyNorth)  
TGP NED Precedent Agreement  
Exhibit MW-3

Path: Y:\Projects\Kinder\_MorganNortheast\_Energy\_Direct\_NED\Maps\Misc\System\_Minor\_Route\_Alternatives\MXD\Figure\_10\_3\_10\_NH\_Powerline\_Alternative.mxd



**Legend**

- NED West Nashua Lateral
- NED Haverhill Lateral
- New Hampshire Powerline Alternative
- NED Pittsfield Lateral
- - - NED Fitchburg Lateral Extension
- Mileposts
- NED North Worcester Lateral
- Wright to Dracut Pipeline Segment
- NED Lynnfield Lateral



**Tennessee Gas Pipeline Company, L.L.C.**  
**Northeast Energy Direct Project**  
Major Route Alternatives  
NH Powerline Alternative  
Figure 10.3-10

Tennessee Gas Pipeline Company, L.L.C.  
a Kinder Morgan company

**AECOM**

November 2014

FIGURE 10.3

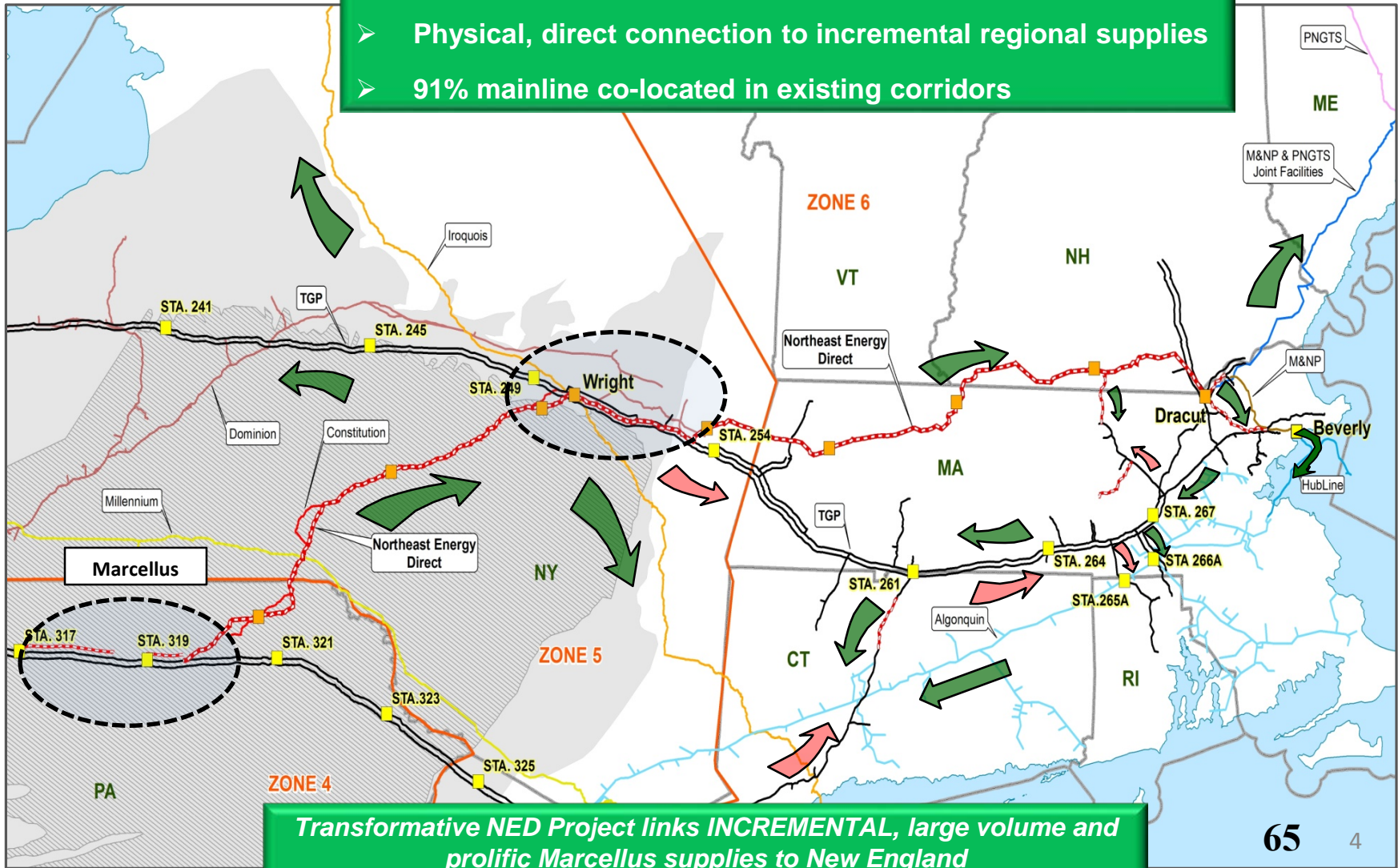
1 inch = 64,000 feet





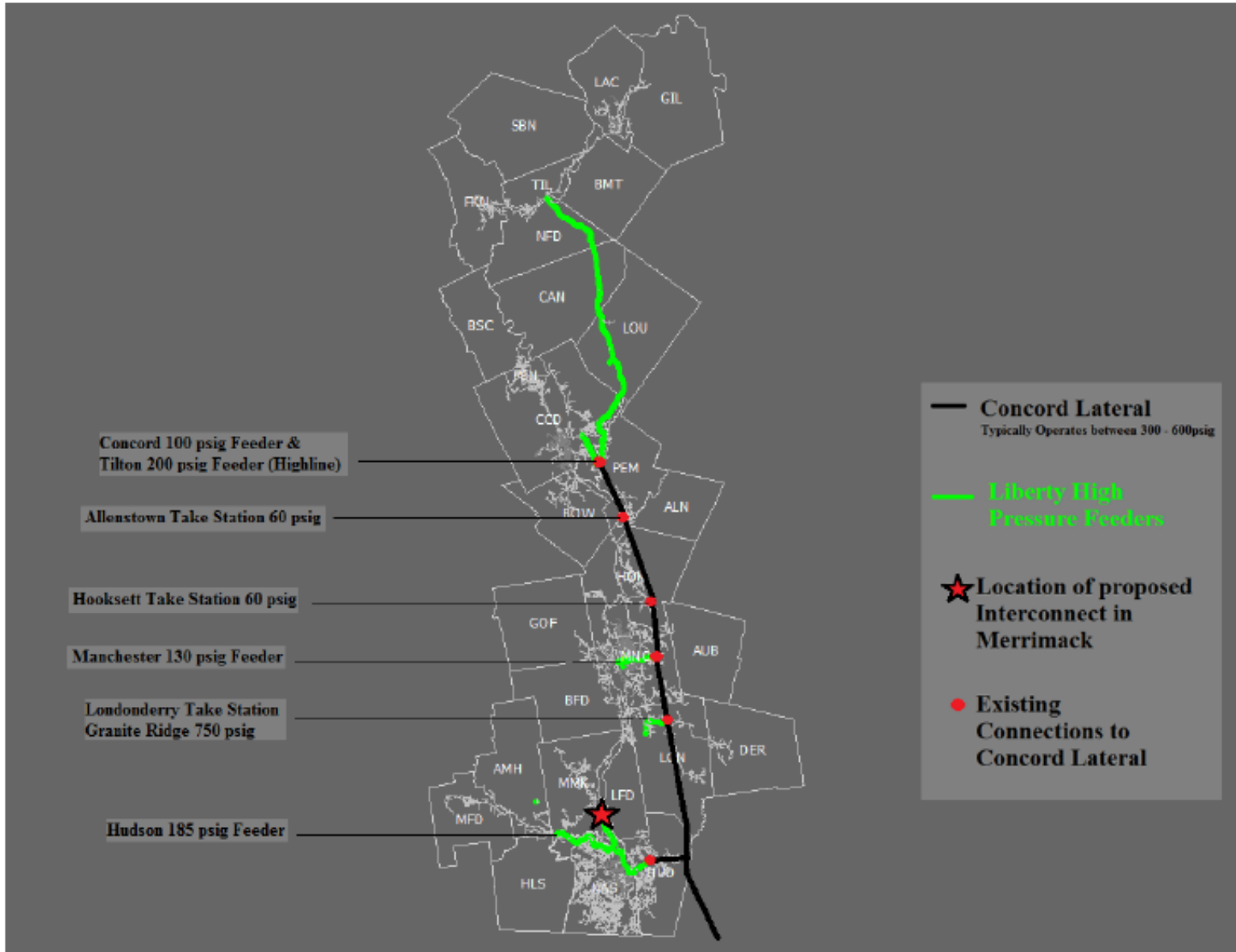
# NORTHEAST ENERGY DIRECT (NED)

- Enough Supply for 1.5 Million Households
- Physical, direct connection to incremental regional supplies
- 91% mainline co-located in existing corridors



**Transformative NED Project links INCREMENTAL, large volume and prolific Marcellus supplies to New England**

Docket No. DG 14-380  
Attachment Staff Tech-47



**Table III - revised for removal of LPG Vaporization MDQ**

<b>Year</b>	<b>Design Day Resources w/NED</b>	<b>LPG MDQ Vaporization (MDVQ)</b>	<b>Adj Des Day w/ NED - excl LPG MDVQ</b>	<b>Design Day Demand (*)</b>	<b>Adj Reserve / (Deficiency)</b>	<b>Year of FT-NED agreement</b>
2014/15	155,033		155,033	148,547	6,486	
2015/16	155,033		155,033	153,155	1,878	
2016/17	155,033		155,033	157,039	(2,006)	
2017/18	155,033		155,033	160,686	(5,653)	
2018/19	220,033	34,600	185,433	164,526	20,907	1
2019/20	220,033	34,600	185,433	167,773	17,660	2
2020/21	220,033	34,600	185,433	171,229	14,204	3
2021/22	220,033	34,600	185,433	174,088	11,345	4
2022/23	220,033	34,600	185,433	176,851	8,582	5
2023/24	220,033	34,600	185,433	179,790	5,643	6
2024/25	220,033	34,600	185,433	182,421	3,012	7
2025/26	220,033	34,600	185,433	184,768	665	8
2026/27	220,033	34,600	185,433	187,295	(1,862)	9
2027/28	220,033	34,600	185,433	189,944	(4,511)	10
2028/29	220,033	34,600	185,433	192,341	(6,908)	11
2029/30	220,033	34,600	185,433	194,851	(9,418)	12
2030/31	220,033	34,600	185,433	197,886	(12,453)	13
2031/32	220,033	34,600	185,433	200,609	(15,176)	14
2032/33	220,033	34,600	185,433	203,366	(17,933)	15
2033/34	220,033	34,600	185,433	206,238	(20,805)	16
2034/35	220,033	34,600	185,433	209,190	(23,757)	17
2034/36	220,033	34,600	185,433	212,101	(26,668)	18
2036/37	220,033	34,600	185,433	214,790	(29,357)	19
2037/38	220,033	34,600	185,433	217,519	(32,086)	20

(\*) revised to show the addition of FT NED capacity beginning in 2018/2019 and Company response to STAFF Tech-40

Forecast Detail from IRP - Attachment 2-2(d)								
Date	Residential Sales Volume		C&I Sales Volume		C&I Transportation Volume		C&I Zero Capacity Volume	
	Heating	Non-heating	Heating	Non-heating	Heating	Non-heating	Heating	Non-heating
PY 2013	54,649,450	806,196	29,529,042	5,105,707	25,420,801	9,458,555	5,242,200	24,095,447
PY 2014	54,437,992	786,380	28,697,466	4,663,221	28,062,421	10,316,733	5,405,283	25,166,445
PY 2015	54,504,239	768,293	28,172,397	4,285,624	30,840,681	11,118,966	5,624,448	25,960,420
PY 2016	53,868,229	736,757	27,459,195	3,805,348	33,295,857	11,768,089	5,877,413	26,645,281
PY 2017	53,426,838	699,203	26,927,230	3,388,901	35,908,974	12,326,841	6,084,361	26,842,151
<b>Growth</b>								
PY 2014	(211,458)	(19,816)	(831,576)	(442,486)	2,641,620	858,179	163,083	1,070,998
PY 2015	66,247	(18,086)	(525,069)	(377,597)	2,778,260	802,233	219,165	793,975
PY 2016	(636,009)	(31,537)	(713,202)	(480,276)	2,455,176	649,122	252,965	684,861
PY 2017	(441,392)	(37,553)	(531,965)	(416,447)	2,613,117	558,752	206,948	196,870
<b>Growth Rate</b>								
PY 2014	-0.4%	-2.5%	-2.8%	-8.7%	10.4%	9.1%	3.1%	4.4%
PY 2015	0.1%	-2.3%	-1.8%	-8.1%	9.9%	7.8%	4.1%	3.2%
PY 2016	-1.2%	-4.1%	-2.5%	-11.2%	8.0%	5.8%	4.5%	2.6%
PY 2017	-0.8%	-5.1%	-1.9%	-10.9%	7.8%	4.7%	3.5%	0.7%

New Hampshire Public Service Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-7

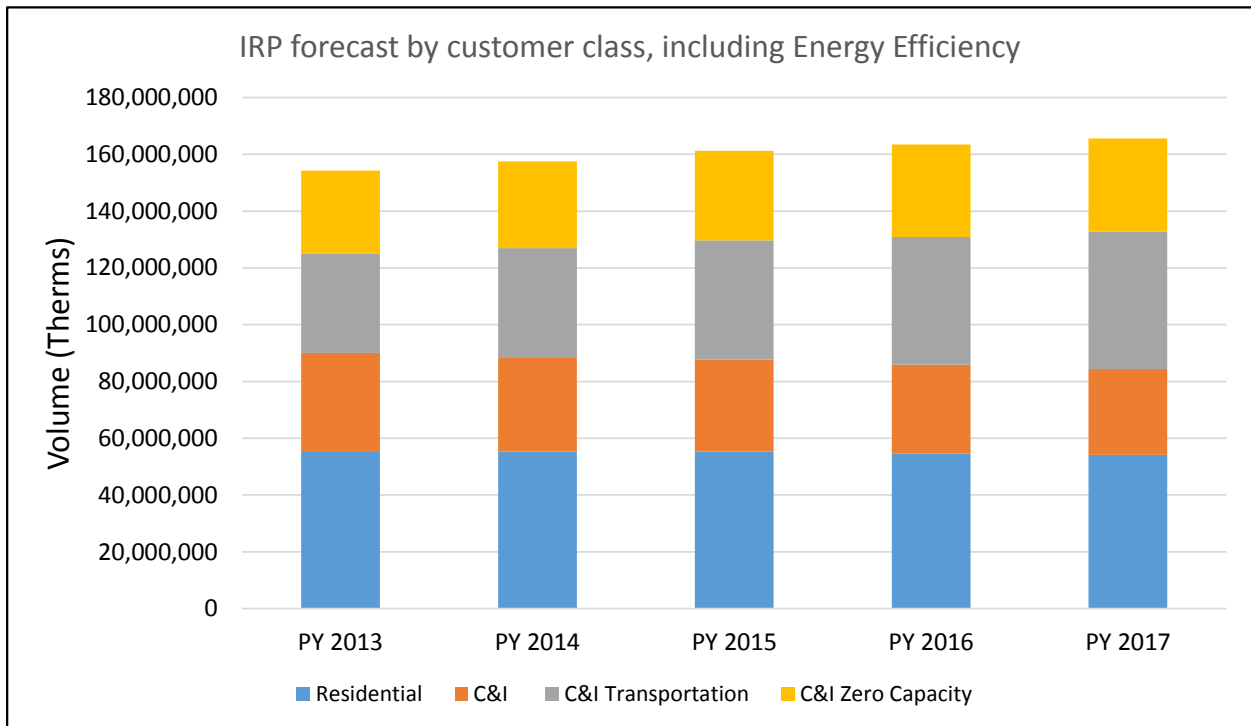
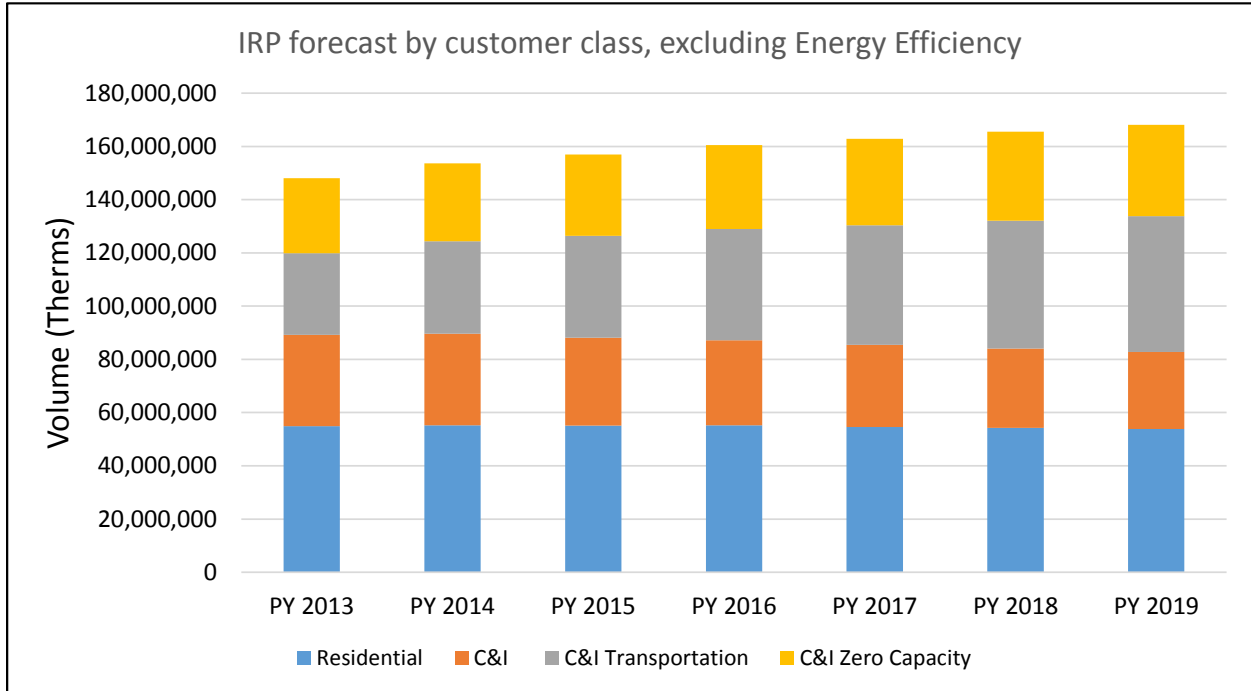


Table I - revised

A	B	C	D	E = C + D	F = E - B	G	H = C + D + G	I = H - B	J = I / B
<u>Year</u>	<u>Design Day IRP</u>	<u>Design Day Updated</u>	<u>iNATGAS</u>	<u>Design Day Updated plus iNATGAS</u>	<u>Difference from Design Day IRP</u>	<u>Capacity Exempt</u>	<u>Total Updated Design Day</u>	<u>Difference from Design Day IRP</u>	<u>Rev Migr Cap Exempt % Difference from Design Day IRP</u>
2014/15	146,630	145,184	0	145,184	-1,446	3,363	148,547	1,917	175%
2015/16	149,433	147,379	3,965	151,344	1,911	1,811	153,155	3,722	49%
2016/17	153,799	149,581	5,619	155,200	1,401	1,839	157,039	3,240	57%
2017/18	157,380	152,205	6,611	158,816	1,436	1,871	160,687	3,307	57%
2018/19	160,740	154,823	7,800	162,623	1,883	1,903	164,526	3,786	50%
2019/20	163,085	158,030	7,800	165,830	2,745	1,942	167,772	4,687	41%
2020/21	165,466	160,457	8,800	169,257	3,791	1,972	171,229	5,763	34%
2021/22	167,881	163,280	8,800	172,080	4,199	2,007	174,087	6,206	32%
2022/23	170,331	166,010	8,800	174,810	4,479	2,040	176,850	6,519	31%
2023/24	172,817	168,913	8,800	177,713	4,896	2,076	179,789	6,972	30%
2024/25	175,339	171,513	8,800	180,313	4,974	2,108	182,421	7,082	30%
2025/26	177,898	173,831	8,800	182,631	4,733	2,137	184,768	6,870	31%
2026/27	180,494	176,327	8,800	185,127	4,633	2,167	187,294	6,800	32%
2027/28	183,129	178,945	8,800	187,745	4,616	2,199	189,944	6,815	32%
2028/29	185,802	181,312	8,800	190,112	4,310	2,229	192,341	6,539	34%
2029/30	188,513	183,792	8,800	192,592	4,079	2,259	194,851	6,338	36%
2030/31	191,265	186,790	8,800	195,590	4,325	2,296	197,886	6,621	35%
2031/32	194,056	189,480	8,800	198,280	4,224	2,329	200,609	6,553	36%
2032/33	196,889	192,203	8,800	201,003	4,114	2,362	203,365	6,476	36%
2033/34	199,762	195,040	8,800	203,840	4,078	2,397	206,237	6,475	37%
2034/35	202,678	197,957	8,800	206,757	4,079	2,433	209,190	6,512	37%
2034/36	205,636	200,832	8,800	209,632	3,996	2,468	212,100	6,464	38%
2036/37	208,638	203,489	8,800	212,289	3,651	2,501	214,790	6,152	41%
2037/38	211,683	206,184	8,800	214,984	3,301	2,534	217,518	5,835	43%



Exhibit MW-9

Redacted Company Responses

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

DG 14-380

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

## OCA Data Requests - Set 2

Date Request Received: 3/27/15  
Request No. OCA 2-5Date of Response: 4/13/15  
Respondent: Francisco C. DaFonte**REQUEST**

Ref. Company's response to Data Request Staff 1-12.

- a. Please conduct a SENDOUT ® analysis for the NED option using NED capacity amount of 105,000 Dth-per day. Assume any deficiency would be met from other sources (including Dracut) using the least-cost alternatives available. Please clearly identify any additional assumptions made for the SENDOUT® run. Report the annual total portfolio cost, supply cost, demand cost, mitigation, and net costs for 2018-19 to 2037-38 (in excel format akin to the Company's response to Staff 1-16(a) with all cells enabled and formulas intact). Also, include two columns to show respectively NED Total Take, and Rest-of-Portfolio Total Take.
- b. Please conduct a SENDOUT ® analysis for the NED option using NED capacity amount of 95,000 Dth-per day. Assume any deficiency would be met from other sources (including Dracut) using the least-cost alternatives available. Please clearly identify any additional assumptions made for the SENDOUT® run. Report the annual total portfolio cost, supply cost, demand cost, mitigation, and net costs for 2018-19 to 2037-38 (in excel format akin to the Company's response to Staff 1-16(a) with all cells enabled and formulas intact). Also, include two columns to show respectively NED Total Take, and Rest-of-Portfolio Total Take.
- c. Please conduct a SENDOUT ® analysis for the NED option using NED capacity amount of 85,000 Dth-per day. Assume any deficiency would be met from other sources (including Dracut) using the least-cost alternatives available. Please clearly identify any additional assumptions made for the SENDOUT® run. Report the annual total portfolio cost, supply cost, demand cost, mitigation, and net costs for 2018-19 to 2037-38 (in excel format akin to the Company's response to Staff 1-16(a) with all cells enabled and formulas intact). Also, include two columns to show respectively NED Total Take, and Rest-of-Portfolio Total Take.
- d. Please conduct a SENDOUT ® analysis for the NED option using NED capacity amount of 75,000 Dth-per day. Assume any deficiency would be met from other sources (including Dracut) using the least-cost alternatives available. Please clearly identify any

additional assumptions made for the SENDOUT® run. Report the annual total portfolio cost, supply cost, demand cost, mitigation, and net costs for 2018-19 to 2037-38 (in excel format akin to the Company's response to Staff 1-16(a) with all cells enabled and formulas intact). Also, include two columns to show respectively NED Total Take, and Rest-of-Portfolio Total Take.

- e. Please conduct a SENDOUT® analysis for the NED option using NED capacity amount of 65,000 Dth-per day. Assume any deficiency would be met from other sources (including Dracut) using the least-cost alternatives available. Please clearly identify any additional assumptions made for the SENDOUT® run. Report the annual total portfolio cost, supply cost, demand cost, mitigation, and net costs for 2018-19 to 2037-38 (in excel format akin to the Company's response to Staff 1-16(a) with all cells enabled and formulas intact). Also, include two columns to show respectively NED Total Take, and Rest-of-Portfolio Total Take.

### **RESPONSE:**

Please see Attachment OCA 2-5 for the requested SENDOUT® output for parts (a) through (e). Pursuant to Puc 203.08, the Company has a good faith basis for seeking confidential treatment of information in this response. The Company will submit a motion for confidential treatment regarding this information at or before the commencement of the hearing in such proceedings.

- a. Assumptions in the SENDOUT® run for the 105,000 Dth per day NED scenario include maintaining the blended Dracut capacity rate of approximately \$0.30 per Dth in order to satisfy the 10,000 Dth per day of unsupplied demand as a result of reducing the NED capacity by 10,000. For the Dracut supply assumption, the Company assumed the following for each month:

January - the average of the 10 highest basis days for the past 3 winters.

December and February - the average of the 20 highest basis days for the past 3 winters.

November and March - the average of the 30 highest basis days for the past 3 winters.

- b. Assumptions in the SENDOUT® run for the 95,000 Dth per day NED scenario include maintaining the existing Dracut capacity contracts until their expiration and then terminating each with the exception of needing to retain 20,000 Dth after the last contract expiration at the end of October 2029 in order to satisfy the 20,000 Dth per day of unsupplied demand as a result of reducing the NED capacity by 20,000. For the Dracut supply assumption, the Company assumed the following for each month:

January - the average of the 10 highest basis days for the past 3 winters.

December and February - the average of the 20 highest basis days for the past 3 winters.

November and March - the average of the 30 highest basis days for the past 3 winters.

- c. Assumptions in the SENDOUT® run for the 85,000 Dth per day NED scenario include maintaining the existing Dracut capacity contracts until their expiration and then terminating each with the exception of needing to retain 30,000 Dth after the last contract expiration at the end of October 2029 in order to satisfy the 30,000 Dth per day of unsupplied demand as a result of reducing the NED capacity by 30,000. For the Dracut supply assumption, the Company assumed the following for each month:

January - the average of the 10 highest basis days for the past 3 winters.

December and February - the average of the 20 highest basis days for the past 3 winters.

November and March - the average of the 30 highest basis days for the past 3 winters.

- d. Assumptions in the SENDOUT® run for the 75,000 Dth per day NED scenario include maintaining the existing Dracut capacity for 30,000 Dth per day and reducing the Dracut capacity contract from 20,000 Dth per day to 10,000 Dth per day upon its expiration after October 2020 in order to satisfy the 40,000 Dth per day of unsupplied demand as a result of reducing the NED capacity by 40,000. For the Dracut supply assumption, the Company assumed the following for each month:

January - the average of the 10 highest basis days for the past 3 winters.

December and February - the average of the 20 highest basis days for the past 3 winters.

November and March - the average of the 30 highest basis days for the past 3 winters.

- e. Assumptions in the SENDOUT® run for the 65,000 Dth per day NED scenario include maintaining the existing Dracut capacity throughout the forecast period in order to satisfy the 50,000 Dth per day of unsupplied demand as a result of reducing the NED capacity by 50,000. For the Dracut supply assumption, the Company assumed the following for each month:

January - the average of the 10 highest basis days for the past 3 winters.

December and February - the average of the 20 highest basis days for the past 3 winters.

It should be noted that any reduction in the NED capacity would limit the Company's ability to satisfy design day requirements and would not take into account the increased demand scenarios and potential propane plant retirements as detailed in the Company's response to Staff request Staff Tech-23. It should also be noted that the Precedent Agreement filed for approval in this docket does not contemplate any volumes below 100,000 Dth and would require renegotiated terms and conditions to address any lower volume.

105,000 Dth NED SENDOUT Run

Split Year	{a}	{b}	{c}	{d}	{e}	{f}	{g}
	Report 1	Report 1	Report 1	Report 1	{a} - {d}	Report 1	Report 1
	Total Costs	NED Supply Costs	NED Demand Costs	Cost Mitigation	Net Costs	NED Take	Rest of Portfolio Take
2018 19	159,865	45,163		16,610	143,255	10,124	7,736
2019 20	165,951	49,999		15,838	150,113	10,753	7,716
2020 21	169,518	52,848		14,925	154,593	11,028	7,649
2021 22	173,600	56,042		14,206	159,394	11,348	7,620
2022 23	177,427	59,154		13,497	163,930	11,680	7,588
2023 24	181,745	62,701		12,832	168,913	12,107	7,597
2024 25	183,727	64,460		12,121	171,606	12,293	7,547
2025 26	186,216	66,623		11,527	174,689	12,569	7,535
2026 27	188,750	68,891		10,890	177,860	12,857	7,514
2027 28	192,219	71,872		10,264	181,955	13,246	7,530
2028 29	194,059	73,578		9,616	184,443	13,437	7,485
2029 30	196,737	75,949		8,982	187,755	13,721	7,470
2030 31	199,569	78,485		8,233	191,336	14,027	7,454
2031 32	203,371	81,776		7,574	195,797	14,437	7,470
2032 33	205,441	83,671		6,853	198,588	14,640	7,427
2033 34	208,516	86,420		6,129	202,387	14,962	7,414
2034 35	211,658	89,328		4,973	206,685	15,306	7,382
2035 36	215,805	92,958		4,247	211,558	15,735	7,401
2036 37	217,927	94,919		3,547	214,380	15,924	7,357
2037 38	221,031	97,697		2,864	218,167	16,222	7,337
	3,853,132	1,452,534		195,728	3,657,404		

NPV = \$2,822,157 \$1,042,316 \$155,853 \$2,666,304

95,000 Dth NED SENDOUT Run

Split Year	{a}	{b}	{c}	{d}	{e}	{f}	{g}
	Report 1	Report 1	Report 1	Report 1	{a} - {d}	Report 1	Report 1
	Total Costs	NED Supply Costs	NED Demand Costs	Cost Mitigation	Net Costs	NED Take	Rest of Portfolio Take
2018 19	160,344	43,205		15,655	144,689	9,574	8,284
2019 20	166,490	48,047		14,952	151,538	10,236	8,243
2020 21	169,037	50,837		14,398	154,639	10,522	8,163
2021 22	173,227	53,999		13,919	159,308	10,858	8,118
2022 23	177,037	57,152		13,320	163,717	11,216	8,058
2023 24	181,479	60,703		12,779	168,700	11,657	8,053
2024 25	183,327	62,596		12,146	171,181	11,876	7,970
2025 26	185,748	64,874		11,552	174,196	12,179	7,930
2026 27	188,195	67,179		10,915	177,280	12,480	7,896
2027 28	191,605	70,238		10,288	181,317	12,890	7,891
2028 29	193,411	72,010		9,640	183,771	13,099	7,828
2029 30	194,588	74,407		8,970	185,618	13,394	7,802
2030 31	197,382	76,992		8,221	189,161	13,715	7,770
2031 32	201,159	80,323		7,562	193,597	14,137	7,775
2032 33	203,174	82,270		6,840	196,334	14,354	7,718
2033 34	206,224	85,056		6,117	200,107	14,687	7,693
2034 35	209,294	88,235		4,900	204,394	15,095	7,597
2035 36	212,997	92,132		3,020	209,977	15,567	7,573
2036 37	215,293	93,975		2,930	212,363	15,741	7,544
2037 38	218,584	96,712		2,822	215,762	16,036	7,527
	3,828,595	1,420,942		190,946	3,637,649		

NPV = \$2,806,476 \$1,017,924 [REDACTED] \$152,071 \$2,654,405



85,000 Dth NED SENDOUT Run

Split Year	{a}	{b}	{c}	{d}	{e}	{f}	{g}
	Report 1	Report 1	Report 1	Report 1	{a} - {d}	Report 1	Report 1
	Total Costs	NED Supply Costs	NED Demand Costs	Cost Mitigation	Net Costs	NED Take	Rest of Portfolio Take
2018 19	155,302	42,970		12,864	142,438	9,502	8,367
2019 20	161,529	47,546		12,237	149,292	10,087	8,393
2020 21	164,127	50,157		11,757	152,370	10,326	8,360
2021 22	168,372	53,121		11,349	157,023	10,614	8,364
2022 23	172,232	56,077		10,824	161,408	10,926	8,350
2023 24	176,705	59,519		10,318	166,387	10,344	9,369
2024 25	178,770	61,162		9,960	168,810	11,512	8,337
2025 26	181,387	63,218		9,619	171,768	11,770	8,343
2026 27	184,036	65,299		9,247	174,789	12,027	8,353
2027 28	187,645	68,126		8,795	178,850	12,391	8,395
2028 29	189,549	69,762		8,460	181,089	12,576	8,356
2029 30	192,273	72,196		8,021	184,252	12,892	8,308
2030 31	195,203	74,780		7,541	187,662	13,225	8,265
2031 32	199,035	78,150		6,946	192,089	13,666	8,250
2032 33	201,181	80,077		6,594	194,587	13,892	8,184
2033 34	204,332	82,848		6,098	198,234	14,233	8,151
2034 35	207,162	86,683		4,887	202,275	14,792	7,906
2035 36	210,467	90,784		2,994	207,473	15,299	7,846
2036 37	212,805	92,603		2,904	209,901	15,474	7,816
2037 38	216,192	95,294		2,797	213,395	15,767	7,801
	3,758,304	1,390,372		164,212	3,594,092		

NPV = \$2,751,393 \$996,217 \$129,585 \$2,621,808

75,000 Dth NED SENDOUT Run

Split Year	{a}	{b}	{c}	{d}	{e}	{f}	{g}
	Report 1	Report 1	Report 1	Report 1	{a} - {d}	Report 1	Report 1
	Total Costs	NED Supply Costs	NED Demand Costs	Cost Mitigation	Net Costs	NED Take	Rest of Portfolio Take
2018 19	150,192	42,970		10,001	140,191	9,502	8,367
2019 20	156,419	47,546		9,360	147,059	10,087	8,393
2020 21	159,599	50,141		8,931	150,668	10,324	8,362
2021 22	163,844	53,104		8,523	155,321	10,611	8,367
2022 23	167,706	56,077		7,997	159,709	10,926	8,350
2023 24	172,182	59,542		7,478	164,704	11,348	8,365
2024 25	174,247	61,182		7,133	167,114	11,515	8,334
2025 26	176,858	63,199		6,792	170,066	11,767	8,345
2026 27	179,509	65,299		6,421	173,088	12,027	8,353
2027 28	183,119	68,126		5,954	177,165	12,391	8,395
2028 29	185,033	69,697		5,647	179,386	12,561	8,371
2029 30	187,826	71,907		5,276	182,550	12,820	8,381
2030 31	190,809	74,299		4,854	185,955	13,108	8,383
2031 32	194,697	77,463		4,310	190,387	13,500	8,417
2032 33	196,892	79,216		4,034	192,858	13,686	8,392
2033 34	200,102	81,786		3,613	196,489	13,981	8,405
2034 35	203,265	85,426		2,884	200,381	14,508	8,192
2035 36	208,304	88,631		2,829	205,475	14,882	8,266
2036 37	210,869	90,312		2,801	208,068	15,032	8,262
2037 38	214,623	92,737		2,755	211,868	15,282	8,290
	3,676,095	1,378,660		117,593	3,558,502		

NPV = \$2,688,435 \$989,215 \$93,257 \$2,595,178

65,000 Dth NED SENDOUT Run

Split Year	{a}	{b}	{c}	{d}	{e}	{f}	{g}
	Report 1	Report 1	Report 1	Report 1	{a} - {d}	Report 1	Report 1
	Total Costs	NED Supply Costs	NED Demand Costs	Cost Mitigation	Net Costs	NED Take	Rest of Portfolio Take
2018 19	145,082	42,970		7,138	137,944	9,502	8,367
2019 20	151,309	47,546		6,483	144,826	10,087	8,392
2020 21	155,077	50,157		6,104	148,973	10,326	8,360
2021 22	159,322	53,121		5,696	153,626	10,614	8,364
2022 23	163,182	56,077		5,171	158,011	10,926	8,350
2023 24	167,655	59,519		4,637	163,018	11,344	8,369
2024 25	169,720	61,162		4,307	165,413	11,512	8,337
2025 26	172,337	63,218		3,966	168,371	11,770	8,342
2026 27	174,985	65,299		3,594	171,391	12,027	8,353
2027 28	178,595	68,126		3,114	175,481	12,391	8,395
2028 29	180,512	69,716		2,820	177,692	12,564	8,368
2029 30	183,640	71,725		2,738	180,902	12,792	8,408
2030 31	187,167	73,876		2,685	184,482	13,043	8,448
2031 32	191,882	76,680		2,638	189,244	13,381	8,537
2032 33	194,420	78,284		2,581	191,839	13,544	8,535
2033 34	198,574	80,496		2,535	196,039	13,784	8,604
2034 35	202,730	83,709		2,238	200,492	14,248	8,455
2035 36	209,056	86,437		2,184	206,872	14,554	8,596
2036 37	212,296	87,827		2,156	210,140	14,665	8,631
2037 38	217,275	89,848		2,114	215,161	14,861	8,713
	3,614,816	1,365,793		74,899	3,539,917		

NPV = \$2,638,042 \$981,558 \$59,539 \$2,578,503

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

DG 14-380

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

Staff Data Requests - Set 2

Date Request Received: 2/5/15  
Request No. Staff 2-1

Date of Response: 2/17/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Please provide an explanation of all variables listed in the Sendout runs presented in attachments 3, 4, and 5.

**RESPONSE:**

The Company assumes that Staff's request is referring to the SENDOUT® runs provided in Attachments 4, 5 and 6.

All pricing inputs (fixed and variable) are provided in Confidential Attachment Staff-2-1. Pursuant to Puc 203.08, the Company has a good faith basis for seeking confidential treatment of the information contained in Confidential Attachment Staff 2-1, and will file a motion for protective treatment regarding this information prior to the final hearing in this matter. The basis numbers used in the SENDOUT® inputs were derived through analysis performed by the LDC consortium based on various historical and forward looking basis relationships and include assumptions on various projects getting constructed and or expanded including the Constitution Pipeline to Wright, NY and the Millennium Pipeline to Ramapo, NJ.

		<u>NYMEX Strip as of December 9 2014</u>				<u>BASIS</u>		
<u>NED</u>						<u>NED</u>	<u>C2C</u>	<u>Atl Bridge</u>
MDQ =	115,000 Dth	Nov 18	\$ 4 218	Jan 22	\$ 5.002	\$ 0.237	\$ 0.237	\$ (0.149)
Fuel =	1.05%	Dec 18	\$ 4 396	Feb 22	\$ 4.978	\$ 1.177	\$ 1.177	\$ 0.580
Transportation Rate =	0.0811	Jan 19	\$ 4.537	Mar 22	\$ 4.910	\$ 1.648	\$ 1.648	\$ 0.947
Rate - Other Variable =	0.0067	Feb 19	\$ 4.515	Apr 22	\$ 4.595	\$ 1.299	\$ 1.299	\$ 1.187
Demand Rate (D1)		Mar 19	\$ 4.453	May 22	\$ 4.587	\$ 1.059	\$ 1.059	\$ 0.515
100% Load Factor Rate	per Dth	Apr 19	\$ 4.188	Jun 22	\$ 4.617	\$ (0.559)	\$ (0.559)	\$ (0.575)
		May 19	\$ 4 200	Jul 22	\$ 4.655	\$ (0.800)	\$ (0.800)	\$ (0.816)
		Jun 19	\$ 4 228	Aug 22	\$ 4.693	\$ (0.739)	\$ (0.739)	\$ (0.755)
		Jul 19	\$ 4 259	Sep 22	\$ 4.699	\$ (0.572)	\$ (0.572)	\$ (0.588)
		Aug 19	\$ 4 275	Oct 22	\$ 4.744	\$ (0.712)	\$ (0.712)	\$ (0.727)
		Sep 19	\$ 4 269	Nov 22	\$ 4.832	\$ (1.172)	\$ (1.172)	\$ (1.187)
		Oct 19	\$ 4 295	Dec 22	\$ 5.022	\$ (1.124)	\$ (1.124)	\$ (1.140)
		Nov 19	\$ 4 385	Jan 23	\$ 5.122			
		Dec 19	\$ 4.570	Feb 23	\$ 5.096			
		Jan 20	\$ 4.710	Mar 23	\$ 5.021			
		Feb 20	\$ 4 688	Apr 23	\$ 4.701			
		Mar 20	\$ 4 626	May 23	\$ 4.689			
		Apr 20	\$ 4 356	Jun 23	\$ 4.719			
		May 20	\$ 4 356	Jul 23	\$ 4.760			
		Jun 20	\$ 4 381	Aug 23	\$ 4.799			
		Jul 20	\$ 4.409	Sep 23	\$ 4.809			
		Aug 20	\$ 4.431	Oct 23	\$ 4.861			
		Sep 20	\$ 4.425	Nov 23	\$ 4.951			
		Oct 20	\$ 4.453	Dec 23	\$ 5.141			
		Nov 20	\$ 4.543	Jan 24	\$ 5.236			
		Dec 20	\$ 4.731	Feb 24	\$ 5.206			
		Jan 21	\$ 4 851	Mar 24	\$ 5.126			
		Feb 21	\$ 4 830	Apr 24	\$ 4.766			
		Mar 21	\$ 4.768	May 24	\$ 4.751			
		Apr 21	\$ 4.473	Jun 24	\$ 4.783			
		May 21	\$ 4.473	Jul 24	\$ 4.828			
		Jun 21	\$ 4.503	Aug 24	\$ 4.870			
		Jul 21	\$ 4.540	Sep 24	\$ 4.883			
		Aug 21	\$ 4.570	Oct 24	\$ 4.943			
		Sep 21	\$ 4.567	Nov 24	\$ 5.033			
		Oct 21	\$ 4 602	Dec 24	\$ 5.228			
		Nov 21	\$ 4 692	Jan 25	\$ 5.323			
		Dec 21	\$ 4 882	Feb 25	\$ 5.288			
				Mar 25	\$ 5.203			
				Apr 25	\$ 4.818			
				May 25	\$ 4.803			

Note 1: The monthly Basis is kept constant for each month.

Note 2: Actual NYMEX futures strip used through May 2025. Escalation is 1% thereafter based on prior year's same month, e.g. June 2025 is 1% higher than June 2024.

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

DG 14-380

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

## Staff Data Requests - Set 3

Date Request Received: 4/15/15  
Request No. Staff 3-1Date of Response: 4/20/15  
Respondent: Francisco C. DaFonte**REQUEST:**

Ref. Attachment Staff Tech-1 Excel file, Tab "Normal-ENGI AprMar", Cell O2. Please explain how the 1.46% value, which is in white text, was calculated. Provide any workpapers used to formulate this value and explain why this value is appropriate for use as a trend growth rate in your response.

**RESPONSE:**

The tab "Normal-ENGI AprMar" in Attachment Staff Tech-1 was taken from the design day forecast submitted with the Company's 2013 Least Cost Integrated Resource Plan ("LCIRP"). The resulting design day forecast is shown in column 2 of Table I on Bates p. 12 of the Company's testimony in this case. The 2013 IRP design day forecast was prepared by National Grid in conjunction with the Company and reflected the average annual growth rates for the 5-year LCIRP forecast period of 2013-2018 and then extended that average annual growth rate through 2040 in order to model the energy efficiency programs as a supply side resource. The applied average annual growth rate is the 1.46% saved in cell O2 of tab "Normal-ENGI AprMar" of the referenced Attachment Staff Tech-1. Attachment Staff-3-1.xlsx provides the derivation of this average annual growth rate in cell M110 of tab "ENG-Tab-2." This tab was also provided in Attachment Staff Tech-1.

As discussed in the Company's response to Staff request Staff Tech-1, column 3, "Design Day Updated," of Table I on Bates p. 12 of the Company's testimony reflects the most recent econometric data and results in a slightly lower overall growth rate when taking into account the continued decline in use per customer attributable to implementation of current energy efficiency targets. The design day LCIRP forecast was based on the economic data from 2013 and energy efficiency goals at that time. The major differences between the two design day forecasts come from the updated economic data and updated energy efficiency data stemming from the approximately 18 month gap between the development of each of the forecasts. With that said, the growth rate of 1.46% in the Company's LCIRP is only slightly higher than the growth rate in the Company's "Design Day Updated" forecast. Over the 24-year forecast period, the difference between the two Design Day forecasts is approximately 2.6% which is approximately a 0.11%



per year difference on average. Since the two forecasts are similar, it is reasonable to assume that the 1.46% growth trend in the LCIRP is also reasonable.

It should also be noted that the overall forecast shown in column 6, "Total Updated Design Day," of Table I on Bates p. 12 of the Company's testimony does not include any demand associated with the Company's Keene Division or any growth through expansion into currently unserved communities and does not reflect the most recent capacity-exempt load that has returned to the Company's Default Service. An estimated forecast updated to reflect this additional load was previously provided in the Company's response to Staff request Staff Tech-23.

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-1

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Refer to the Direct Testimony of Mr. Da Fonte, Table 1 on page 12.

- a. Please provide in electronic spreadsheet format all supporting models and data required to replicate the design day forecasts presented in the first two columns labeled Design Day IRP and Design Day Updated.
- b. Please explain what is meant by the column labeled Design Day Updated and how it compares to the Design Day forecast included in the IRP
- c. Please explain the major differences between the two Design Day forecasts, IRP and Updated. How much should they differ from one another?

**RESPONSE:**

- a. Please see Attachment Staff Tech-1.xlsx.
- b. The Design Day Updated reflects the most recent econometric data and results in a slightly lower overall growth rate when taking into account the continued decline in use per customer attributable to implementation of current energy efficiency targets. The Design Day IRP forecast was based on the economic data from 2013 and energy efficiency goals at that time.
- c. The major differences between the two Design Day forecasts come from the updated economic data and updated energy efficiency data stemming from the approximately 18 month gap between the development of each of the forecasts.

There is not a significant difference between the two forecasts. Over the 24-year forecast period, the difference between the two Design Day forecasts is approximately 2.6% which is approximately a 0.11% per year difference on average.

(Dth)

1.46%

	E	G	H	I	J	K	L	M	N	O	P	Q	R	S	
	KMHT	ENGI SCC													
Date	HDDn	SegReg-n	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	
376	1-Apr	23	42,061	42,380	42,778	44,005	44,847	46,157	47,232	48,240	48,944	49,658	50,383	51,118	51,864
376	2-Apr	25	46,438	46,790	47,230	48,585	49,513	50,960	52,147	53,260	54,037	54,825	55,625	56,437	57,260
376	3-Apr	22	39,658	39,959	40,335	41,492	42,285	43,520	44,534	45,484	46,148	46,821	47,504	48,197	48,900
376	4-Apr	22	37,309	37,592	37,946	39,034	39,780	40,943	41,896	42,790	43,414	44,047	44,690	45,342	46,003
376	5-Apr	40	71,303	71,843	72,519	74,599	76,025	78,247	80,069	81,778	82,971	84,182	85,411	86,658	87,923
376	6-Apr	29	56,615	57,044	57,581	59,232	60,364	62,128	63,575	64,932	65,879	66,840	67,815	68,805	69,809
376	7-Apr	21	43,376	43,705	44,116	45,382	46,249	47,600	48,709	49,748	50,474	51,210	51,957	52,715	53,484
376	8-Apr	26	49,338	49,712	50,180	51,619	52,605	54,143	55,403	56,586	57,412	58,250	59,100	59,962	60,837
376	9-Apr	14	27,345	27,553	27,812	28,610	29,156	30,008	30,707	31,363	31,820	32,284	32,755	33,233	33,718
376	10-Apr	22	38,393	38,684	39,048	40,168	40,936	42,132	43,113	44,033	44,676	45,328	45,989	46,660	47,341
376	11-Apr	21	33,777	34,033	34,353	35,338	36,014	37,066	37,929	38,739	39,304	39,877	40,459	41,049	41,648
376	12-Apr	20	35,281	35,549	35,883	36,912	37,618	38,717	39,619	40,464	41,653	42,261	42,878	43,504	44,141
376	13-Apr	10	20,227	20,380	20,572	21,162	21,567	22,197	22,714	23,198	23,537	23,880	24,228	24,581	24,939
376	14-Apr	15	26,450	26,651	26,902	27,673	28,202	29,026	29,702	30,336	30,779	31,228	31,683	32,145	32,614
376	15-Apr	19	32,832	33,081	33,393	34,350	35,007	36,030	36,869	37,656	38,205	38,762	39,327	39,901	40,483
376	16-Apr	22	39,635	39,936	40,311	41,468	42,260	43,495	44,508	45,458	46,121	46,794	47,477	48,170	48,873
376	17-Apr	17	29,585	29,810	30,090	30,953	31,545	32,467	33,223	33,932	34,429	34,929	35,433	35,955	36,479
376	18-Apr	9	15,496	15,613	15,760	16,212	16,522	17,005	17,401	17,772	18,031	18,294	18,561	18,831	19,105
376	19-Apr	13	20,041	20,193	20,383	20,967	21,368	21,993	22,505	22,985	23,320	23,660	24,005	24,355	24,710
376	20-Apr	7	17,122	17,252	17,415	17,914	18,257	18,790	19,228	19,638	19,924	20,214	20,509	20,808	21,111
376	21-Apr	13	21,283	21,444	21,646	22,267	22,692	23,356	23,899	24,409	24,765	25,126	25,492	25,864	26,241
376	22-Apr	9	16,873	17,001	17,161	17,653	17,991	18,516	18,947	19,352	19,634	19,920	20,210	20,505	20,804
376	23-Apr	13	21,599	21,763	21,968	22,598	23,030	23,703	24,255	24,772	25,133	25,499	25,871	26,248	26,631
376	24-Apr	14	21,201	21,362	21,563	22,182	22,606	23,266	23,808	24,316	24,671	25,031	25,396	25,766	26,142
376	25-Apr	11	14,422	14,531	14,668	15,089	15,377	15,826	16,195	16,540	16,781	17,026	17,274	17,526	17,781
376	26-Apr	8	15,439	15,556	15,703	16,153	16,462	16,943	17,338	17,708	17,966	18,228	18,494	18,764	19,037
376	27-Apr	8	16,681	16,808	16,966	17,453	17,786	18,306	18,732	19,132	19,411	19,694	19,981	20,272	20,567
376	28-Apr	15	24,237	24,420	24,650	25,357	25,842	26,597	27,216	27,797	28,203	28,614	29,031	29,454	29,884
376	29-Apr	13	21,757	21,922	22,128	22,763	23,198	23,876	24,432	24,954	25,317	25,686	26,061	26,441	26,827
376	30-Apr	15	26,134	26,332	26,580	27,342	27,865	28,679	29,347	29,973	30,411	30,855	31,305	31,762	32,225
377	1-May	0	15,936	16,057	16,208	16,673	16,991	17,488	17,895	18,277	18,543	18,813	19,087	19,365	19,647
377	2-May	0	13,114	13,213	13,338	13,720	13,983	14,391	14,726	15,041	15,260	15,482	15,708	15,937	16,169
377	3-May	0	16,037	16,159	16,311	16,778	17,099	17,599	18,009	18,393	18,661	18,933	19,209	19,489	19,773
377	4-May	0	17,455	17,588	17,753	18,262	18,611	19,155	19,601	20,020	20,311	20,607	20,907	21,212	21,521
377	5-May	13	21,615	21,779	21,984	22,614	23,046	23,720	24,272	24,790	25,152	25,519	25,891	26,269	26,652
377	6-May	20	34,422	34,683	35,010	36,014	36,702	37,775	38,654	39,479	40,055	40,639	41,232	41,833	42,443
377	7-May	10	18,962	19,106	19,286	19,839	20,218	20,809	21,293	21,748	22,065	22,387	22,713	23,044	23,380
377	8-May	4	16,096	16,219	16,371	16,841	17,163	17,664	18,075	18,461	18,730	19,003	19,280	19,561	19,846
377	9-May	5	11,409	11,496	11,604	11,937	12,165	12,520	12,812	13,085	13,276	13,469	13,665	13,864	14,066
377	10-May	0	12,916	13,014	13,137	13,513	13,772	14,174	14,504	14,814	15,029	15,248	15,470	15,695	15,924
377	11-May	0	15,764	15,884	16,033	16,493	16,809	17,300	17,703	18,080	18,344	18,611	18,882	19,157	19,436
377	12-May	0	16,241	16,364	16,518	16,992	17,316	17,822	18,237	18,627	18,898	19,173	19,452	19,735	20,023
377	13-May	13	20,659	20,816	21,012	21,615	22,028	22,671	23,199	23,694	24,040	24,390	24,746	25,107	25,473
377	14-May	9	17,040	17,169	17,331	17,828	18,169	18,700	19,135	19,544	19,828	20,117	20,410	20,707	21,009
377	15-May	15	22,995	23,169	23,387	24,058	24,518	25,234	25,822	26,373	26,757	27,147	27,543	27,945	28,352
377	16-May	15	21,120	21,280	21,480	22,097	22,519	23,177	23,717	24,223	24,576	24,934	25,298	25,667	26,041
377	17-May	12	18,880	19,023	19,202	19,753	20,131	20,719	21,201	21,654	21,969	22,289	22,614	22,944	23,278
377	18-May	9	17,980	18,116	18,287	18,811	19,171	19,731	20,190	20,621	20,922	21,227	21,536	21,850	22,169
377	19-May	8	16,998	17,127	17,288	17,784	18,124	18,653	19,087	19,495	19,779	20,067	20,359	20,656	20,957
377	20-May	10	16,432	16,557	16,712	17,192	17,520	18,032	18,452	18,846	19,121	19,400	19,683	19,970	20,261
377	21-May	12	19,173	19,319	19,501	20,060	20,443	21,041	21,531	21,990	22,311	22,636	22,966	23,301	23,641
377	22-May	14	21,201	21,362	21,563	22,182	22,606	23,266	23,808	24,316	24,671	25,031	25,396	25,766	26,142
377	23-May	9	13,440	13,542	13,669	14,062	14,330	14,749	15,093	15,415	15,639	15,867	16,098	16,333	16,571
377	24-May	9	15,157	15,271	15,415	15,857	16,160	16,633	17,020	17,383	17,637	17,894	18,155	18,420	18,688
377	25-May	6	16,457	16,581	16,737	17,217	17,547	18,059	18,480	18,874	19,149	19,428	19,711	19,998	20,289
377	26-May	3	15,882	16,002	16,153	16,616	16,934	17,429	17,835	18,215	18,481	18,750	19,023	19,300	19,581
377	27-May	11	15,957	16,078	16,229	16,695	17,014	17,511	17,919	18,301	18,568	18,839	19,114	19,393	19,676
377	28-May	6	15,824	15,944	16,094	16,556	16,872	17,365	17,770	18,149	18,413	18,681	18,953	19,229	19,509

377	29-May	4	14,041	14,147	14,280	14,690	14,971	15,408	15,767	16,104	16,338	16,576	16,818	17,312
377	30-May	11	11,734	11,823	11,934	12,276	12,511	12,876	13,176	13,458	13,654	13,853	14,055	14,468
377	31-May	12	16,508	16,633	16,790	17,272	17,602	18,116	18,538	18,934	19,209	19,489	19,773	20,353
378	1-Jun	0	17,014	17,143	17,305	17,801	18,141	18,671	19,106	19,514	19,798	20,087	20,370	20,978
378	2-Jun	0	15,180	15,295	15,439	15,882	16,185	16,658	17,046	17,410	17,663	17,920	18,181	18,715
378	3-Jun	0	13,450	13,552	13,679	14,071	14,340	14,759	15,103	15,425	15,650	15,878	16,109	16,582
378	4-Jun	12	16,786	16,913	17,072	17,562	17,898	18,421	18,849	19,252	19,532	19,817	20,106	20,696
378	5-Jun	11	14,577	14,688	14,826	15,251	15,543	15,997	16,369	16,719	16,962	17,209	17,460	17,972
378	6-Jun	8	12,932	13,030	13,153	13,789	14,192	14,522	14,832	15,048	15,267	15,489	15,715	15,944
378	7-Jun	0	14,243	14,351	14,486	14,901	15,186	15,630	15,994	16,335	16,573	16,814	17,059	17,308
378	8-Jun	0	14,723	14,835	14,975	15,404	15,699	16,157	16,534	16,886	17,132	17,382	17,635	17,892
378	9-Jun	0	13,266	13,367	13,493	14,145	14,558	14,897	15,215	15,437	15,662	15,890	16,121	16,356
378	10-Jun	0	13,010	13,108	13,232	13,611	13,871	14,277	14,609	14,921	15,138	15,359	15,583	15,810
378	11-Jun	0	13,061	13,160	13,284	13,665	13,926	14,333	14,667	14,980	15,198	15,419	15,644	15,872
378	12-Jun	0	10,951	11,034	11,138	11,457	11,676	12,018	12,297	12,560	12,743	12,929	13,117	13,308
378	13-Jun	5	9,033	9,101	9,187	9,450	9,631	9,913	10,143	10,360	10,511	10,664	10,819	10,976
378	14-Jun	0	11,881	11,971	12,084	12,431	12,668	13,038	13,342	13,627	13,825	14,026	14,230	14,437
378	15-Jun	0	13,842	13,947	14,078	14,482	14,758	15,190	15,543	15,875	16,106	16,341	16,579	16,821
378	16-Jun	4	12,839	12,936	13,058	13,432	13,689	14,089	14,417	14,725	14,940	15,158	15,379	15,603
378	17-Jun	8	13,871	13,977	14,108	14,513	14,790	15,222	15,577	15,909	16,141	16,376	16,615	16,857
378	18-Jun	0	15,144	15,259	15,402	15,844	16,147	16,619	17,006	17,369	17,622	17,879	18,140	18,404
378	19-Jun	4	11,843	11,933	12,045	12,391	12,627	12,996	13,299	13,583	13,781	13,982	14,186	14,393
378	20-Jun	0	8,730	8,796	8,879	9,134	9,308	9,580	9,804	10,013	10,158	10,306	10,456	10,608
378	21-Jun	0	10,968	11,051	11,155	11,475	11,694	12,036	12,316	12,579	12,762	12,948	13,137	13,328
378	22-Jun	0	11,820	11,909	12,022	12,366	12,603	12,971	13,273	13,556	13,754	13,954	14,157	14,363
378	23-Jun	0	11,812	11,902	12,014	12,358	12,594	12,962	13,264	13,547	13,745	13,945	14,148	14,354
378	24-Jun	0	11,864	11,954	12,066	12,412	12,649	13,019	13,322	13,607	13,805	14,006	14,210	14,417
378	25-Jun	0	12,037	12,128	12,243	12,594	12,834	13,209	13,517	13,806	14,007	14,211	14,418	14,628
378	26-Jun	0	9,720	9,794	9,886	10,170	10,364	10,667	10,916	11,148	11,311	11,476	11,643	11,812
378	27-Jun	0	7,056	7,110	7,177	7,382	7,523	7,743	7,924	8,093	8,210	8,329	8,450	8,573
378	28-Jun	0	8,815	8,882	8,965	9,222	9,399	9,673	9,898	10,110	10,257	10,406	10,557	10,711
378	29-Jun	0	10,933	11,016	11,119	11,438	11,657	11,998	12,277	12,539	12,722	12,907	13,095	13,286
378	30-Jun	0	11,215	11,300	11,407	11,734	11,958	12,308	12,594	12,863	13,050	13,240	13,433	13,629
379	1-Jul	0	11,538	11,626	11,735	12,072	12,302	12,662	12,957	13,233	13,426	13,622	13,820	14,021
379	2-Jul	0	11,676	11,765	11,875	12,216	12,450	12,813	13,112	13,392	13,587	13,785	13,986	14,190
379	3-Jul	2	9,689	9,763	9,854	10,137	10,331	10,633	11,112	11,438	11,604	11,774	11,944	12,114
379	4-Jul	0	8,242	8,304	8,382	8,623	8,788	9,044	9,255	9,453	9,590	9,730	9,872	10,016
379	5-Jul	0	10,088	10,165	10,260	10,554	10,756	11,071	11,328	11,570	11,738	11,909	12,082	12,258
379	6-Jul	0	10,732	10,813	10,915	11,228	11,442	11,777	12,051	12,308	12,487	12,669	12,853	13,040
379	7-Jul	0	10,652	10,733	10,834	11,145	11,358	11,690	11,962	12,217	12,395	12,575	12,758	12,944
379	8-Jul	0	10,647	10,727	10,828	11,139	11,352	11,684	11,956	12,211	12,389	12,569	12,752	12,938
379	9-Jul	0	10,703	10,785	10,886	11,198	11,412	11,746	12,019	12,276	12,455	12,636	12,820	13,007
379	10-Jul	0	8,446	8,510	8,591	8,837	9,006	9,269	9,485	9,687	9,828	9,971	10,116	10,263
379	11-Jul	0	6,253	6,300	6,360	6,542	6,667	6,862	7,022	7,172	7,276	7,382	7,489	7,598
379	12-Jul	0	8,712	8,778	8,861	9,115	9,289	9,560	9,783	9,992	10,137	10,285	10,435	10,587
379	13-Jul	0	11,101	11,185	11,290	11,614	11,836	12,182	12,465	12,731	12,917	13,105	13,296	13,490
379	14-Jul	0	10,940	11,023	11,126	11,445	11,664	12,005	12,285	12,547	12,730	12,915	13,103	13,294
379	15-Jul	0	10,603	10,683	10,784	11,093	11,305	11,635	11,906	12,160	12,337	12,517	12,699	12,884
379	16-Jul	0	10,353	10,432	10,530	10,832	11,039	11,362	11,626	11,874	12,047	12,222	12,400	12,581
379	17-Jul	0	7,963	8,024	8,099	8,331	8,491	8,739	8,942	9,133	9,266	9,401	9,538	9,677
379	18-Jul	1	5,942	5,987	6,044	6,217	6,336	6,521	6,673	6,815	6,914	7,014	7,116	7,219
379	19-Jul	0	9,471	9,543	9,633	9,909	10,099	10,394	10,636	10,863	11,021	11,181	11,344	11,509
379	20-Jul	0	11,753	11,843	11,954	12,297	12,532	12,898	13,198	13,480	13,676	13,875	14,077	14,282
379	21-Jul	0	10,114	10,191	10,287	10,582	10,784	11,099	11,358	11,600	11,769	11,940	12,114	12,290
379	22-Jul	0	10,083	10,159	10,255	10,549	10,751	11,065	11,323	11,564	11,733	11,904	12,077	12,253
379	23-Jul	0	10,115	10,192	10,288	10,583	10,785	11,101	11,359	11,601	11,770	11,941	12,115	12,291
379	24-Jul	0	8,162	8,224	8,301	8,539	8,703	8,957	9,166	9,361	9,497	9,635	9,775	9,917
379	25-Jul	0	6,209	6,256	6,314	6,496	6,620	6,813	6,972	7,121	7,224	7,329	7,436	7,544
379	26-Jul	0	8,461	8,526	8,606	8,853	9,022	9,286	9,502	9,705	9,846	9,989	10,134	10,281
379	27-Jul	0	10,523	10,603	10,702	11,009	11,220	11,548	11,816	12,069	12,244	12,422	12,603	12,787
379	28-Jul	0	10,559	10,639	10,739	11,047	11,258	11,587	11,857	12,110	12,286	12,465	12,646	12,830
379	29-Jul	0	10,717	10,798	10,900	11,212	11,427	11,761	12,034	12,291	12,470	12,652	12,836	13,023
379	30-Jul	0	10,781	10,862	10,965	11,279	11,495	11,831	12,106	12,364	12,544	12,727	12,912	13,100
379	31-Jul	0	8,526	8,591	8,672	8,921	9,091	9,357	9,575	9,779	9,921	10,065	10,211	10,360
380	1-Aug	0	6,429	6,478	6,539	6,727	6,855	7,055	7,220	7,374	7,481	7,590	7,700	7,812
380	2-Aug	0	8,469	8,533	8,613	8,860	9,030	9,293	9,510	9,713	9,854	9,997	10,142	10,290

380	3-Aug	0	10,240	10,317	10,414	10,713	10,918	11,237	11,499	11,744	11,915	12,088	12,264	12,441	12,624
380	4-Aug	0	10,013	10,089	10,184	10,476	10,676	10,988	11,244	11,484	11,651	11,821	11,993	12,168	12,345
380	5-Aug	0	9,887	9,962	10,056	10,344	10,542	10,850	11,102	11,339	11,505	11,672	11,842	12,014	12,189
380	6-Aug	0	10,026	10,102	10,197	10,490	10,690	11,003	11,259	11,499	11,667	11,837	12,009	12,184	12,361
380	7-Aug	0	8,358	8,421	8,500	8,744	8,911	9,171	9,385	9,585	9,725	9,866	10,010	10,156	10,304
380	8-Aug	0	6,472	6,521	6,583	6,772	6,901	7,103	7,268	7,423	7,531	7,640	7,751	7,864	7,978
380	9-Aug	0	8,393	8,457	8,536	8,781	8,949	9,211	9,425	9,626	9,766	9,908	10,052	10,198	10,346
380	10-Aug	0	10,537	10,617	10,717	11,025	11,235	11,564	11,833	12,085	12,261	12,440	12,621	12,805	12,991
380	11-Aug	0	10,772	10,854	10,956	11,270	11,486	11,821	12,096	12,355	12,578	12,718	12,903	13,091	13,282
380	12-Aug	0	10,934	11,017	11,121	11,440	11,658	11,999	12,278	12,540	12,723	12,908	13,096	13,287	13,480
380	13-Aug	0	11,305	11,390	11,497	11,827	12,053	12,406	12,694	12,965	13,154	13,346	13,540	13,737	13,937
380	14-Aug	0	9,222	9,292	9,380	9,649	9,833	10,121	10,356	10,577	10,731	10,887	11,045	11,206	11,369
380	15-Aug	0	6,710	6,761	6,825	7,021	7,155	7,364	7,535	7,696	7,808	7,921	8,036	8,153	8,272
380	16-Aug	0	8,748	8,815	8,898	9,153	9,328	9,600	9,824	10,034	10,180	10,328	10,478	10,630	10,785
380	17-Aug	6	11,363	11,449	11,557	11,888	12,115	12,469	12,760	13,032	13,222	13,415	13,610	13,808	14,009
380	18-Aug	0	13,004	13,103	13,226	13,605	13,865	14,271	14,603	14,915	15,132	15,352	15,576	15,803	16,033
380	19-Aug	0	13,268	13,369	13,494	13,881	14,147	14,560	14,899	15,217	15,439	15,664	15,892	16,124	16,359
380	20-Aug	0	11,657	11,745	11,855	12,196	12,429	12,792	13,090	13,369	13,564	13,762	13,962	14,165	14,371
380	21-Aug	0	9,810	9,885	9,978	10,264	10,460	10,766	11,016	11,251	11,415	11,581	11,750	11,921	12,095
380	22-Aug	0	7,768	7,827	7,901	8,128	8,283	8,525	8,724	8,910	9,039	9,170	9,303	9,438	9,575
380	23-Aug	0	10,078	10,155	10,250	10,544	10,746	11,060	11,317	11,559	11,727	11,898	12,071	12,247	12,425
380	24-Aug	1	12,395	12,489	12,607	12,968	13,216	13,603	13,919	14,216	14,423	14,633	14,846	15,062	15,281
380	25-Aug	3	13,110	13,210	13,334	13,717	13,979	14,387	14,722	15,036	15,256	15,478	15,703	15,932	16,164
380	26-Aug	1	14,076	14,183	14,316	14,727	15,008	15,447	15,806	16,144	16,379	16,618	16,860	17,106	17,355
380	27-Aug	1	14,076	14,183	14,316	14,727	15,008	15,447	15,806	16,144	16,379	16,618	16,860	17,106	17,355
380	28-Aug	0	11,365	11,451	11,559	11,890	12,118	12,472	12,762	13,034	13,224	13,417	13,612	13,810	14,011
380	29-Aug	0	8,238	8,300	8,378	8,619	8,783	9,040	9,251	9,448	9,585	9,724	9,865	10,009	10,155
380	30-Aug	0	9,591	9,664	9,755	10,034	10,226	10,525	10,770	11,000	11,160	11,322	11,487	11,654	11,824
380	31-Aug	0	11,885	11,975	12,087	12,434	12,672	13,042	13,346	13,631	13,829	14,030	14,234	14,441	14,651
381	1-Sep	4	12,215	12,308	12,424	12,780	13,025	13,405	13,717	14,010	14,214	14,421	14,631	14,844	15,060
381	2-Sep	8	13,718	13,822	13,952	14,352	14,626	15,054	15,404	15,733	15,962	16,193	16,431	16,670	16,913
381	3-Sep	0	15,244	15,360	15,504	15,949	16,254	16,729	17,118	17,484	17,738	17,996	18,258	18,524	18,794
381	4-Sep	0	12,106	12,198	12,313	12,666	12,908	13,285	13,594	13,885	14,087	14,292	14,500	14,711	14,925
381	5-Sep	5	8,527	8,592	8,672	8,921	9,092	9,357	9,575	9,780	9,922	10,066	10,212	10,361	10,512
381	6-Sep	0	11,610	11,698	11,808	12,147	12,379	12,740	13,037	13,315	13,509	13,706	13,906	14,109	14,314
381	7-Sep	0	13,988	14,094	14,227	14,635	14,915	15,351	15,708	16,043	16,277	16,514	16,755	16,999	17,247
381	8-Sep	0	12,937	13,035	13,157	13,535	13,794	14,197	14,527	14,837	15,053	15,272	15,494	15,720	15,949
381	9-Sep	0	12,950	13,048	13,171	13,549	13,808	14,212	14,542	14,853	15,069	15,289	15,512	15,738	15,967
381	10-Sep	0	13,167	13,266	13,391	13,775	14,039	14,449	14,785	15,101	15,321	15,544	15,770	16,000	16,233
381	11-Sep	1	11,099	11,183	11,288	11,612	11,834	12,180	12,464	12,730	12,915	13,103	13,294	13,488	13,684
381	12-Sep	2	9,170	9,239	9,326	9,594	9,777	10,063	10,297	10,517	10,670	10,825	10,983	11,143	11,305
381	13-Sep	0	11,732	11,821	11,932	12,274	12,509	12,874	13,174	13,455	13,651	13,850	14,052	14,257	14,465
381	14-Sep	14	20,411	20,565	20,759	21,354	21,762	22,398	22,920	23,409	23,750	24,096	24,447	24,803	25,165
381	15-Sep	12	18,722	18,864	19,041	19,587	19,962	20,545	21,023	21,472	21,785	22,103	22,425	22,752	23,084
381	16-Sep	7	17,755	17,890	18,058	18,576	18,931	19,484	19,938	20,363	20,660	20,961	21,267	21,577	21,892
381	17-Sep	5	16,581	16,707	16,864	17,348	17,680	18,196	18,620	19,017	19,294	19,575	19,860	20,149	20,443
381	18-Sep	0	13,244	13,344	13,470	13,856	14,121	14,533	14,872	15,189	15,411	15,636	15,864	16,095	16,329
381	19-Sep	3	10,520	10,600	10,700	11,007	11,217	11,545	11,814	12,066	12,241	12,419	12,600	12,783	12,969
381	20-Sep	0	12,430	12,524	12,642	13,004	13,253	13,640	13,958	14,256	14,463	14,674	14,888	15,105	15,325
381	21-Sep	0	14,623	14,734	14,873	15,300	15,592	16,048	16,421	16,772	17,016	17,264	17,516	17,771	18,030
381	22-Sep	0	14,622	14,732	14,871	15,298	15,590	16,046	16,419	16,770	17,014	17,262	17,514	17,769	18,028
381	23-Sep	0	14,508	14,618	14,755	15,179	15,469	15,921	16,291	16,639	16,882	17,128	17,378	17,631	17,888
381	24-Sep	0	14,800	14,912	15,052	15,484	15,780	16,241	16,619	16,974	17,221	17,472	17,727	17,985	18,247
381	25-Sep	0	13,126	13,226	13,350	13,733	13,996	14,405	14,740	15,055	15,274	15,497	15,723	15,952	16,184
381	26-Sep	11	12,265	12,358	12,474	12,832	13,077	13,459	13,772	14,066	14,271	14,479	14,690	14,904	15,121
381	27-Sep	10	14,460	14,570	14,707	15,129	15,418	15,869	16,238	16,585	16,826	17,071	17,320	17,572	17,828
381	28-Sep	12	19,648	19,797	19,983	20,556	20,949	21,561	22,063	22,534	22,863	23,196	23,534	23,877	24,225
381	29-Sep	15	25,185	25,376	25,615	26,350	26,854	27,638	28,282	28,885	29,307	29,734	30,168	30,608	31,054
381	30-Sep	14	24,183	24,366	24,595	25,301	25,785	26,538	27,156	27,736	28,140	28,550	28,966	29,388	29,817
382	1-Oct	0	18,289	18,428	18,601	19,135	19,501	20,071	20,538	20,976	21,282	21,592	21,907	22,226	22,550
382	2-Oct	8	15,092	15,206	15,349	15,789	16,091	16,561	16,947	17,309	17,561	17,817	18,077	18,340	18,607
382	3-Oct	8	11,952	12,043	12,156	12,505	12,744	13,116	13,421	13,708	13,908	14,111	14,317	14,526	14,738
382	4-Oct	3	13,849	13,954	14,086	14,490	14,767	15,198	15,552	15,884	16,115	16,350	16,588	16,830	17,075
382	5-Oct	5	15,316	15,432	15,578	16,025	16,331	16,808	17,199	17,566	17,822	18,082	18,345	18,612	18,883
382	6-Oct	4	14,809	14,921	15,061	15,493	15,789	16,251	16,629	16,984	17,232	17,483	17,738	17,996	18,258
382	7-Oct	8	15,100	15,215	15,358	15,798	16,100	16,571	16,957	17,319	17,571	17,827	18,087	18,351	18,618

Exhibit MW-9

382	8-Oct	11	16,432	16,556	16,712	17,191	17,520	18,032	18,452	18,845	19,120	19,399	19,682	20,260
382	9-Oct	13	18,934	19,077	19,257	19,809	20,188	20,778	21,262	21,716	22,032	22,353	22,679	23,345
382	10-Oct	19	28,293	28,507	28,776	29,601	30,167	31,048	31,771	32,449	32,923	33,403	33,890	34,886
382	11-Oct	20	33,542	33,796	34,114	35,092	35,763	36,808	37,665	38,469	39,030	39,599	40,177	41,358
382	12-Oct	18	33,253	33,505	33,820	34,790	35,455	36,491	37,341	38,138	38,694	39,258	39,831	41,002
382	13-Oct	11	20,543	20,698	20,893	21,492	21,903	22,543	23,068	23,561	24,252	24,606	25,329	
382	14-Oct	9	18,296	18,435	18,608	19,142	19,508	20,078	20,545	20,984	21,600	21,915	22,234	22,558
382	15-Oct	10	16,906	17,035	17,195	17,688	18,026	18,553	18,985	19,390	19,673	19,960	20,251	20,845
382	16-Oct	20	31,486	31,725	32,023	32,942	33,572	34,553	35,357	36,112	36,638	37,172	37,714	38,264
382	17-Oct	19	29,241	29,463	29,740	30,593	31,178	32,089	32,837	33,537	34,027	34,523	35,027	36,056
382	18-Oct	18	31,062	31,298	31,592	32,498	33,120	34,087	34,881	35,626	36,145	36,672	37,207	38,301
382	19-Oct	15	27,557	27,766	28,027	28,831	29,382	30,241	30,945	31,606	32,067	32,535	33,010	33,979
382	20-Oct	11	19,752	19,902	20,089	20,665	21,060	21,676	22,180	22,654	22,984	23,319	23,659	24,004
382	21-Oct	11	18,645	18,787	18,963	19,507	19,880	20,461	20,937	21,384	21,696	22,012	22,333	22,989
382	22-Oct	24	41,324	41,637	42,029	43,235	44,061	45,349	46,404	47,395	48,086	48,788	49,500	50,222
382	23-Oct	26	44,775	45,115	45,539	46,845	47,741	49,136	50,280	51,353	52,102	52,862	53,633	54,416
382	24-Oct	24	41,370	41,683	42,076	43,282	44,110	45,399	46,456	47,447	48,842	49,555	50,278	51,012
382	25-Oct	28	50,733	51,118	51,599	53,079	54,093	55,674	56,970	58,186	59,035	59,896	60,770	62,557
382	26-Oct	17	33,515	33,769	34,087	35,065	35,735	36,779	37,636	38,439	39,000	39,569	40,146	40,732
382	27-Oct	19	35,995	36,268	36,609	37,659	38,379	39,500	40,420	41,283	41,885	42,496	43,116	44,385
382	28-Oct	18	32,779	33,027	33,338	34,294	34,950	35,971	36,808	37,594	38,142	38,698	39,262	39,835
382	29-Oct	11	20,385	20,539	20,732	21,327	21,735	22,370	22,891	23,379	23,720	24,066	24,417	24,773
382	30-Oct	9	16,105	16,227	16,380	16,850	17,172	17,674	18,085	18,471	19,014	19,291	19,572	19,857
382	31-Oct	6	12,391	12,485	12,603	12,964	13,212	13,598	13,915	14,212	14,419	14,629	14,842	15,058
383	1-Nov	19	29,060	29,281	29,556	30,404	30,985	31,891	32,633	33,330	33,816	34,309	34,809	35,317
383	2-Nov	14	23,867	24,048	24,274	24,970	25,447	26,191	26,801	27,373	27,772	28,177	28,588	29,005
383	3-Nov	13	23,338	23,515	23,737	24,417	24,884	25,611	26,208	26,767	27,157	27,553	27,955	28,777
383	4-Nov	14	24,183	24,366	24,595	25,301	25,785	26,538	27,156	27,736	28,140	28,550	28,968	29,811
383	5-Nov	21	36,735	37,014	37,362	38,433	39,168	40,313	41,251	42,132	42,746	43,370	44,003	45,296
383	6-Nov	21	35,809	36,081	36,420	37,465	38,181	39,297	40,212	41,070	41,669	42,277	42,894	44,155
383	7-Nov	18	29,346	29,568	29,847	30,703	31,289	32,044	32,954	33,657	34,148	34,646	35,151	36,664
383	8-Nov	15	25,683	25,877	26,121	26,870	27,384	28,184	28,840	29,456	29,885	30,321	30,763	31,212
383	9-Nov	19	34,097	34,356	34,679	35,674	36,356	37,418	38,289	39,107	39,677	40,256	40,843	41,439
383	10-Nov	19	34,256	34,515	34,840	35,839	36,524	37,592	38,467	39,288	39,861	40,442	41,032	41,631
383	11-Nov	15	27,715	27,925	28,188	28,997	29,551	30,415	31,123	31,787	32,251	32,721	33,198	33,682
383	12-Nov	19	34,256	34,515	34,840	35,839	36,524	37,592	38,467	39,288	40,442	41,032	41,631	42,238
383	13-Nov	21	35,651	35,921	36,259	37,299	38,012	39,123	40,034	40,889	41,485	42,090	42,704	43,959
383	14-Nov	20	32,616	32,863	33,172	34,124	34,776	35,792	36,626	37,407	37,953	38,507	39,069	40,217
383	15-Nov	22	38,551	38,843	39,209	40,334	41,104	42,306	43,291	44,215	44,860	45,514	46,178	47,536
383	16-Nov	22	40,900	41,210	41,598	42,791	43,609	44,883	45,928	46,909	47,593	48,287	48,991	50,431
383	17-Nov	21	39,423	39,722	40,096	41,246	42,034	43,263	44,270	45,215	45,874	46,543	47,222	47,911
383	18-Nov	26	48,231	48,596	49,054	50,461	51,425	52,928	54,160	55,316	56,124	56,943	57,774	59,617
383	19-Nov	30	56,036	56,461	56,992	58,627	59,747	61,493	62,925	64,268	65,206	66,158	67,123	69,096
383	20-Nov	31	57,061	57,494	58,035	59,700	60,841	62,619	64,077	65,444	66,399	67,368	68,351	70,360
383	21-Nov	31	55,661	56,083	56,611	58,235	59,348	61,082	62,504	63,838	64,770	65,715	66,674	68,634
383	22-Nov	32	59,803	60,257	60,824	62,568	63,764	65,628	67,156	68,589	69,590	70,606	71,636	73,742
383	23-Nov	38	72,911	73,464	74,155	76,282	77,740	80,012	81,875	83,623	84,843	86,081	87,337	89,905
383	24-Nov	42	81,191	81,806	82,576	84,945	86,568	89,098	91,173	93,119	94,478	95,857	97,256	100,115
383	25-Nov	39	77,392	77,979	78,713	80,971	82,518	84,930	86,907	88,762	90,058	91,372	92,706	95,432
383	26-Nov	30	61,412	61,878	62,460	64,251	65,480	67,393	68,962	70,434	71,462	72,505	73,563	74,637
383	27-Nov	22	42,978	43,304	43,712	44,966	45,825	47,164	48,262	49,292	50,012	50,742	51,482	52,995
383	28-Nov	21	36,306	36,582	36,926	37,985	38,711	39,842	40,770	41,640	42,248	42,864	43,489	44,767
383	29-Nov	26	46,040	46,389	46,826	48,169	49,089	50,524	51,700	52,804	53,574	54,356	55,149	56,770
383	30-Nov	29	54,243	54,654	55,168	56,751	57,835	59,526	60,912	62,212	63,119	64,040	64,974	66,884
384	1-Dec	31	59,094	59,542	60,102	61,826	63,008	64,849	66,359	67,776	68,765	69,768	70,786	72,867
384	2-Dec	48	90,369	91,054	91,911	94,547	96,354	99,170	101,479	103,645	105,157	106,692	108,249	111,432
384	3-Dec	44	86,200	86,854	87,671	90,186	91,910	94,595	96,798	98,864	100,307	101,771	103,256	106,292
384	4-Dec	45	87,858	88,524	89,357	91,920	93,677	96,415	98,660	100,765	102,236	103,728	105,242	108,336
384	5-Dec	43	81,607	82,225	82,999	85,380	87,012	89,554	91,640	93,596	94,962	96,348	97,754	100,629
384	6-Dec	41	80,053	80,660	81,419	83,754	85,355	87,849	89,895	91,814	93,154	94,514	95,893	98,713
384	7-Dec	41	81,611	82,230	83,004	85,385	87,017	89,559	91,645	93,601	94,967	96,353	97,759	100,634
384	8-Dec	43	84,881	85,525	86,330	88,806	90,503	93,148	95,317	97,351	98,772	100,214	101,677	104,667
384	9-Dec	37	74,439	75,003	75,709	77,880	79,369	81,688	83,590	85,374	86,620	87,884	89,167	91,788
384	10-Dec	31	63,047	63,525	64,123	65,962	67,223	69,187	70,798	72,309	73,365	74,436	75,522	77,742
384	11-Dec	23	44,613	44,952	45,375	46,676	47,568	48,958	50,098	51,168	51,914	52,671	53,439	55,010
384	12-Dec	34	59,934	60,388	60,957	62,705	63,904	65,771	67,302	68,739	69,742	70,760	71,793	73,904



384	13-Dec	46	84,117	84,755	85,552	88,006	89,688	92,309	94,459	96,475	97,883	99,312	100,761	102,210	103,724
384	14-Dec	42	82,772	83,400	84,184	86,599	88,254	90,833	92,948	94,932	96,318	97,724	99,150	100,597	102,065
384	15-Dec	37	75,071	75,640	76,352	78,542	80,043	82,382	84,301	86,100	87,356	88,631	89,925	91,237	92,569
384	16-Dec	34	68,268	68,786	69,433	71,425	72,790	74,917	76,662	78,298	79,440	80,599	81,775	82,968	84,179
384	17-Dec	24	49,072	49,444	49,909	51,341	52,322	53,851	55,105	56,281	57,102	57,935	58,780	59,638	60,508
384	18-Dec	34	62,757	63,233	63,828	65,659	66,914	68,869	70,473	71,977	73,027	74,093	75,174	76,271	77,384
384	19-Dec	36	64,153	64,639	65,247	67,119	68,402	70,401	72,040	73,577	74,651	75,740	76,845	77,966	79,104
384	20-Dec	41	77,207	77,792	78,524	80,776	82,320	84,726	86,699	88,549	89,842	91,153	92,483	93,833	95,202
384	21-Dec	34	67,952	68,467	69,112	71,094	72,453	74,570	76,306	77,935	80,226	81,397	82,585	83,790	85,020
384	22-Dec	31	62,256	62,729	63,319	65,135	66,380	68,320	69,910	71,403	72,445	73,502	74,575	75,663	76,767
384	23-Dec	30	58,882	59,329	59,887	61,605	62,782	64,617	66,121	67,533	68,518	69,518	70,532	71,561	72,605
384	24-Dec	18	36,732	37,010	37,358	38,430	39,164	40,309	41,247	42,128	42,742	43,366	43,999	44,641	45,292
384	25-Dec	27	48,624	48,992	49,454	50,872	51,844	53,359	54,602	55,767	56,581	57,407	58,245	59,095	59,957
384	26-Dec	30	51,338	51,727	52,214	53,712	54,738	56,338	57,650	58,880	59,739	60,611	61,495	62,392	63,302
384	27-Dec	33	60,806	61,267	61,843	63,617	64,833	66,728	68,282	69,739	70,757	71,790	72,838	73,901	74,979
384	28-Dec	33	63,945	64,430	65,037	66,902	68,181	70,173	71,807	73,340	74,410	75,496	76,598	77,716	78,850
384	29-Dec	25	50,074	50,454	50,929	52,390	53,391	54,951	56,231	57,431	58,269	59,119	59,982	60,857	61,745
384	30-Dec	24	47,016	47,373	47,819	49,190	50,130	51,595	52,797	53,923	54,710	55,508	56,318	57,140	57,974
384	31-Dec	27	50,973	51,359	51,842	53,329	54,349	55,937	57,239	58,461	59,314	60,179	61,057	61,948	62,852
385	1-Jan	55	99,307	100,060	101,002	103,898	105,884	108,979	111,516	113,896	115,559	117,246	118,957	120,693	122,455
385	2-Jan	38	71,534	72,076	72,755	74,841	76,272	78,501	80,329	82,043	83,240	84,455	85,688	86,939	88,208
385	3-Jan	32	64,705	65,196	65,809	67,697	68,991	71,007	72,660	74,211	75,294	76,393	77,508	78,639	79,787
385	4-Jan	27	54,293	54,705	55,220	56,803	57,889	59,581	60,968	62,269	63,178	64,100	65,035	65,984	66,947
385	5-Jan	25	48,968	49,339	49,803	51,232	52,211	53,737	54,988	56,161	56,981	57,812	58,656	59,512	60,380
385	6-Jan	28	53,240	53,644	54,149	55,702	56,766	58,425	59,786	61,062	61,953	62,857	63,774	64,705	65,649
385	7-Jan	39	73,123	73,678	74,371	76,504	77,966	80,245	82,113	83,866	85,090	86,332	87,592	88,870	90,167
385	8-Jan	43	80,319	80,928	81,689	84,032	85,639	88,141	90,193	92,118	93,463	94,827	96,211	97,615	99,040
385	9-Jan	40	75,120	75,690	76,402	78,593	80,096	82,436	84,356	86,156	87,414	88,690	89,984	91,297	92,629
385	10-Jan	32	63,124	63,602	64,201	66,042	67,305	69,272	70,884	72,397	73,454	74,526	75,614	76,717	77,837
385	11-Jan	38	74,334	74,898	75,603	77,771	79,258	81,574	83,473	85,255	86,499	87,761	89,042	90,342	91,660
385	12-Jan	42	81,191	81,806	82,576	84,945	86,568	89,098	91,173	93,119	94,478	95,857	97,256	98,675	100,115
385	13-Jan	36	72,013	72,559	73,242	75,342	76,783	79,026	80,866	82,592	83,798	85,021	86,262	87,521	88,798
385	14-Jan	37	73,490	74,047	74,744	76,888	78,357	80,647	82,525	84,286	85,516	86,764	88,030	89,315	90,618
385	15-Jan	32	61,543	62,009	62,593	64,388	65,619	67,536	69,109	70,584	71,614	72,659	73,719	74,795	75,887
385	16-Jan	27	49,754	50,131	50,603	52,054	53,049	54,599	55,870	57,063	57,895	58,740	59,597	60,467	61,349
385	17-Jan	46	84,433	85,074	85,874	88,337	90,026	92,856	94,814	96,837	98,251	99,685	101,140	102,616	104,114
385	18-Jan	57	108,563	109,386	110,415	113,582	115,753	119,136	121,910	124,512	126,329	128,173	130,044	131,942	133,868
385	19-Jan	67	131,238	132,233	133,477	137,306	139,930	144,019	147,373	150,518	152,715	154,944	157,206	159,501	161,829
385	20-Jan	44	93,316	94,023	94,908	97,630	99,496	102,404	104,788	107,025	108,587	110,172	111,780	113,411	115,066
385	21-Jan	37	78,708	79,305	80,051	82,347	83,921	86,373	88,384	90,271	91,588	92,925	94,281	95,657	97,053
385	22-Jan	24	48,462	48,830	49,289	50,703	51,672	53,182	54,420	55,582	56,393	57,216	58,051	58,898	59,757
385	23-Jan	32	57,454	57,890	58,435	60,111	61,260	63,050	64,518	65,895	66,857	67,833	68,823	69,827	70,846
385	24-Jan	48	87,545	88,209	89,039	91,593	93,344	96,071	98,308	100,407	101,872	103,359	104,868	106,399	107,952
385	25-Jan	31	63,047	63,525	64,123	65,962	67,223	70,798	72,309	73,365	74,436	75,522	76,624	77,742	
385	26-Jan	43	84,407	85,047	85,847	88,310	89,998	92,627	94,784	96,807	98,220	99,654	101,108	102,584	104,081
385	27-Jan	49	94,375	95,091	95,986	98,739	100,626	103,567	105,978	108,240	109,820	111,423	113,049	114,699	116,373
385	28-Jan	36	73,910	74,471	75,172	77,328	78,806	81,109	82,997	84,769	86,006	87,261	88,535	89,827	91,138
385	29-Jan	48	92,131	92,829	93,703	96,390	98,233	101,104	103,458	105,666	107,208	108,773	110,361	111,972	113,606
385	30-Jan	52	96,955	97,690	98,609	101,437	103,376	106,397	108,874	111,198	112,821	114,468	116,139	117,834	119,554
385	31-Jan	42	83,744	84,379	85,173	87,615	89,290	91,899	94,039	96,046	97,448	98,870	100,313	101,777	103,262
386	1-Feb	20	45,536	45,881	46,313	47,641	48,552	49,971	51,134	52,226	52,988	53,761	54,545	55,341	56,148
386	2-Feb	25	49,442	49,817	50,286	51,728	52,717	54,257	55,520	56,705	57,533	58,372	59,224	60,088	60,965
386	3-Feb	43	79,031	79,630	80,380	82,685	84,265	86,728	88,747	90,641	91,964	93,306	94,668	96,050	97,452
386	4-Feb	41	79,081	79,681	80,431	82,738	84,319	86,783	88,804	90,699	92,023	93,366	94,729	96,112	97,515
386	5-Feb	51	97,352	98,090	99,013	101,853	103,800	106,833	109,321	111,654	113,284	114,937	116,615	118,317	120,044
386	6-Feb	57	107,185	107,998	109,014	112,141	114,285	117,624	120,363	122,932	124,726	126,546	128,393	130,267	132,168
386	7-Feb	53	104,733	105,528	106,521	109,576	111,670	114,933	117,610	120,120	121,873	123,652	125,457	127,288	129,146
386	8-Feb	38	80,343	80,952	81,714	84,058	85,664	88,168	90,220	92,146	93,491	94,855	96,239	97,644	99,069
386	9-Feb	42	84,511	85,152	85,953	88,419	90,109	92,742	94,901	96,927	98,342	99,777	101,233	102,711	104,210
386	10-Feb	37	73,806	74,366	75,066	77,219	78,695	80,994	82,880	84,649	85,884	87,137	88,409	89,699	91,008
386	11-Feb	44	86,200	86,854	87,671	90,186	91,910	94,595	96,798	98,864	100,307	101,771	103,256	104,763	106,292
386	12-Feb	33	64,601	65,091	65,703	67,588	68,879	70,892	72,543	74,091	75,173	76,270	77,383	78,512	79,658
386	13-Feb	39	72,537	73,087	73,774	75,890	77,341	79,601	81,454	83,193	84,407	85,639	86,889	88,157	89,444
386	14-Feb	39	73,937	74,497	75,198	77,355	78,834	81,137	83,027	84,799	86,036	87,292	88,566	89,859	91,170
386	15-Feb	30	6												

386	17-Feb	33	62,997	63,474	64,072	65,909	67,169	69,132	70,742	72,252	73,306	74,376	75,461	77,679		
386	18-Feb	30	58,092	58,532	59,083	60,777	61,939	63,749	65,233	66,626	67,598	68,584	69,585	71,630		
386	19-Feb	34	63,548	64,030	64,632	66,486	67,757	69,737	71,361	72,884	73,947	75,026	76,121	78,359		
386	20-Feb	23	41,790	42,107	42,503	43,722	44,558	46,928	47,930	48,628	49,338	50,058	50,788	51,529		
386	21-Feb	43	78,738	79,335	80,081	82,378	83,953	86,406	88,418	90,305	91,623	92,960	94,317	95,694		
386	22-Feb	37	71,592	72,135	72,814	74,903	76,334	78,565	80,394	82,110	83,308	84,524	85,758	87,010		
386	23-Feb	20	43,322	43,651	44,061	45,325	46,192	47,541	48,648	49,687	50,412	51,148	51,894	53,419		
386	24-Feb	35	66,583	67,088	67,719	69,661	70,993	73,068	74,769	76,365	77,479	78,610	79,757	82,102		
386	25-Feb	41	77,026	77,610	78,340	80,587	82,127	84,527	86,496	88,342	89,631	90,939	92,266	94,799		
386	26-Feb	42	79,949	80,555	81,313	83,645	85,244	87,735	89,778	91,694	93,032	94,390	95,768	98,584		
386	27-Feb	37	69,899	70,429	71,092	73,131	74,529	76,706	78,492	80,168	81,338	82,525	83,729	86,191		
386	28-Feb	37	71,457	71,999	72,677	74,761	76,190	78,416	80,242	81,955	83,151	84,365	85,596	88,112		
387	1-Mar	47	90,789	91,477	92,338	94,987	96,802	99,631	101,951	104,127	105,647	107,189	108,753	111,950		
387	2-Mar	35	70,852	71,389	72,061	74,128	75,545	77,753	79,563	81,261	82,447	83,650	84,871	87,367		
387	3-Mar	44	86,675	87,332	88,154	90,682	92,415	95,116	97,331	99,408	100,859	102,331	103,825	106,877		
387	4-Mar	44	86,200	86,854	87,671	90,186	91,910	94,595	96,798	98,864	100,307	101,771	103,256	106,292		
387	5-Mar	26	53,155	53,558	54,062	55,613	56,676	58,332	59,690	60,965	61,854	62,757	63,673	64,602		
387	6-Mar	33	60,671	61,131	61,706	63,476	64,689	66,579	68,130	69,584	70,599	71,629	72,674	74,811		
387	7-Mar	29	53,949	54,359	54,870	56,444	57,523	59,204	60,582	61,875	62,778	63,694	64,623	66,523		
387	8-Mar	37	70,960	71,498	72,171	74,241	75,660	77,871	79,684	81,385	82,572	83,777	85,000	87,500		
387	9-Mar	42	80,558	81,169	81,933	84,283	85,894	88,404	90,462	92,393	93,742	95,110	96,498	99,335		
387	10-Mar	38	75,441	76,013	76,729	78,929	80,438	82,788	84,716	86,524	87,787	89,068	90,368	93,025		
387	11-Mar	20	43,322	43,651	44,061	45,325	46,192	47,541	48,648	49,687	50,412	51,148	51,894	53,419		
387	12-Mar	22	41,239	41,552	41,943	43,146	43,971	45,255	46,309	47,298	47,988	48,688	49,398	50,850		
387	13-Mar	23	38,312	38,602	38,965	40,083	40,849	42,043	43,022	43,940	44,581	45,231	45,891	47,240		
387	14-Mar	23	40,977	41,287	41,676	42,871	43,691	44,968	46,015	46,997	47,682	48,378	49,084	49,800		
387	15-Mar	28	52,291	52,688	53,184	54,709	55,755	57,384	58,720	59,974	60,849	61,737	62,638	63,552		
387	16-Mar	24	45,909	46,258	46,693	48,032	48,950	50,381	51,554	52,654	53,422	54,201	54,992	56,608		
387	17-Mar	28	53,240	53,644	54,149	55,702	56,766	58,425	59,786	61,062	61,953	62,857	63,774	65,649		
387	18-Mar	23	44,274	44,610	45,030	46,321	47,207	48,586	49,718	50,779	51,520	52,272	53,035	53,809		
387	19-Mar	23	41,925	42,243	42,641	43,864	44,702	46,009	47,080	48,085	48,786	49,498	50,220	51,696		
387	20-Mar	20	33,565	33,819	34,137	35,116	35,788	36,833	37,691	38,496	39,057	39,627	40,205	41,386		
387	21-Mar	24	42,454	42,776	43,178	44,417	45,266	46,588	47,673	48,691	49,401	50,122	50,853	51,595		
387	22-Mar	23	43,009	43,336	43,743	44,998	45,858	47,198	48,297	49,328	50,048	50,778	51,519	52,271		
387	23-Mar	26	48,863	49,234	49,697	51,122	52,100	53,622	54,871	56,042	56,860	57,690	58,532	59,386		
387	24-Mar	24	45,593	45,939	46,371	47,701	48,613	50,034	51,199	52,291	53,828	54,613	55,410	56,213		
387	25-Mar	19	36,785	37,064	37,413	38,486	39,222	40,368	41,308	42,190	42,805	43,429	44,063	45,358		
387	26-Mar	24	42,454	42,776	43,178	44,417	45,266	46,588	47,673	48,691	49,401	50,122	50,853	51,595		
387	27-Mar	31	52,815	53,216	53,716	55,257	56,313	57,959	59,308	60,574	61,458	62,355	63,265	64,188		
387	28-Mar	40	73,042	73,596	74,288	76,419	77,880	80,155	82,022	83,772	84,995	86,235	87,494	90,067		
387	29-Mar	28	56,244	56,671	57,204	58,845	59,970	61,722	63,159	64,507	65,449	66,404	67,373	68,356		
387	30-Mar	18	37,838	38,125	38,484	39,588	40,345	41,524	42,490	43,397	44,030	44,672	45,324	46,656		
387	31-Mar	20	37,946	38,234	38,594	39,701	40,459	41,642	42,611	43,521	44,156	44,800	45,454	46,790		
30	10	39 Apr	516	921,908	928,898	937,639	964,532	982,969	1,011,693	1,035,250	1,057,346	1,072,769	1,088,415	1,104,292	1,120,402	1,136,744
31	40	70 May	240	537,446	541,521	546,617	562,295	573,043	589,789	603,521	616,403	625,386	634,499	643,747	653,131	662,650
30	71	100 Jun	52	372,617	375,442	378,975	389,845	397,296	408,906	418,427	427,358	433,581	439,897	446,305	452,806	459,400
31	101	131 Jul	3	299,755	302,028	304,871	313,615	319,609	328,949	336,608	343,793	348,794	353,870	359,019	364,247	369,549
31	132	162 Aug	12	318,200	320,613	323,630	332,912	339,276	349,190	357,321	364,947	370,260	375,649	381,113	386,664	392,292
30	163	192 Sep	123	435,544	438,846	442,976	455,681	464,392	477,962	489,091	499,530	506,806	514,190	521,685	529,285	536,997
31	193	223 Oct	423	777,721	783,618	790,993	813,680	829,233	853,465	873,337	891,977	904,984	918,179	931,572	945,158	958,940
30	224	253 Nov	710	1,294,752	1,304,570	1,316,847	1,354,616	1,380,509	1,420,850	1,453,933	1,484,966	1,506,631	1,528,612	1,550,912	1,573,542	1,596,500
31	254	284 Dec	1,067	2,055,722	2,071,310	2,090,802	2,150,769	2,191,880	2,255,931	2,308,459	2,357,730	2,392,137	2,427,048	2,462,466	2,498,403	2,534,862
31	285	315 Jan	1,227	2,374,345	2,392,348	2,414,862	2,484,123	2,531,606	2,605,585	2,666,254	2,723,162	2,762,906	2,803,232	2,844,145	2,885,654	2,927,767
28	316	343 Feb	1,031	1,998,360	2,013,513	2,032,461	2,090,755	2,130,718	2,192,982	2,244,045	2,291,941	2,325,389	2,359,324	2,393,757	2,428,693	2,464,137
31	344	374 Mar	886	1,681,351	1,694,099	1,710,042	1,759,088	1,792,712	1,845,099	1,888,061	1,928,359	1,956,499	1,985,048	2,014,015	2,043,405	2,073,223
Total			6,290	13,067,721	13,166,807	13,290,714	13,671,910	13,933,243	14,340,401	14,674,307	14,987,511	15,206,142	15,427,963	15,653,028	15,881,390	16,113,061
Datacheck			0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth						123,907	381,196	261,332	407,158	333,907	313,204	218,631	221,821	225,065	228,362	231,671
Gro Pct						0.9%	2.9%	1.9%	2.9%	2.3%	2.1%	1.5%	1.5%	1.5%	1.5%	1.5%
Leap Day					79,630	80,380	82,685	84,265	86,728	88,747	90,641	91,964	93,306	94,668	96,050	97,452

T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40
52,621	53,389	54,168	54,958	55,760	56,574	57,399	58,237	59,087	59,949	60,824	61,712	62,612	63,526	64,453	65,394
58,095	58,943	59,803	60,676	61,561	62,459	63,370	64,295	65,233	66,185	67,151	68,131	69,125	70,134	71,157	72,195
49,613	50,337	51,071	51,816	52,572	53,339	54,117	54,907	55,708	56,521	57,346	58,183	59,032	59,893	60,767	61,654
46,674	47,355	48,046	48,747	49,458	50,180	50,912	51,655	52,409	53,174	53,950	54,737	55,536	56,346	57,168	58,002
89,206	90,508	91,829	93,169	94,529	95,909	97,309	98,729	100,170	101,632	103,115	104,620	106,147	107,696	109,268	110,863
70,828	71,862	72,911	73,975	75,055	76,150	77,261	78,389	79,533	80,694	81,872	83,067	84,279	85,509	86,757	88,023
54,264	55,056	55,859	56,674	57,501	58,340	59,191	60,055	60,931	61,820	62,722	63,637	64,566	65,508	66,464	67,434
61,725	62,626	63,540	64,467	65,408	66,362	67,330	68,313	69,310	70,321	71,347	72,388	73,444	74,516	75,603	76,706
34,210	34,709	35,215	35,729	36,250	36,779	37,315	37,859	38,411	38,971	39,539	40,116	40,701	41,295	41,897	42,508
48,032	48,733	49,444	50,165	50,897	51,640	52,393	53,157	53,933	54,720	55,518	56,328	57,150	57,984	58,830	59,688
42,256	42,872	43,497	44,132	44,776	45,429	46,092	46,764	47,446	48,138	48,840	49,553	50,276	51,010	51,754	52,509
44,139	44,783	45,436	46,099	46,772	47,454	48,146	48,848	49,561	50,284	51,018	51,762	52,517	53,283	54,060	54,849
25,303	25,672	26,046	26,426	26,811	27,202	27,599	28,001	28,409	28,823	29,243	29,669	30,102	30,541	30,986	31,438
33,090	33,573	34,063	34,560	35,064	35,575	36,094	36,620	37,154	37,696	38,246	38,804	39,370	39,944	40,527	41,118
41,074	41,673	42,281	42,898	43,524	44,159	44,803	45,457	46,120	46,793	47,476	48,169	48,872	49,585	50,308	51,042
49,586	50,309	51,043	51,788	52,544	53,311	54,089	54,878	55,679	56,491	57,315	58,151	59,000	59,861	60,734	61,620
37,011	37,551	38,099	38,655	39,219	39,791	40,371	40,960	41,558	42,164	42,779	43,403	44,036	44,678	45,330	45,991
19,383	19,665	19,952	20,243	20,538	20,837	21,141	21,449	21,762	22,079	22,401	22,728	23,059	23,395	23,736	24,082
25,070	25,436	25,807	26,183	26,565	26,952	27,345	27,744	28,149	28,559	28,975	29,398	29,827	30,262	30,703	31,151
21,419	21,731	22,048	22,369	22,695	23,026	23,362	23,703	24,049	24,400	24,756	25,117	25,483	25,855	26,232	26,614
26,624	27,012	27,406	27,806	28,211	28,622	29,039	29,462	29,892	30,328	30,770	31,219	31,674	32,136	32,605	33,081
21,107	21,415	21,727	22,044	22,365	22,691	23,022	23,358	23,699	24,045	24,396	24,752	25,113	25,479	25,850	26,227
27,019	27,413	27,813	28,219	28,630	29,047	29,471	29,901	30,337	30,779	31,228	31,683	32,145	32,614	33,090	33,573
26,523	26,910	27,302	27,700	28,104	28,514	28,930	29,352	29,780	30,214	30,655	31,102	31,556	32,016	32,483	32,957
18,040	18,303	18,570	18,841	19,116	19,395	19,678	19,965	20,256	20,551	20,851	21,155	21,463	21,776	22,093	22,415
19,314	19,595	19,881	20,171	20,465	20,763	21,066	21,373	21,685	22,001	22,322	22,647	22,977	23,312	23,652	23,997
20,867	21,171	21,480	21,793	22,111	22,433	22,760	23,092	23,429	23,771	24,118	24,470	24,827	25,189	25,556	25,929
30,320	30,762	31,211	31,666	32,128	32,597	33,072	33,554	34,043	34,540	35,044	35,555	36,074	36,600	37,134	37,676
27,218	27,615	28,018	28,427	28,842	29,263	29,690	30,123	30,562	31,008	31,460	31,919	32,385	32,857	33,336	33,822
32,695	33,172	33,656	34,147	34,645	35,150	35,663	36,183	36,711	37,246	37,789	38,340	38,899	39,466	40,042	40,626
19,933	20,224	20,519	20,818	21,121	21,429	21,741	22,058	22,380	22,707	23,037	23,373	23,714	24,060	24,411	24,767
16,405	16,644	16,887	17,133	17,383	17,636	17,893	18,154	18,419	18,687	18,959	19,235	19,515	19,799	20,088	20,381
20,061	20,353	20,650	20,951	21,256	21,566	21,880	22,199	22,523	22,851	23,184	23,522	23,865	24,213	24,566	24,924
21,835	22,153	22,476	22,804	23,136	23,473	23,815	24,162	24,514	24,871	25,234	25,602	25,975	26,354	26,738	27,128
27,041	27,435	27,835	28,241	28,653	29,071	29,495	29,925	30,361	30,804	31,253	31,709	32,171	32,640	33,116	33,599
43,062	43,690	44,327	44,974	45,630	46,296	46,971	47,656	48,351	49,056	49,772	50,498	51,235	51,983	52,741	53,511
23,721	24,067	24,418	24,774	25,135	25,501	25,873	26,250	26,633	27,021	27,415	27,815	28,221	28,633	29,051	29,475
20,135	20,428	20,726	21,028	21,335	21,646	21,962	22,282	22,607	22,937	23,271	23,610	23,954	24,303	24,657	25,016
14,271	14,479	14,690	14,904	15,121	15,341	15,564	15,791	16,021	16,254	16,491	16,731	16,975	17,222	17,473	17,728
16,156	16,391	16,630	16,872	17,118	17,367	17,620	17,877	18,138	18,402	18,670	18,942	19,218	19,498	19,782	20,070
19,719	20,006	20,298	20,594	20,894	21,199	21,508	21,822	22,140	22,463	22,790	23,122	23,459	23,801	24,148	24,500
20,315	20,611	20,911	21,216	21,525	21,839	22,157	22,480	22,808	23,140	23,477	23,819	24,166	24,518	24,875	25,238
25,844	26,221	26,603	26,991	27,385	27,784	28,189	28,600	29,017	29,440	29,869	30,305	30,747	31,195	31,650	32,112
21,315	21,626	22,261	22,586	22,915	23,249	23,588	23,932	24,281	24,635	24,994	25,358	25,728	26,103	26,484	26,864
28,765	29,184	29,610	30,042	30,480	30,925	31,376	31,834	32,298	32,769	33,247	33,732	34,224	34,723	35,229	35,743
26,421	26,806	27,197	27,594	27,996	28,404	28,818	29,238	29,664	30,097	30,536	30,981	31,433	31,891	32,356	32,828
23,617	23,961	24,310	24,664	25,024	25,389	25,759	26,135	26,516	26,903	27,295	27,693	28,097	28,507	28,923	29,345
22,492	22,820	23,153	23,491	23,833	24,180	24,533	24,891	25,254	25,622	25,996	26,375	26,760	27,150	27,546	27,948
21,262	21,572	21,886	22,205	22,529	22,857	23,190	23,528	23,871	24,219	24,572	24,930	25,293	25,662	26,036	26,416
20,556	20,856	21,160	21,468	21,781	22,099	22,421	22,748	23,080	23,416	23,757	24,103	24,454	24,811	25,173	25,540
23,986	24,336	24,691	25,051	25,416	25,787	26,163	26,544	26,931	27,324	27,722	28,126	28,536	28,952	29,374	29,802
26,523	26,910	27,302	27,700	28,104	28,514	28,930	29,352	29,780	30,214	30,655	31,102	31,556	32,016	32,483	32,957
16,812	17,057	17,306	17,558	17,814	18,074	18,337	18,604	18,875	19,150	19,429	19,712	19,999	20,290	20,586	20,886
18,960	19,236	19,516	19,800	20,089	20,382	20,679	20,980	21,286	21,596	21,911	22,230	22,554	22,883	23,217	23,555
20,585	20,885	21,189	21,498	21,811	22,129	22,452	22,779	23,111	23,448	23,790	24,137	24,489	24,846	25,207	25,576
19,866	20,156	20,450	20,748	21,050	21,357	21,668	21,984	22,304	22,629	22,959	23,294	23,634	23,979	24,329	24,684
19,963	20,254	20,549	20,849	21,153	21,461	21,774	22,091	22,413	22,740	23,072	23,408	23,749	24,095	24,446	24,802
19,793	20,081	20,374	20,671	20,972	21,278	21,588	21,903	22,222	22,546	22,875	23,208	23,546	23,889	24,237	24,590

SegReg-n

17,564	17,820	18,080	18,343	18,610	18,881	19,156	19,435	19,718	20,005	20,297	20,593	20,893	21,198	21,507	18,236
14,679	14,893	15,110	15,330	15,553	15,780	16,010	16,243	16,480	16,720	16,964	17,211	17,462	17,716	17,974	25,287
20,650	20,951	21,256	21,566	21,880	22,199	22,523	22,851	23,184	23,522	23,865	24,213	24,566	24,924	25,287	25,656
21,284	21,594	21,909	22,228	22,552	22,881	23,215	23,553	23,896	24,244	24,597	24,956	25,320	25,689	26,064	26,444
18,988	19,265	19,546	19,831	20,120	20,413	20,711	21,013	21,319	21,630	21,945	22,265	22,590	22,919	23,253	23,592
16,824	17,069	17,318	17,570	17,826	18,086	18,350	18,617	18,888	19,163	19,442	19,725	20,012	20,304	20,600	20,900
20,998	21,304	21,615	21,930	22,250	22,574	22,903	23,237	23,576	23,920	24,269	24,623	24,982	25,346	25,716	26,091
18,234	18,500	18,770	19,044	19,322	19,604	19,890	20,180	20,474	20,772	21,075	21,382	21,694	22,010	22,331	22,657
16,176	16,412	16,651	16,894	17,140	17,390	17,643	17,900	18,161	18,426	18,695	18,967	19,243	19,523	19,808	20,097
17,816	18,076	18,339	18,606	18,877	19,152	19,431	19,714	20,001	20,293	20,589	20,889	21,193	21,502	21,815	22,133
18,418	18,686	18,958	19,234	19,514	19,798	20,087	20,380	20,677	20,978	21,284	21,594	21,909	22,228	22,552	22,881
16,594	16,836	17,081	17,330	17,583	17,839	18,099	18,363	18,631	18,903	19,178	19,457	19,741	20,029	20,321	20,617
16,274	16,511	16,752	16,996	17,244	17,495	17,750	18,009	18,271	18,537	18,807	19,081	19,359	19,641	19,927	20,217
16,338	16,576	16,818	17,063	17,312	17,564	17,820	18,080	18,343	18,610	18,881	19,156	19,435	19,718	20,005	20,297
13,699	13,899	14,101	14,306	14,514	14,725	14,939	15,157	15,378	15,602	15,829	16,060	16,294	16,531	16,772	17,016
11,298	11,462	11,629	11,798	11,970	12,144	12,321	12,500	12,682	12,867	13,054	13,244	13,437	13,633	13,832	14,033
14,860	15,076	15,296	15,519	15,745	15,974	16,207	16,443	16,683	16,926	17,173	17,423	17,677	17,935	18,196	18,461
17,315	17,567	17,823	18,083	18,347	18,614	18,885	19,160	19,439	19,722	20,009	20,301	20,597	20,897	21,202	21,511
16,061	16,295	16,532	16,773	17,017	17,265	17,517	17,772	18,031	18,294	18,561	18,831	19,105	19,383	19,665	19,952
17,352	17,605	17,862	18,122	18,386	18,654	18,926	19,202	19,482	19,766	20,054	20,346	20,643	20,944	21,249	21,559
18,944	19,220	19,500	19,784	20,072	20,365	20,662	20,963	21,269	21,579	21,894	22,213	22,537	22,866	23,199	23,537
14,816	15,032	15,251	15,473	15,698	15,927	16,159	16,394	16,633	16,875	17,121	17,370	17,623	17,880	18,141	18,405
10,919	11,078	11,239	11,403	11,569	11,737	11,908	12,081	12,257	12,435	12,616	12,800	12,986	13,175	13,367	13,562
13,719	13,919	14,122	14,328	14,537	14,749	14,964	15,182	15,403	15,627	15,855	16,086	16,320	16,558	16,799	17,044
14,784	14,999	15,217	15,439	15,664	15,892	16,124	16,359	16,597	16,839	17,084	17,333	17,586	17,842	18,102	18,366
14,775	14,990	15,208	15,430	15,655	15,883	16,114	16,349	16,587	16,829	17,074	17,323	17,575	17,831	18,091	18,355
14,840	15,056	15,275	15,498	15,724	15,953	16,185	16,421	16,660	16,903	17,149	17,399	17,653	17,910	18,171	18,436
15,057	15,276	15,499	15,725	15,954	16,186	16,422	16,661	16,904	17,150	17,400	17,654	17,911	18,172	18,437	18,706
12,158	12,335	12,515	12,697	12,882	13,070	13,260	13,453	13,649	13,848	14,050	14,255	14,463	14,674	14,888	15,105
8,824	8,952	9,082	9,214	9,348	9,484	9,622	9,762	9,904	10,048	10,194	10,342	10,492	10,645	10,800	10,957
11,025	11,185	11,348	11,513	11,681	11,851	12,024	12,199	12,377	12,557	12,740	12,926	13,114	13,305	13,499	13,696
13,675	13,874	14,076	14,281	14,489	14,700	14,914	15,131	15,351	15,575	15,802	16,032	16,266	16,503	16,743	16,987
14,028	14,232	14,439	14,649	14,862	15,078	15,298	15,521	15,747	15,976	16,209	16,445	16,685	16,928	17,175	17,425
14,432	14,642	14,855	15,071	15,291	15,514	15,740	15,969	16,202	16,438	16,677	16,920	17,167	17,417	17,671	17,928
14,607	14,820	15,036	15,255	15,477	15,702	15,931	16,163	16,398	16,637	16,879	17,125	17,375	17,628	17,885	18,146
12,118	12,294	12,473	12,655	12,839	13,026	13,216	13,408	13,603	13,801	14,002	14,206	14,413	14,623	14,836	15,052
10,310	10,460	10,612	10,766	10,923	11,082	11,243	11,407	11,573	11,741	11,912	12,085	12,261	12,440	12,621	12,805
12,617	12,801	12,987	13,176	13,368	13,563	13,761	13,961	14,164	14,370	14,579	14,791	15,006	15,225	15,447	15,672
13,423	13,618	13,816	14,017	14,221	14,428	14,638	14,851	15,067	15,286	15,509	15,735	15,964	16,197	16,433	16,672
13,323	13,517	13,714	13,914	14,117	14,323	14,532	14,744	14,959	15,177	15,398	15,622	15,850	16,081	16,315	16,553
13,317	13,511	13,708	13,908	14,111	14,317	14,526	14,738	14,953	15,171	15,392	15,616	15,843	16,074	16,308	16,546
13,388	13,583	13,781	13,982	14,186	14,393	14,603	14,816	15,032	15,251	15,473	15,698	15,927	16,159	16,394	16,633
10,564	10,718	10,874	11,032	11,193	11,356	11,521	11,689	11,859	12,032	12,207	12,385	12,565	12,748	12,934	13,122
7,820	7,934	8,049	8,166	8,285	8,405	8,527	8,651	8,777	8,905	9,035	9,166	9,299	9,434	9,571	9,710
10,897	11,056	11,217	11,380	11,546	11,714	11,885	12,058	12,234	12,412	12,593	12,776	12,962	13,151	13,343	13,537
13,885	14,087	14,292	14,500	14,711	14,925	15,142	15,363	15,587	15,814	16,044	16,278	16,515	16,756	17,000	17,248
13,684	13,883	14,085	14,290	14,498	14,709	14,923	15,140	15,361	15,585	15,812	16,042	16,276	16,513	16,754	16,998
13,262	13,455	13,651	13,850	14,052	14,257	14,465	14,676	14,890	15,107	15,327	15,550	15,777	16,007	16,240	16,477
12,950	13,139	13,330	13,524	13,721	13,921	14,124	14,330	14,539	14,751	14,966	15,184	15,405	15,629	15,857	16,088
9,961	10,106	10,253	10,402	10,553	10,707	10,863	11,021	11,181	11,344	11,509	11,677	11,847	12,019	12,194	12,372
7,430	7,538	7,648	7,759	7,872	7,986	8,102	8,220	8,340	8,461	8,584	8,709	8,836	8,965	9,095	9,227
11,847	12,019	12,194	12,372	12,552	12,735	12,920	13,108	13,299	13,493	13,689	13,888	14,090	14,295	14,503	14,714
14,701	14,915	15,132	15,352	15,576	15,803	16,033	16,267	16,504	16,744	16,988	17,236	17,487	17,742	18,001	18,263
12,651	12,835	13,022	13,212	13,404	13,599	13,797	13,998	14,202	14,409	14,619	14,832	15,048	15,267	15,489	15,715
12,612	12,796	12,982	13,171	13,363	13,558	13,755	13,955	14,158	14,364	14,573	14,785	15,000	15,219	15,441	15,666
12,652	12,836	13,023	13,213	13,405	13,600	13,798	13,999	14,203	14,410	14,620	14,833	15,049	15,268	15,490	15,716
10,207	10,356	10,507	10,660	10,815	10,972	11,132	11,294	11,458	11,625	11,794	11,966	12,140	12,317	12,498	12,678
7,765	7,878	7,993	8,109	8,227	8,347	8,468	8,591	8,716	8,843	8,972	9,102	9,234	9,368	9,504	9,642
10,583	10,737	10,893	11,052	11,213	11,376	11,542	11,710	11,880	12,053	12,228	12,406	12,587	12,770	12,956	13,145
13,162	13,354	13,548	13,745	13,945	14,148	14,354	14,563	14,775	14,990	15,208	15,430	15,655	15,883	16,114	16,349
13,207	13,399	13,594	13,792	13,993	14,197	14,404	14,614	14,827	15,043	15,262	15,484	15,710	15,939	16,171	16,407
13,405	13,600	13,798	13,999	14,203	14,410	14,620	14,833	15,049	15,268	15,490	15,716	15,945	16,177	16,413	16,652
13,485	13,681	13,880	14,082	14,287	14,495	14,706	14,920	15,137	15,358	15,582	15,809	16,039	16,273	16,510	16,751
10,664	10,819	10,976	11,136	11,298	11,462	11,629	11,798	11,970	12,144	12,321	12,500	12,682	12,867	13,054	13,244
8,041	8,158	8,277	8,397	8,519	8,643	8,769	8,897	9,026	9,157	9,290	9,425	9,562	9,701	9,842	9,985
10,592	10,746	10,902	11,061	11,222	11,385	11,551	11,719	11,890	12,063	12,239	12,417	12,598	12,781	12,967	13,156

12,808	12,994	13,183	13,375	13,570	13,768	13,969	14,172	14,378	14,587	14,799	15,015	15,234	15,456	15,681	15,910
12,525	12,707	12,892	13,080	13,270	13,463	13,659	13,858	14,060	14,265	14,473	14,684	14,898	15,115	15,335	15,558
12,366	12,546	12,729	12,914	13,102	13,293	13,487	13,683	13,882	14,084	14,289	14,497	14,708	14,922	15,139	15,360
12,541	12,724	12,909	13,097	13,288	13,482	13,678	13,877	14,079	14,284	14,492	14,703	14,917	15,134	15,354	15,578
10,454	10,606	10,760	10,917	11,076	11,237	11,401	11,567	11,735	11,906	12,079	12,255	12,433	12,614	12,798	12,984
8,094	8,212	8,331	8,452	8,575	8,700	8,827	8,955	9,085	9,217	9,351	9,487	9,625	9,765	9,907	10,051
10,497	10,650	10,805	10,962	11,122	11,284	11,448	11,615	11,784	11,956	12,130	12,307	12,486	12,668	12,852	13,039
13,180	13,372	13,567	13,765	13,965	14,168	14,374	14,583	14,795	15,011	15,230	15,452	15,677	15,905	16,137	16,372
13,475	13,671	13,870	14,072	14,277	14,485	14,696	14,910	15,127	15,347	15,571	15,798	16,028	16,262	16,499	16,739
13,676	13,875	14,077	14,282	14,490	14,701	14,915	15,132	15,352	15,576	15,803	16,033	16,267	16,504	16,744	16,988
14,140	14,346	14,555	14,767	14,982	15,200	15,421	15,646	15,874	16,105	16,340	16,578	16,820	17,065	17,314	17,566
11,534	11,702	11,872	12,045	12,220	12,398	12,579	12,762	12,948	13,137	13,328	13,522	13,719	13,919	14,122	14,328
8,392	8,514	8,638	8,764	8,891	9,020	9,151	9,284	9,419	9,556	9,695	9,836	9,979	10,124	10,271	10,420
10,942	11,101	11,263	11,427	11,593	11,762	11,933	12,107	12,283	12,462	12,643	12,827	13,014	13,204	13,396	13,591
14,213	14,420	14,630	14,843	15,059	15,278	15,501	15,727	15,956	16,188	16,424	16,663	16,906	17,152	17,402	17,656
16,267	16,504	16,744	16,988	17,236	17,487	17,742	18,001	18,263	18,529	18,799	19,073	19,351	19,633	19,919	20,209
16,597	16,839	17,084	17,333	17,586	17,842	18,102	18,366	18,634	18,906	19,182	19,462	19,746	20,034	20,326	20,622
14,580	14,792	15,007	15,226	15,448	15,673	15,901	16,133	16,368	16,606	16,848	17,093	17,342	17,595	17,851	18,111
12,271	12,450	12,631	12,815	13,002	13,191	13,383	13,578	13,776	13,977	14,181	14,388	14,598	14,811	15,027	15,246
9,714	9,855	9,998	10,143	10,291	10,441	10,593	10,747	10,903	11,062	11,223	11,386	11,552	11,720	11,891	12,064
12,606	12,790	12,976	13,165	13,357	13,552	13,749	13,949	14,152	14,358	14,567	14,779	14,994	15,212	15,434	15,659
15,504	15,730	15,959	16,192	16,428	16,667	16,910	17,156	17,406	17,660	17,917	18,178	18,443	18,712	18,985	19,262
16,399	16,638	16,880	17,126	17,376	17,629	17,886	18,147	18,411	18,679	18,951	19,227	19,507	19,791	20,079	20,372
17,608	17,865	18,125	18,389	18,657	18,929	19,205	19,485	19,769	20,057	20,349	20,646	20,947	21,252	21,562	21,876
17,608	17,865	18,125	18,389	18,657	18,929	19,205	19,485	19,769	20,057	20,349	20,646	20,947	21,252	21,562	21,876
14,215	14,422	14,632	14,845	15,061	15,280	15,503	15,729	15,958	16,190	16,426	16,665	16,908	17,154	17,404	17,658
10,303	10,453	10,605	10,759	10,916	11,075	11,236	11,400	11,566	11,734	11,905	12,078	12,254	12,432	12,613	12,797
11,996	12,171	12,348	12,528	12,710	12,895	13,083	13,274	13,467	13,663	13,862	14,064	14,269	14,477	14,688	14,902
14,864	15,081	15,301	15,524	15,750	15,979	16,212	16,448	16,688	16,931	17,178	17,428	17,682	17,940	18,201	18,466
15,279	15,502	15,728	15,957	16,189	16,425	16,664	16,907	17,153	17,403	17,657	17,914	18,175	18,440	18,709	18,982
17,159	17,409	17,663	17,920	18,181	18,446	18,715	18,988	19,265	19,546	19,831	20,120	20,413	20,711	21,013	21,319
19,068	19,346	19,628	19,914	20,204	20,498	20,797	21,100	21,408	21,720	22,037	22,358	22,684	23,015	23,351	23,691
15,142	15,363	15,587	15,814	16,044	16,278	16,515	16,756	17,000	17,248	17,499	17,754	18,013	18,275	18,541	18,811
10,665	10,820	10,977	11,137	11,299	11,463	11,630	11,799	11,971	12,145	12,322	12,501	12,683	12,868	13,055	13,245
14,522	14,734	14,949	15,167	15,388	15,612	15,839	16,070	16,304	16,542	16,783	17,028	17,276	17,528	17,783	18,042
17,498	17,753	18,012	18,274	18,540	18,810	19,084	19,362	19,644	19,930	20,220	20,515	20,814	21,117	21,425	21,737
16,181	16,417	16,656	16,899	17,145	17,395	17,648	17,905	18,166	18,431	18,700	18,973	19,250	19,531	19,816	20,105
16,200	16,436	16,675	16,918	17,165	17,415	17,669	17,926	18,187	18,452	18,721	18,994	19,271	19,552	19,837	20,126
16,470	16,710	16,953	17,200	17,451	17,705	17,963	18,225	18,491	18,760	19,033	19,310	19,591	19,877	20,167	20,461
13,883	14,085	14,290	14,498	14,709	14,923	15,140	15,361	15,585	15,812	16,042	16,276	16,513	16,754	16,998	17,246
11,470	11,637	11,806	11,978	12,152	12,329	12,509	12,691	12,876	13,063	13,253	13,446	13,642	13,841	14,043	14,248
14,676	14,890	15,107	15,327	15,550	15,777	16,007	16,240	16,477	16,717	16,961	17,208	17,459	17,713	17,971	18,233
25,532	25,904	26,282	26,665	27,054	27,448	27,848	28,254	28,666	29,084	29,508	29,938	30,375	30,818	31,267	31,723
23,421	23,762	24,108	24,459	24,816	25,178	25,545	25,917	26,295	26,678	27,067	27,462	27,862	28,268	28,680	29,098
22,211	22,535	22,864	23,197	23,535	23,878	24,226	24,579	24,937	25,301	25,670	26,044	26,424	26,809	27,200	27,597
20,741	21,043	21,350	21,661	21,977	22,297	22,622	22,952	23,287	23,626	23,970	24,319	24,674	25,034	25,399	25,769
16,567	16,808	17,053	17,301	17,553	17,809	18,069	18,332	18,599	18,870	19,145	19,424	19,707	19,994	20,285	20,581
13,158	13,350	13,544	13,741	13,941	14,144	14,350	14,559	14,771	14,986	15,204	15,425	15,650	15,878	16,109	16,344
15,548	15,775	16,005	16,238	16,475	16,715	16,959	17,206	17,457	17,711	17,969	18,231	18,497	18,767	19,040	19,317
18,293	18,560	18,830	19,104	19,382	19,664	19,951	20,242	20,537	20,836	21,140	21,448	21,761	22,078	22,400	22,727
18,291	18,558	18,828	19,102	19,380	19,662	19,949	20,240	20,535	20,834	21,138	21,446	21,759	22,076	22,398	22,725
18,149	18,413	18,681	18,953	19,229	19,509	19,793	20,081	20,374	20,671	20,972	21,278	21,588	21,903	22,222	22,546
18,513	18,783	19,057	19,335	19,617	19,903	20,193	20,487	20,786	21,089	21,396	21,708	22,024	22,345	22,671	23,001
16,420	16,659	16,902	17,148	17,398	17,652	17,909	18,170	18,435	18,704	18,977	19,254	19,535	19,820	20,109	20,402
15,341	15,564	15,791	16,021	16,254	16,491	16,731	16,975	17,222	17,473	17,728	17,986	18,248	18,514	18,784	19,058
18,088	18,352	18,619	18,890	19,165	19,444	19,727	20,015	20,307	20,603	20,903	21,208	21,517	21,831	22,149	22,472
24,578	24,936	25,300	25,669	26,043	26,423	26,808	27,199	27,596	27,998	28,406	28,820	29,240	29,666	30,099	30,538
31,507	31,967	32,433	32,906	33,386	33,873	34,367	34,868	35,377	35,893	36,417	36,948	37,487	38,034	38,589	39,152
30,252	30,693	31,141	31,595	32,056	32,524	32,998	33,479	33,967	34,462	34,965	35,475	35,992	36,517	37,050	37,590
22,879	23,213	23,551	23,894	24,242	24,595	24,954	25,318	25,687	26,062	26,442	26,828	27,219	27,616	28,019	28,428
18,878	19,153	19,432	19,715	20,002	20,294	20,590	20,890	21,194	21,503	21,816	22,134	22,457	22,784	23,116	23,453
14,953	15,171	15,392	15,616	15,843	16,074	16,308	16,546	16,787	17,032	17,280	17,532	17,787	18,046	18,309	18,576
17,324	17,576	17,832	18,092	18,356	18,623	18,894	19,169	19,448	19,731	20,019	20,311	20,607	20,907	21,212	21,521
19,158	19,437	19,720	20,007	20,299	20,595	20,895	21,200	21,509	21,823	22,141	22,464	22,791	23,123	23,460	23,802
18,524	18,794	19,068	19,346	19,628	19,914	20,204	20,498	20,797	21,100	21,408	21,720	22,037	22,358	22,684	23,015
18,889	19,164	19,443	19,726	20,013	20,305	20,601	20,901	21,206	21,515	21,829	22,147	22,470	22,798	23,130	23,467

20,555	20,855	21,159	21,467	21,780	22,097	22,419	22,746	23,078	23,414	23,755	24,101	24,452	24,808	25,170	25,531
23,685	24,030	24,380	24,735	25,096	25,462	25,833	26,210	26,592	26,980	27,373	27,772	28,177	28,588	29,005	29,428
35,395	35,911	36,435	36,966	37,505	38,052	38,607	39,170	39,741	40,321	40,909	41,506	42,111	42,725	43,348	43,980
41,961	42,573	43,194	43,824	44,463	45,112	45,770	46,438	47,115	47,802	48,499	49,207	49,925	50,653	51,392	52,142
41,600	42,207	42,823	43,448	44,082	44,725	45,377	46,039	46,711	47,392	48,083	48,785	49,497	50,219	50,952	51,695
25,698	26,073	26,453	26,839	27,230	27,627	28,030	28,439	28,854	29,275	29,702	30,135	30,574	31,020	31,472	31,931
22,887	23,221	23,560	23,903	24,251	24,605	24,964	25,328	25,697	26,072	26,452	26,838	27,229	27,626	28,029	28,438
21,149	21,457	21,770	22,087	22,409	22,736	23,067	23,403	23,744	24,090	24,441	24,797	25,159	25,526	25,898	26,276
39,388	39,963	40,546	41,137	41,737	42,346	42,964	43,591	44,227	44,872	45,527	46,191	46,865	47,549	48,243	48,947
36,582	37,116	37,657	38,206	38,763	39,328	39,902	40,484	41,075	41,674	42,282	42,899	43,525	44,160	44,804	45,458
38,860	39,427	40,002	40,586	41,178	41,779	42,388	43,006	43,633	44,270	44,916	45,571	46,236	46,911	47,595	48,289
34,475	34,978	35,488	36,006	36,531	37,064	37,605	38,154	38,711	39,276	40,430	41,022	41,618	42,225	42,841	43,467
24,709	25,069	25,435	25,806	26,182	26,564	26,951	27,344	27,743	28,148	28,558	28,974	29,397	29,826	30,261	30,702
23,324	23,664	24,009	24,359	24,714	25,074	25,440	25,811	26,187	26,569	26,956	27,349	27,748	28,153	28,564	28,981
51,698	52,452	53,217	53,993	54,781	55,580	56,391	57,214	58,049	58,896	59,755	60,627	61,512	62,410	63,321	64,245
56,016	56,833	57,662	58,503	59,357	60,223	61,102	61,994	62,899	63,817	64,748	65,693	66,652	67,625	68,612	69,613
51,756	52,511	53,277	54,054	54,843	55,645	56,455	57,279	58,115	58,963	59,823	60,696	61,582	62,481	63,393	64,318
63,470	64,396	65,336	66,289	67,256	68,237	69,233	70,243	71,268	72,308	73,363	74,434	75,520	76,622	77,740	78,875
41,929	42,541	43,162	43,792	44,431	45,079	45,737	46,404	47,081	47,768	48,465	49,172	49,889	50,617	51,356	52,105
45,030	45,687	46,354	47,030	47,716	48,412	49,118	49,835	50,562	51,300	52,048	52,807	53,577	54,359	55,152	55,957
41,006	41,604	42,211	42,827	43,452	44,086	44,729	45,382	46,044	46,716	47,398	48,090	48,792	49,504	50,226	50,959
25,500	25,872	26,249	26,632	27,020	27,414	27,814	28,220	28,632	29,050	29,474	29,904	30,340	30,782	31,231	31,686
20,146	20,440	20,738	21,040	21,347	21,658	21,974	22,294	22,619	22,949	23,284	23,623	23,967	24,316	24,671	25,031
15,500	15,726	15,955	16,187	16,423	16,662	16,905	17,151	17,401	17,655	17,912	18,173	18,438	18,707	18,980	19,257
36,355	36,885	37,423	37,969	38,523	39,085	39,655	40,233	40,820	41,415	42,019	42,632	43,254	43,885	44,525	45,175
29,857	30,292	30,734	31,182	31,637	32,098	32,566	33,041	33,523	34,012	34,508	35,011	35,522	36,040	36,566	37,099
29,197	29,623	30,055	30,493	30,938	31,389	31,847	32,311	32,782	33,260	33,745	34,237	34,736	35,243	35,757	36,279
30,252	30,693	31,141	31,595	32,056	32,524	32,998	33,479	33,967	34,462	34,965	35,475	35,992	36,517	37,050	37,590
45,957	46,627	47,307	47,997	48,697	49,407	50,128	50,859	51,601	52,354	53,118	53,893	54,679	55,477	56,286	57,107
44,799	45,453	46,116	46,789	47,472	48,165	48,868	49,581	50,304	51,038	51,783	52,539	53,306	54,084	54,873	55,674
36,712	37,247	37,790	38,341	38,900	39,467	40,043	40,627	41,220	41,821	42,431	43,050	43,678	44,315	44,961	45,617
32,129	32,598	33,073	33,555	34,044	34,541	35,045	35,556	36,075	36,601	37,135	37,677	38,227	38,785	39,351	39,925
42,657	43,279	43,910	44,551	45,201	45,860	46,529	47,208	47,897	48,596	49,305	50,024	50,754	51,495	52,246	53,008
42,854	43,479	44,113	44,757	45,410	46,072	46,744	47,426	48,118	48,820	49,532	50,255	50,988	51,732	52,487	53,253
34,671	35,177	35,690	36,211	36,739	37,275	37,819	38,371	38,931	39,499	40,075	40,660	41,253	41,855	42,466	43,086
42,854	43,479	44,113	44,757	45,410	46,072	46,744	47,426	48,118	48,820	49,532	50,255	50,988	51,732	52,487	53,253
44,600	45,251	45,911	46,581	47,261	47,951	48,651	49,361	50,081	50,812	51,553	52,305	53,068	53,842	54,628	55,425
40,804	41,399	42,003	42,616	43,238	43,869	44,509	45,158	45,817	46,485	47,163	47,851	48,549	49,257	49,976	50,705
48,230	48,934	49,648	50,372	51,107	51,853	52,610	53,378	54,157	54,947	55,749	56,562	57,387	58,224	59,071	59,936
51,167	51,914	52,671	53,439	54,219	55,010	55,813	56,627	57,453	58,291	59,142	60,005	60,881	61,769	62,670	63,584
49,319	50,039	50,769	51,510	52,262	53,025	53,799	54,584	55,380	56,188	57,008	57,840	58,684	59,540	60,409	61,290
60,340	61,220	62,113	63,019	63,939	64,872	65,819	66,779	67,753	68,742	69,745	70,763	71,796	72,844	73,907	74,986
70,104	71,127	72,165	73,218	74,286	75,370	76,470	77,586	78,718	79,867	81,033	82,216	83,416	84,633	85,868	87,121
71,387	72,429	73,486	74,558	75,646	76,750	77,870	79,006	80,159	81,329	82,516	83,720	84,942	86,182	87,440	88,716
69,636	70,652	71,683	72,729	73,790	74,867	75,960	77,069	78,194	79,335	80,493	81,668	82,860	84,069	85,296	86,541
74,818	75,910	77,018	78,142	79,282	80,439	81,613	82,804	84,012	85,238	86,482	87,744	89,025	90,324	91,642	92,979
91,217	92,548	93,899	95,269	96,659	98,070	99,501	100,953	102,426	103,921	105,438	106,977	108,538	110,122	111,729	113,360
101,576	103,059	104,563	106,089	107,637	109,208	110,802	112,419	114,060	115,725	117,414	119,128	120,867	122,631	124,421	126,237
96,825	98,238	99,672	101,127	102,603	104,101	105,620	107,162	108,726	110,313	111,923	113,557	115,214	116,896	118,602	120,333
76,831	77,952	79,090	81,415	82,603	83,809	85,032	86,273	87,532	88,809	90,105	91,420	92,754	94,108	95,481	96,874
53,768	54,553	55,349	56,157	56,976	57,807	58,650	59,506	60,374	61,255	62,149	63,056	63,976	64,910	65,857	66,818
45,420	46,083	46,755	47,437	48,129	48,831	49,543	50,266	50,999	51,743	52,498	53,264	54,041	54,829	55,629	56,441
57,598	58,438	59,291	60,156	61,034	61,925	62,829	63,746	64,676	65,620	66,578	67,550	68,536	69,536	70,551	71,581
67,860	68,850	69,855	70,874	71,908	72,957	74,022	75,102	76,198	77,310	78,438	79,583	80,744	81,922	83,118	84,331
73,930	75,009	76,104	77,215	78,342	79,485	80,645	81,822	83,016	84,228	85,457	86,704	87,969	89,253	90,556	91,878
113,058	114,708	116,382	118,081	119,804	121,553	123,327	125,127	126,953	128,806	130,686	132,594	134,529	136,493	138,485	140,506
107,843	109,417	111,014	112,634	114,278	115,946	117,638	119,355	121,097	122,865	124,658	126,478	128,324	130,197	132,097	134,025
109,917	111,521	113,149	114,800	116,476	118,176	119,901	121,651	123,427	125,229	127,057	128,912	130,794	132,703	134,640	136,605
102,098	103,588	105,100	106,634	108,190	109,769	111,371	112,997	114,646	116,319	118,017	119,740	121,488	123,261	125,060	126,885
100,154	101,616	103,099	104,604	106,131	107,680	109,252	110,847	112,465	114,106	115,771	117,461	119,175	120,914	122,679	124,470
102,103	103,593	105,105	106,639	108,195	109,774	111,376	113,002	114,651	116,324	118,022	119,745	121,493	123,266	125,065	126,890
106,195	107,745	109,318	110,914	112,533	114,175	115,841	117,532	119,247	120,988	122,754	124,546	126,364	128,208	130,079	131,978
93,128	94,487	95,866	97,265	98,685	100,125	101,586	103,069	104,573	106,099	107,648	109,219	110,813	112,430	114,071	115,736
78,877	80,028	81,196	82,381	83,583	84,803	86,041	87,297	88,571	89,864	91,176	92,507	93,857	95,227	96,617	98,027
55,813	56,627	57,453	58,291	59,142	60,005	60,881	61,769	62,670	63,584	64,512	65,453	66,408	67,377	68,360	69,358
74,982	76,076	77,186	78,312	79,455	80,615	81,791	82,985	84,196	85,425	86,672	87,937	89,220	90,522	91,843	93,183

105,238	106,774	108,332	109,913	111,517	113,145	114,796	116,472	118,172	119,897	121,647	123,423	125,224	127,052	128,906	Exhibit MW-9
103,555	105,066	106,599	108,155	109,734	111,336	112,961	114,610	116,283	117,980	119,702	121,449	123,222	125,021	126,846	128,697
93,920	95,291	96,682	98,093	99,525	100,978	102,452	103,947	105,464	107,003	108,565	110,150	111,758	113,389	115,044	116,723
85,408	86,654	87,919	89,202	90,504	91,825	93,165	94,525	95,905	97,305	98,725	100,166	101,628	103,111	104,616	106,143
61,391	62,287	63,196	64,118	65,054	66,003	66,966	67,943	68,934	69,940	70,961	71,997	73,048	74,114	75,196	76,293
78,513	79,659	80,822	82,002	83,199	84,413	85,645	86,895	88,163	89,450	90,755	92,080	93,424	94,787	96,170	97,574
80,258	81,429	82,617	83,823	85,046	86,287	87,546	88,824	90,120	91,435	92,769	94,123	95,497	96,891	98,305	99,740
96,591	98,001	99,431	100,882	102,354	103,848	105,364	106,902	108,462	110,045	111,651	113,281	114,934	116,612	118,314	120,041
85,013	86,254	87,513	90,086	91,401	92,735	94,088	95,461	96,854	98,268	99,702	101,157	102,633	104,131	105,651	
77,887	79,024	80,177	81,347	82,534	83,738	84,960	86,200	87,458	88,734	90,029	91,343	92,676	94,029	95,401	96,793
73,665	74,740	75,831	76,938	78,061	79,200	80,356	81,529	82,719	83,926	85,151	86,394	87,655	88,934	90,232	91,549
45,953	46,623	47,303	48,693	49,403	50,124	50,855	51,597	52,350	53,114	53,889	54,675	55,473	56,282	57,103	
60,832	61,720	62,621	63,535	64,462	65,403	66,357	67,325	68,307	69,304	70,315	71,341	72,382	73,438	74,510	75,597
64,226	65,163	66,114	67,079	68,058	69,051	70,059	71,081	72,118	73,170	74,238	75,321	76,420	77,535	78,667	79,815
76,073	77,183	78,309	79,452	80,611	81,787	82,981	84,192	85,421	86,668	87,933	89,216	90,518	91,839	93,179	94,539
80,001	81,169	82,354	83,556	84,775	86,012	87,267	88,541	89,833	91,144	92,474	93,824	95,193	96,582	97,992	99,422
62,646	63,560	64,487	65,428	66,383	67,352	68,335	69,332	70,344	71,371	72,413	73,470	74,542	75,630	76,734	77,854
58,820	59,678	60,549	61,433	62,329	63,239	64,162	65,098	66,048	67,012	67,990	68,982	69,989	71,010	72,046	73,097
63,769	64,700	65,644	66,602	67,574	68,560	69,560	70,575	71,605	72,650	73,710	74,786	75,877	76,984	78,107	79,247
124,242	126,055	127,895	129,762	131,656	133,578	135,528	137,506	139,513	141,549	143,615	145,711	147,838	149,996	152,185	154,406
89,495	90,801	92,126	93,471	94,835	96,219	97,623	99,048	100,494	101,961	103,449	104,959	106,491	108,045	109,622	111,222
80,951	82,132	83,331	84,547	85,781	87,033	88,303	89,592	90,900	92,227	93,573	94,939	96,325	97,731	99,157	100,604
67,924	68,915	69,921	71,976	73,026	74,092	75,173	76,270	77,383	78,512	79,658	80,821	82,000	83,197	84,411	
61,261	62,155	63,062	63,982	64,916	65,863	66,824	67,799	68,788	69,792	70,810	71,843	72,891	73,955	75,034	76,129
66,607	67,579	68,565	69,566	70,581	71,611	72,656	73,716	74,792	75,883	76,990	78,114	79,254	80,411	81,585	82,776
91,483	92,818	94,173	95,547	96,941	98,356	99,791	101,247	102,725	104,224	105,745	107,288	108,854	110,443	112,055	113,691
100,485	101,952	103,440	104,950	106,482	108,036	109,613	111,213	112,836	114,483	116,154	117,849	119,569	121,314	123,085	124,882
93,981	95,353	96,745	98,157	99,590	101,044	102,519	104,015	105,533	107,073	108,636	110,222	111,831	113,463	115,119	116,799
78,973	80,126	81,295	82,481	83,685	84,906	86,145	87,402	88,678	89,972	91,285	92,617	93,969	95,340	96,731	98,143
92,998	94,355	95,732	97,129	98,547	99,985	101,444	102,925	104,427	105,951	107,497	109,066	110,658	112,273	113,912	115,575
101,576	103,059	104,563	106,089	107,637	109,208	110,802	112,419	114,060	115,725	117,414	119,128	120,867	122,631	124,421	126,237
90,094	91,409	92,743	94,097	95,470	96,863	98,277	99,711	101,166	102,643	104,141	105,661	107,203	108,768	110,356	111,967
91,941	93,283	94,644	96,025	97,426	98,848	100,291	101,755	103,240	104,747	106,276	107,827	109,401	110,998	112,618	114,262
76,994	78,118	79,258	80,415	81,589	82,780	83,988	85,214	86,458	87,720	89,000	90,299	91,617	92,954	94,311	95,687
62,244	63,152	64,074	65,009	65,958	66,920	67,897	68,888	69,893	70,913	71,948	72,998	74,063	75,144	76,241	77,354
105,634	107,176	108,740	110,327	111,937	113,571	115,229	116,911	118,617	120,348	122,105	123,887	125,695	127,530	129,391	131,280
135,822	137,805	139,816	141,857	143,928	146,029	148,161	150,324	152,518	154,744	157,003	159,295	161,620	163,979	166,373	168,802
164,191	166,588	169,020	171,487	173,990	176,530	179,107	181,721	184,374	187,065	189,796	192,567	195,378	198,230	201,124	204,060
116,745	118,449	120,178	121,932	123,712	125,518	127,350	129,209	131,095	133,008	134,949	136,919	138,918	140,946	143,003	145,090
98,469	99,906	101,364	102,843	104,344	105,867	107,412	108,980	110,571	112,185	113,822	115,483	117,169	118,879	120,614	122,374
60,629	61,514	62,412	63,323	64,247	65,185	66,136	67,101	68,080	69,073	70,081	71,104	72,142	73,195	74,263	75,347
71,880	72,929	73,993	75,073	76,169	77,281	78,409	79,553	80,714	81,892	83,087	84,300	85,530	86,778	88,044	89,329
109,528	111,127	112,749	114,395	116,065	117,759	119,478	121,222	122,991	124,786	126,607	128,455	130,330	132,232	134,162	136,120
78,877	80,028	81,196	82,381	83,583	84,803	86,041	87,297	88,571	89,864	91,176	92,507	93,857	95,227	96,617	98,027
105,600	107,141	108,705	110,292	111,902	113,535	115,192	116,873	118,579	120,310	122,066	123,848	125,656	127,490	129,351	131,239
118,072	119,795	121,544	123,318	125,118	126,944	128,797	130,677	132,584	134,519	136,482	138,474	140,495	142,546	144,627	146,738
92,468	93,818	95,187	96,576	97,986	99,416	100,867	102,339	103,833	105,348	106,886	108,446	110,029	111,635	113,264	114,917
115,264	116,946	118,653	120,385	122,142	123,925	125,734	127,569	129,431	131,320	133,237	135,182	137,155	139,157	141,188	143,249
121,299	123,069	124,865	126,688	128,537	130,413	132,317	134,248	136,208	138,196	140,213	142,260	144,336	146,443	148,581	150,750
104,769	106,298	107,849	109,423	111,020	112,640	114,284	115,952	117,644	119,361	121,103	122,871	124,664	126,484	128,330	130,203
56,967	57,798	58,641	59,497	60,365	61,246	62,140	63,047	63,967	64,900	65,847	66,808	67,783	68,772	69,776	70,794
61,855	62,758	63,674	64,603	65,546	66,502	67,472	68,457	69,456	70,470	71,498	72,541	73,600	74,674	75,764	76,870
98,874	100,317	101,781	103,267	104,774	106,303	107,855	109,429	111,026	112,646	114,290	115,958	117,650	119,367	121,109	122,877
98,938	100,382	101,847	103,333	104,841	106,371	107,924	109,499	111,097	112,719	114,364	116,033	117,727	119,445	121,188	122,957
121,796	123,574	125,378	127,208	129,065	130,949	132,860	134,799	136,767	138,763	140,788	142,843	144,928	147,043	149,189	151,367
134,097	136,054	138,040	140,055	142,099	144,173	146,277	148,412	150,578	152,776	155,006	157,269	159,565	161,894	164,257	166,655
131,031	132,944	134,884	136,853	138,851	140,878	142,934	145,020	147,137	149,285	151,464	153,675	155,918	158,194	160,503	162,846
100,515	101,982	103,470	104,980	106,512	108,067	109,644	111,244	112,868	114,515	116,186	117,882	119,603	121,349	123,120	124,917
105,731	107,274	108,840	110,429	112,041	113,676	115,335	117,018	118,726	120,459	122,217	124,001	125,811	127,647	129,510	131,400
92,336	93,684	95,051	96,438	97,845	99,273	100,722	102,192	103,684	105,197	106,732	108,290	109,871	111,475	113,102	114,753
107,843	109,417	111,014	112,634	114,278	115,946	117,638	119,355	121,097	122,865	124,658	126,478	128,324	130,197	132,097	134,025
80,821	82,000	83,197	84,411	85,643	86,893	88,161	89,448	90,753	92,077	93,421	94,784	96,167	97,571	98,995	100,440
90,749	92,073	93,417	94,780	96,163	97,566	98,990	100,435	101,901	103,388	104,897	106,428	107,981	109,557	111,156	112,778
92,501	93,851	95,221	96,611	98,021	99,452	100,903	102,376	103,870	105,386	106,924	108,485	110,068	111,674	113,304	114,958
76,238	77,351	78,480	79,625	80,787	81,966	83,162	84,376	85,607	86,856	88,124	89,410	90,715	92,039	93,382	94,745

Exhibit MW-9

78,813	79,963	81,130	82,314	83,515	84,734	85,971	87,226	88,499	89,791	91,101	92,431	93,780	95,149	96,538	98,017	90,317
72,675	73,736	74,812	75,904	77,012	78,136	79,276	80,433	81,607	82,798	84,006	85,232	86,476	87,738	89,018	90,317	90,317
79,503	80,663	81,840	83,034	84,246	85,475	86,722	87,988	89,272	90,575	91,897	93,238	94,599	95,980	97,381	98,802	98,802
52,281	53,044	53,818	54,603	55,400	56,208	57,028	57,860	58,704	59,561	60,430	61,312	62,207	63,115	64,036	64,970	64,970
98,508	99,946	101,405	102,885	104,387	105,911	107,457	109,025	110,616	112,230	113,868	115,530	117,216	118,927	120,663	122,424	122,424
89,568	90,875	92,201	93,547	94,912	96,297	97,702	99,128	100,575	102,043	103,532	105,043	106,576	108,132	109,710	111,311	111,311
54,198	54,989	55,791	56,605	57,431	58,269	59,119	59,982	60,857	61,745	62,646	63,560	64,487	65,428	66,383	67,352	67,352
83,300	84,516	85,749	87,000	88,270	89,558	90,865	92,191	93,536	94,901	96,286	97,691	99,117	100,564	102,032	103,521	103,521
96,365	97,771	99,198	100,646	102,115	103,605	105,117	106,651	108,208	109,787	111,389	113,015	114,665	116,339	118,037	119,760	119,760
100,023	101,483	102,964	104,467	105,992	107,539	109,109	110,701	112,317	113,956	115,619	117,307	119,019	120,756	122,519	124,307	124,307
87,449	88,725	90,020	91,334	92,667	94,019	95,391	96,783	98,196	99,629	101,083	102,558	104,055	105,574	107,115	108,678	108,678
89,398	90,703	92,027	93,370	94,733	96,116	97,519	98,942	100,386	101,851	103,338	104,846	106,376	107,929	109,504	111,102	111,102
113,584	115,242	116,924	118,631	120,363	122,120	123,902	125,710	127,545	129,407	131,296	133,212	135,156	137,129	139,131	141,162	141,162
88,642	89,936	91,249	92,581	93,932	95,303	96,694	98,105	99,537	100,990	102,464	103,959	105,476	107,015	108,577	110,162	110,162
108,437	110,020	111,626	113,255	114,908	116,585	118,287	120,013	121,765	123,542	125,345	127,175	129,031	130,914	132,825	134,764	134,764
107,843	109,417	111,014	112,634	114,278	115,946	117,638	119,355	121,097	122,865	124,658	126,478	128,324	130,197	132,097	134,025	134,025
66,501	67,471	68,456	69,455	70,469	71,497	72,540	73,599	74,673	75,763	76,869	77,991	79,129	80,284	81,456	82,645	82,645
75,903	77,011	78,135	79,275	80,432	81,606	82,797	84,005	85,231	86,475	87,737	89,017	90,316	91,634	92,971	94,328	94,328
67,494	68,479	69,478	70,492	71,521	72,565	73,624	74,698	75,788	76,894	78,016	79,155	80,310	81,482	82,671	83,877	83,877
88,777	90,073	91,388	92,722	94,075	95,448	96,841	98,254	99,688	101,143	102,619	104,117	105,637	107,179	108,743	110,330	110,330
100,785	102,256	103,748	105,262	106,798	108,357	109,939	111,544	113,172	114,824	116,500	118,200	119,925	121,675	123,451	125,253	125,253
94,383	95,760	97,158	98,576	100,015	101,475	102,956	104,459	105,984	107,531	109,100	110,692	112,308	113,947	115,610	117,297	117,297
54,198	54,989	55,791	56,605	57,431	58,269	59,119	59,982	60,857	61,745	62,646	63,560	64,487	65,428	66,383	67,352	67,352
51,592	52,345	53,109	53,884	54,670	55,468	56,277	57,098	57,931	58,776	59,634	60,504	61,387	62,283	63,192	64,114	64,114
47,929	48,628	49,337	50,057	50,787	51,528	52,280	53,043	53,817	54,602	55,399	56,207	57,027	57,859	58,703	59,560	59,560
51,264	52,012	52,771	53,541	54,322	55,115	55,919	56,735	57,563	58,403	59,255	60,120	60,997	61,887	62,790	63,706	63,706
65,420	66,375	67,344	68,327	69,324	70,336	71,362	72,403	73,460	74,532	75,620	76,724	77,844	78,980	80,133	81,302	81,302
57,434	58,272	59,122	59,985	60,860	61,748	62,649	63,563	64,491	65,432	66,387	67,356	68,339	69,336	70,348	71,375	71,375
66,607	67,579	68,565	69,566	70,581	71,611	72,656	73,716	74,792	75,883	76,990	78,114	79,254	80,411	81,585	82,776	82,776
55,391	56,199	57,019	57,851	58,695	59,551	60,420	61,302	62,197	63,105	64,026	64,960	65,908	66,870	67,846	68,836	68,836
52,450	53,215	53,991	54,779	55,578	56,389	57,212	58,047	58,894	59,753	60,625	61,510	62,408	63,319	64,243	65,180	65,180
41,990	42,603	43,225	43,856	44,496	45,145	45,804	46,472	47,150	47,838	48,536	49,244	49,962	50,691	51,431	52,181	52,181
53,112	53,887	54,673	55,471	56,280	57,101	57,934	58,779	59,637	60,507	61,390	62,286	63,195	64,117	65,053	66,002	66,002
53,808	54,593	55,390	56,198	57,018	57,850	58,694	59,550	60,419	61,301	62,195	63,103	64,024	64,958	65,906	66,868	66,868
61,132	62,024	62,929	63,847	64,779	65,724	66,683	67,656	68,643	69,645	70,661	71,692	72,738	73,799	74,876	75,969	75,969
57,038	57,870	58,714	59,571	60,440	61,322	62,217	63,125	64,046	64,981	65,929	66,891	67,867	68,857	69,862	70,881	70,881
46,020	46,691	47,372	48,063	48,764	49,475	50,197	50,929	51,672	52,426	53,191	53,967	54,754	55,553	56,364	57,186	57,186
53,112	53,887	54,673	55,471	56,280	57,101	57,934	58,779	59,637	60,507	61,390	62,286	63,195	64,117	65,053	66,002	66,002
66,075	67,039	68,017	69,016	70,017	71,039	72,076	73,128	74,195	75,278	76,377	77,492	78,623	79,770	80,934	82,115	82,115
91,381	92,715	94,068	95,441	96,834	98,247	99,681	101,136	102,612	104,110	105,630	107,172	108,736	110,323	111,933	113,567	113,567
70,365	71,392	72,434	73,491	74,563	75,651	76,755	77,875	79,011	80,164	81,334	82,521	83,725	84,947	86,187	87,445	87,445
47,337	48,028	48,729	49,438	50,161	50,893	51,636	52,389	53,153	53,926	54,716	55,514	56,324	57,146	57,980	58,826	58,826
47,473	48,166	48,869	49,582	50,305	51,039	51,784	52,540	53,307	54,085	54,874	55,675	56,487	57,311	58,147	58,995	58,995
1,153,326	1,170,151	1,187,222	1,204,543	1,222,116	1,239,943	1,258,030	1,276,383	1,295,006	1,313,897	1,333,066	1,352,515	1,372,247	1,392,266	1,412,575	1,433,184	7.1%
672,307	682,106	692,050	702,139	712,373	722,759	733,294	743,984	754,831	765,833	776,999	788,325	799,818	811,479	823,310	835,318	4.1%
466,093	472,881	479,771	486,761	493,854	501,047	508,350	515,756	523,270	530,894	538,630	546,478	554,442	562,521	570,720	579,039	2.9%
374,929	380,387	385,923	391,542	397,245	403,030	408,900	414,855	420,897	427,027	433,244	439,552	445,954	452,451	459,040	465,728	2.3%
398,002	403,799	409,675	415,642	421,696	427,836	434,069	440,392	446,803	453,310	459,913	466,612	473,411	480,306	487,302	494,400	2.4%
544,823	552,764	560,819	568,988	577,278	585,690	594,225	602,885	611,675	620,588	629,634	638,811	648,124	657,574	667,160	676,886	3.3%
972,924	987,114	1,001,510	1,016,112	1,030,930	1,045,965	1,061,221	1,076,701	1,092,406	1,108,343	1,124,507	1,140,910	1,157,552	1,174,437	1,191,570	1,208,953	6.0%
1,619,794	1,643,428	1,667,406	1,691,734	1,716,418	1,741,463	1,766,876	1,792,656	1,818,812	1,845,351	1,872,279	1,899,602	1,927,321	1,955,444	1,983,980	2,012,931	9.9%
2,571,857	2,609,390	2,647,472	2,686,111	2,725,313	2,765,087	2,805,441	2,846,387	2,887,926	2,930,075	2,972,840	3,016,233	3,060,253	3,104,915	3,150,230	3,196,207	15.7%
2,970,496	3,013,851	3,057,838	3,102,468	3,147,750	3,193,692	3,240,307	3,287,599	3,335,583	3,384,265	3,433,658	3,483,777	3,534,626	3,586,217	3,638,561	3,691,670	18.2%
2,500,099	2,536,587	2,573,607	2,611,167	2,649,277	2,687,941	2,727,169	2,766,971	2,807,355	2,848,327	2,889,895	2,932,074	2,974,869	3,018,290	3,062,342	3,107,038	15.3%
2,103,477	2,134,174	2,165,318	2,196,919	2,228,976	2,261,504	2,294,507	2,327,989	2,361,964	2,396,436	2,431,409	2,466,894	2,502,893	2,539,418	2,576,481	2,614,081	12.9%
16,348,127	16,586,632	16,828,611	17,074,126	17,323,226	17,575,957	17,832,389	18,092,558	18,356,528	18,624,346	18,896,074	19,171,783	19,451,510	19,735,318	20,023,271	20,315,435	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
235,066	238,505	241,979	245,515	249,100	252,731	256,432	260,169	263,970	267,818	271,728	275,709	279,727	283,808	287,953	292,164	
1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
98,874	100,317	101,781	103,267	104,774	106,303	107,855	109,429	111,026	112,646	114,290	115,958	117,650	119,367	121,109	122,877	



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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-6

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Refer to Da Fonte Direct Testimony, pp 35-37, and Table V and answer the following:  
What is or will be the pressure rating of the new interconnect for the NED project?

**RESPONSE:**

The Company's understanding is that the maximum allowable operating pressure ("MAOP") on the NED mainline is expected to be approximately 1,400 psig.

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-7

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Refer to Da Fonte Direct Testimony, pp 35-37, and Table V and answer the following:  
How does EnergyNorth accommodate the absence of this potential new interconnect at this time?  
Refer to the service territory map requested in the last question below if helpful when answering  
this question.

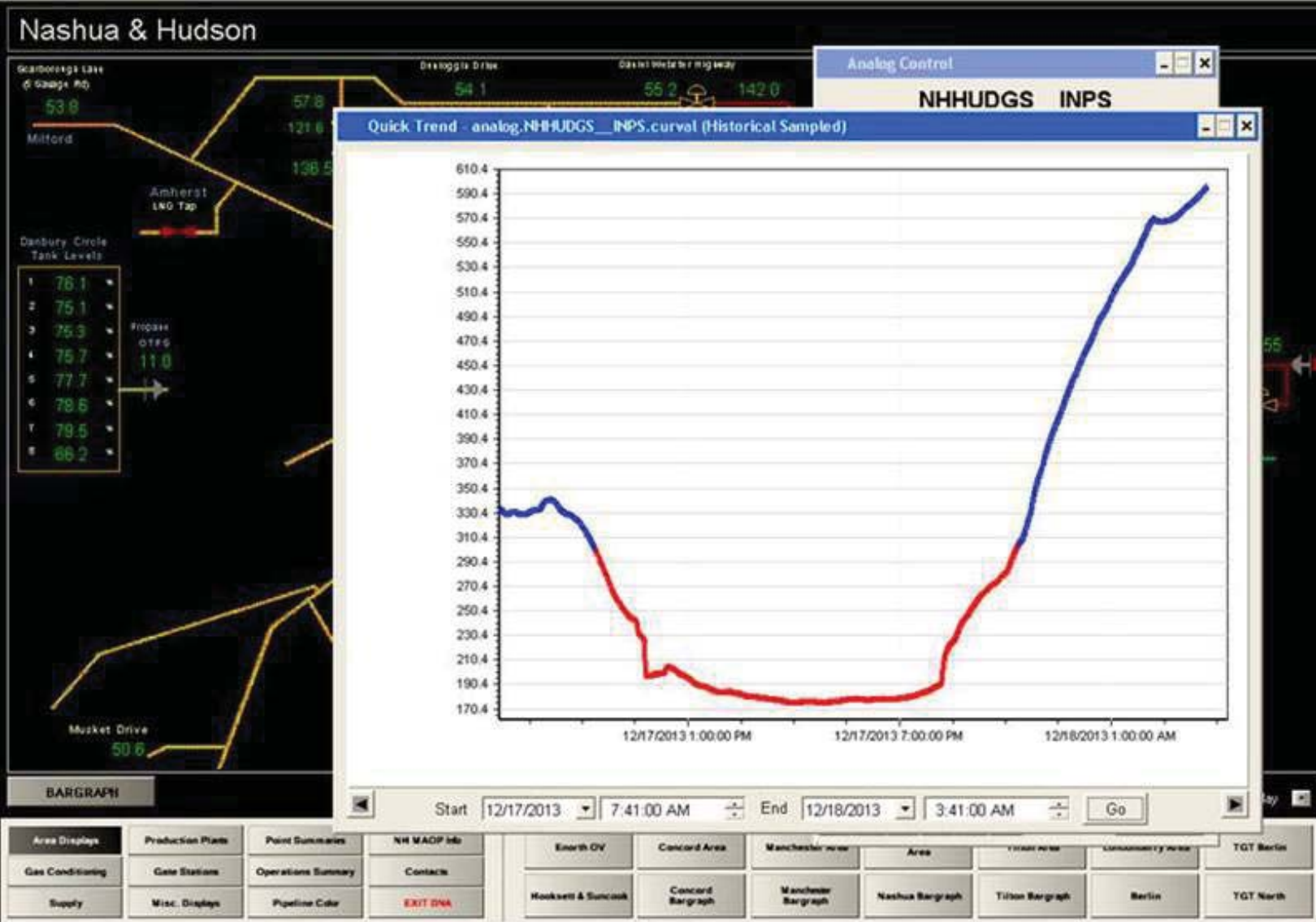
**RESPONSE:**

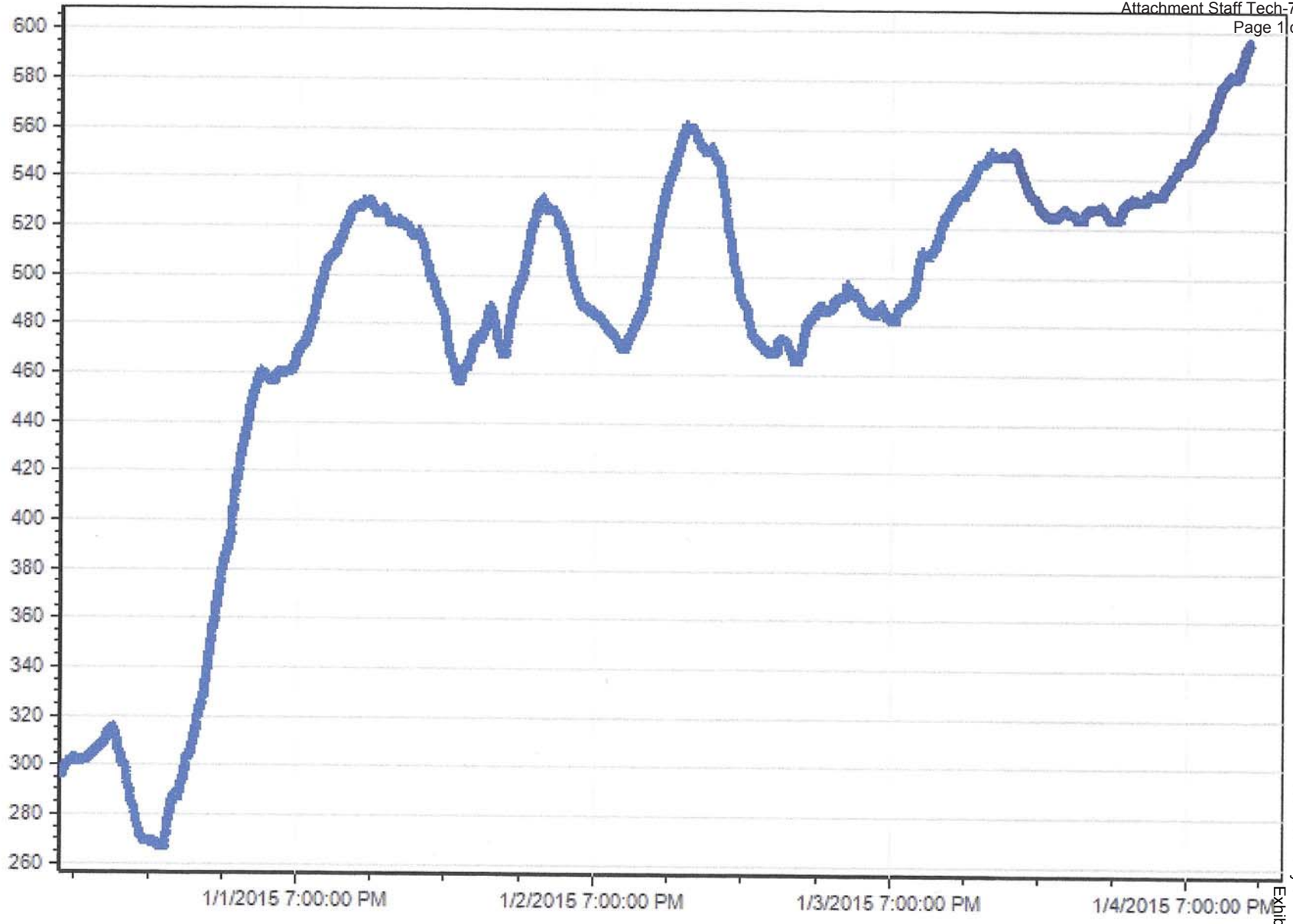
The Concord Lateral has an MAOP of 750 psig but operates in the 300# to 600# range and has been lower than 300# on many occasions. The Tennessee tariff only requires that Tennessee deliver a minimum pressure on the lateral of 100#. As such, any restriction or curtailment on the lateral as a result of an operational or *force majeure* event would adversely impact delivery pressure to the EnergyNorth city gates. In particular, the Hudson Lateral has experienced less than optimal pressures in the past when the Concord Lateral pressures were low. As shown in the map provided in the Company's response to Staff request Staff Tech-47, the Hudson Lateral is at the base of the Concord Lateral and is the first interconnect to the EnergyNorth distribution system. It serves the Nashua section of the Company's distribution system which is the largest load pocket on the distribution system and which has one of the higher load growth rates in the EnergyNorth footprint. The Nashua high pressure line is a 200# "back bone" system that operates at 185# and allows for increased flow and pressure to its customers. The Company has made distribution system improvements to and around the high pressure system to enable it to take as much flow off of the Hudson Lateral as possible to satisfy its customers' firm requirements. However, there have been many occasions where the lateral pressure is less than optimal and some instances where the pressure fell below 200#. Attachment Staff Tech-7(a) shows a particular instance where the Hudson Lateral inlet pressure fell to approximately 170# on December 17, 2013 resulting from a restriction on the Tennessee mainline. In addition, Attachment Staff Tech-7(b) shows a monthly trend for January 2015 that demonstrates the fluctuations of the Hudson Lateral pressure under normal Tennessee operating conditions. Even under these conditions, inlet pressures to the Nashua high pressure distribution system fell below 260#. Given the Company's current capacity entitlements on the Concord Lateral, without the expansion of the Hudson Lateral the EnergyNorth distribution system in Nashua would see

consistently lower pressures from Tennessee under normal operating conditions and critically low pressures during abnormal operating conditions.

The the proposed Merrimack gate station shown on the map attached to Staff Tech-47 would have access to the 1,400# mainline pressure for the NED project. This new interconnect would not only provide a secondary source of supply to the distribution system but enhance delivery pressure into the Nashua area and relieve the load burden on the Hudson Lateral. In addition, the NED project will also improve the pressures at Dracut given that it can operate at almost twice the pressure as the current Tennessee system, which in turn helps to fortify the pressure on the Concord Lateral up to the Concord gate station.

# Hudson lateral Inlet Pressure Trend December 17, 2013

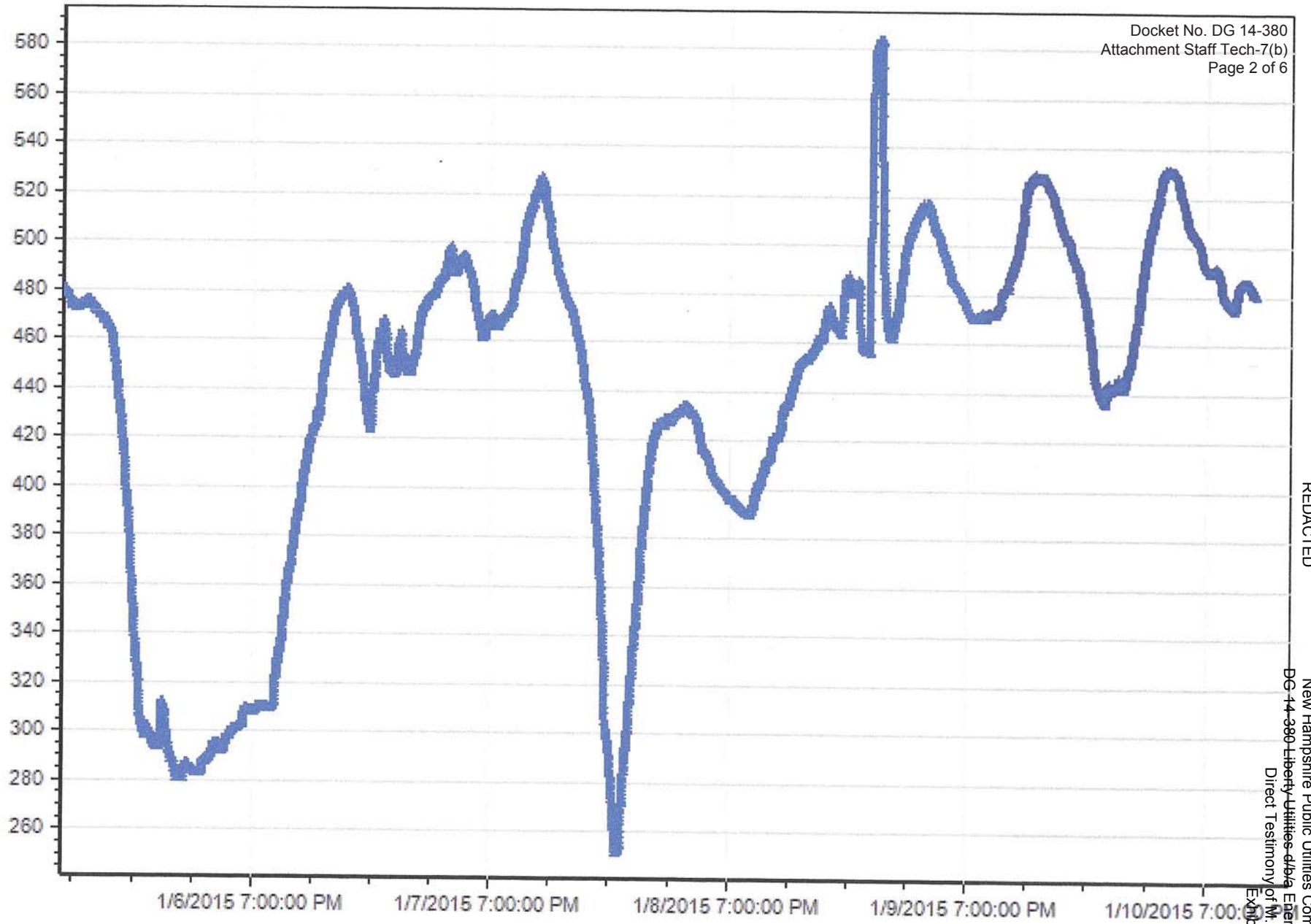




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REDACTED  
New Hampshire Public Utilities Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

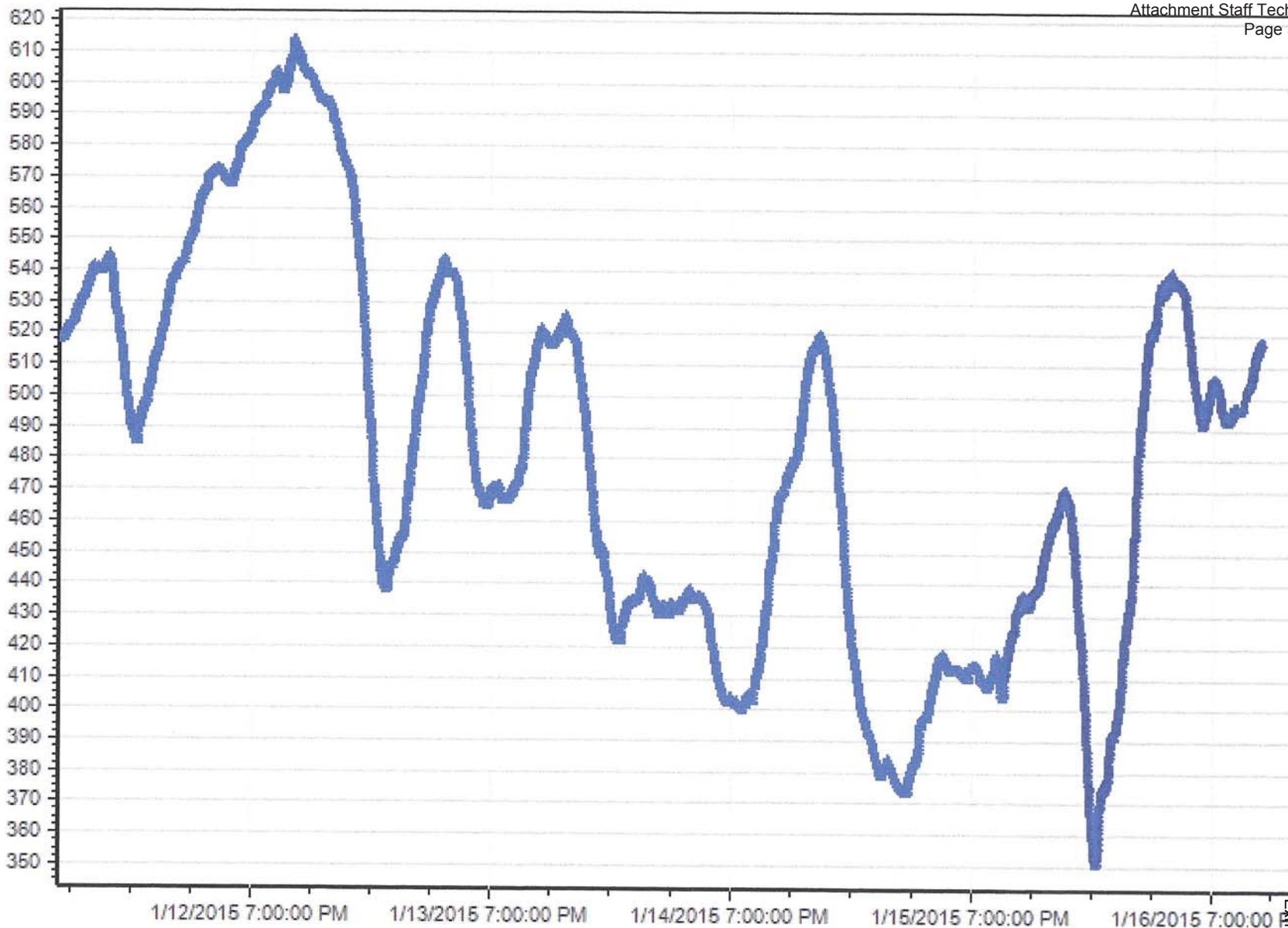




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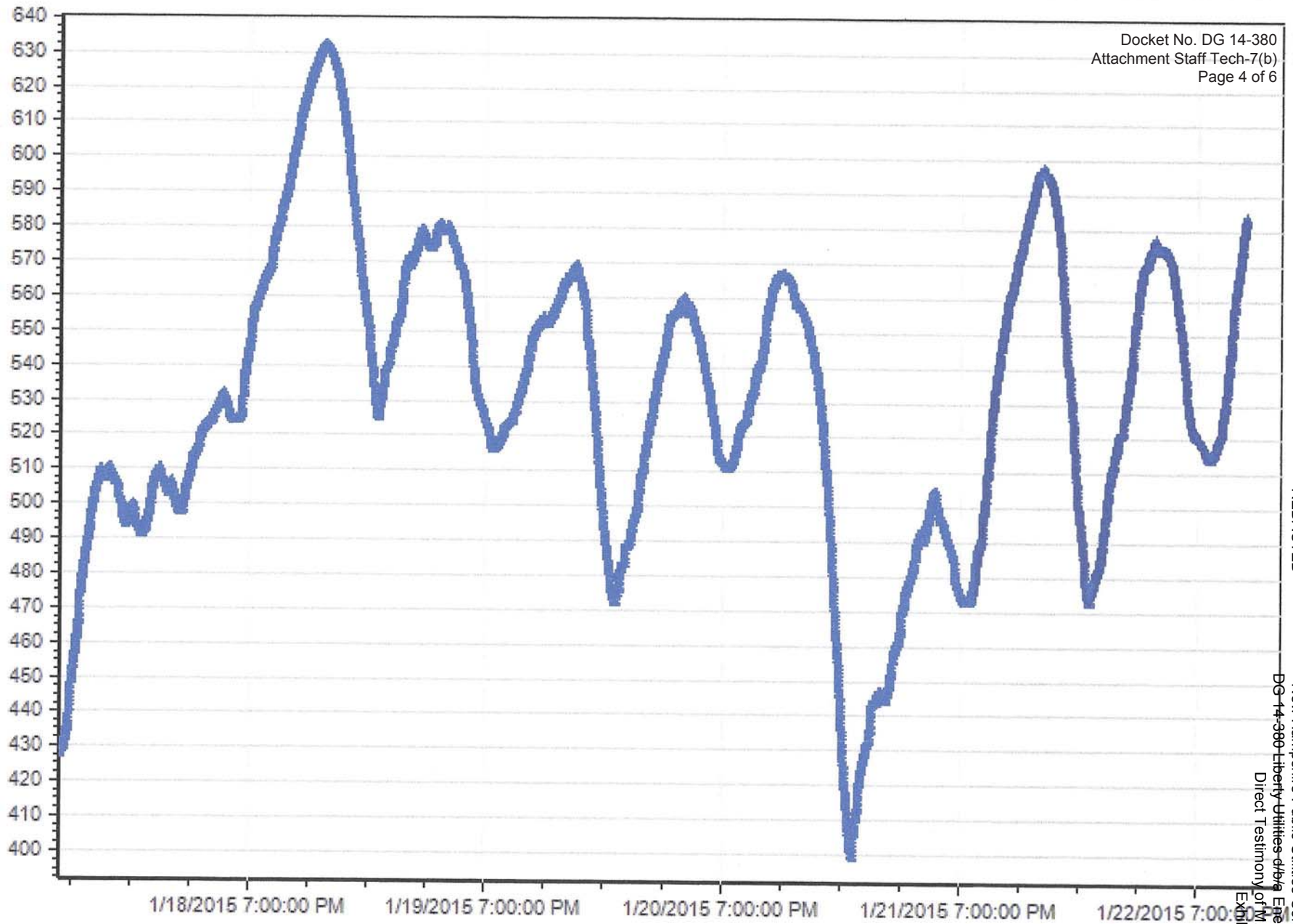
New Hampshire Public Utilities Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

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Start 1/12/2015 12:00:00 AM End 1/17/2015 12:00:00 AM Go

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New Hampshire Public Utilities Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

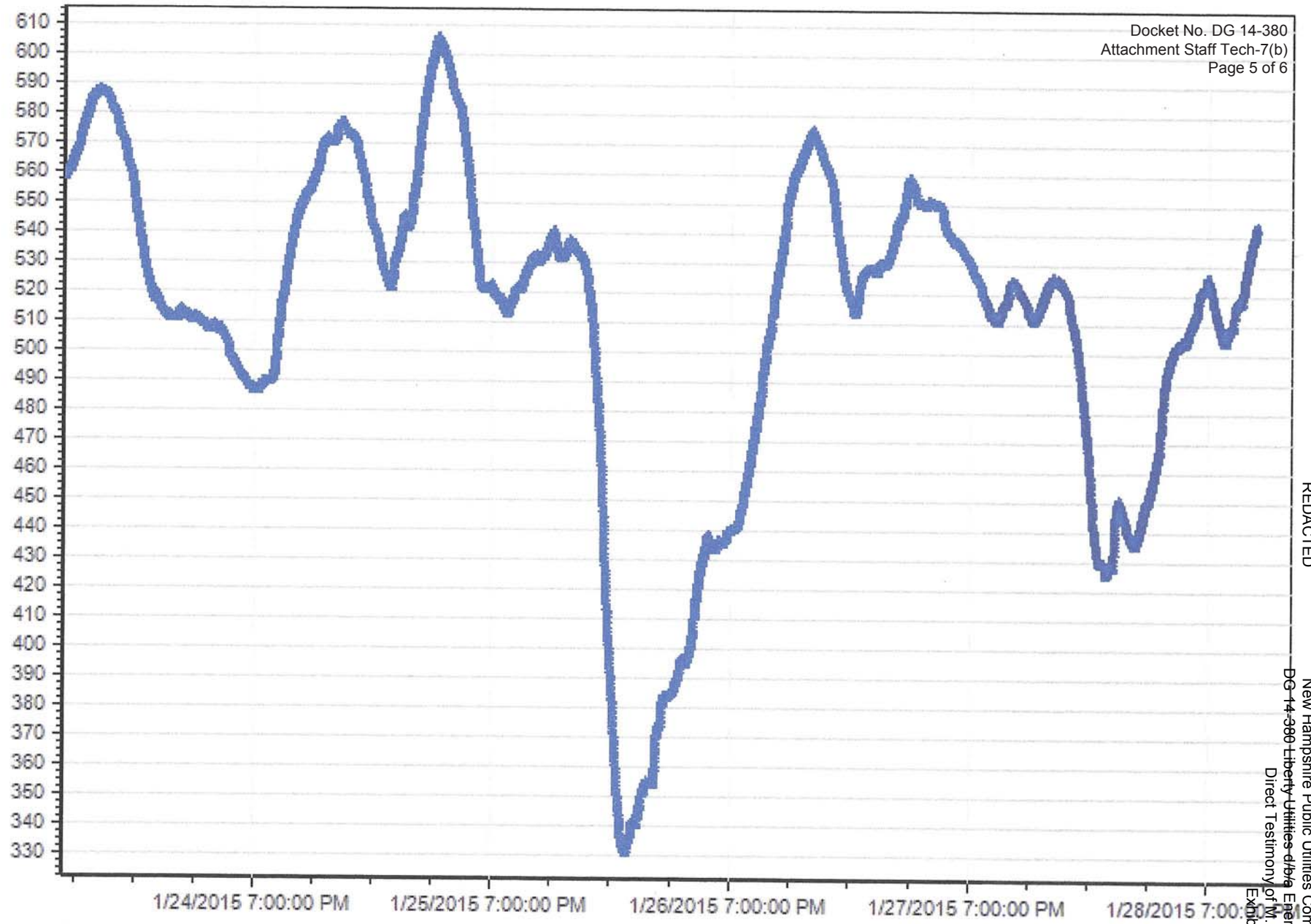


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New Hampshire Public Utilities Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

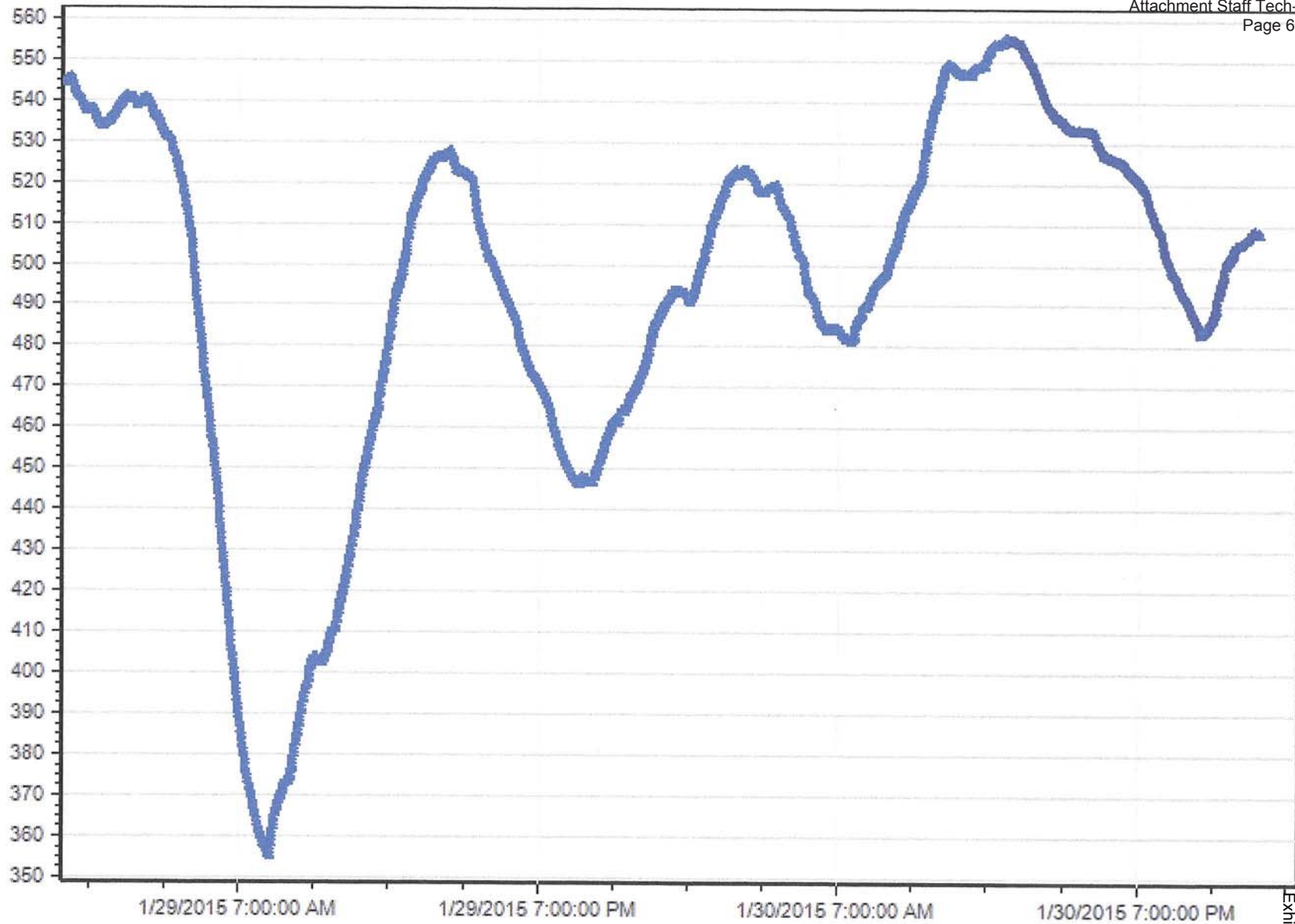
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DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

Start 1/24/2015 12:00:00 AM End 1/29/2015 12:00:00 AM Go



Start 1/29/2015 12:00:00 AM End 1/31/2015 12:00:00 AM Go

REDACTED  
New Hampshire Public Utilities Commission  
DG 14-380 Liberty Utilities d/b/a EnergyNorth  
Direct Testimony of M. Whitten  
Exhibit MW-9

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-20

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Refer to Da Fonte Direct Testimony, pp 14-17 and 20, and answer the following:  
Does the Company use the LNG or propane facilities for pressure support on other days? If so,  
please identify which facilities.

**RESPONSE:**

The Company only requires the Tilton LNG and propane plants for pressure support on its  
distribution system. The Tilton LNG plant and, to a much lesser extent, the Tilton propane plant  
were used extensively throughout the winter for pressure support. In total the Tilton facility  
operated on 104 days this past winter.

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
 Request No. Staff Tech-23

Date of Response: 4/2/15  
 Respondent: Francisco C. DaFonte

**REQUEST:**

Refer to Da Fonte Direct Testimony, pp 14-17 and 20, and answer the following:  
 Please explain the decision making and facilities management process that would be undertaken were the Company to “mothball” one or more of the propane facilities?

**RESPONSE:**

Before making the decision to retire any propane facilities the Company would update its demand forecast to reflect the most current actual usage information, projected econometric data, projected growth, projected energy efficiency savings and growth and expansion of the Company’s Keene Division and any new service territories. Based on the comparison of the demand forecast to available resources, the Company would then determine whether it had the ability to retire any of its propane facilities or replace them with any alternative resource options available in the marketplace at a given point in time.

For example, as shown below and in Table III on Bates p. 18 of the company’s filing, using the filed demand forecast and comparing it to available resources before and after the NED project comes on line demonstrates that the Company would have sufficient capacity through 2037-2038 to satisfy its projected customer demand.

**Table III**

<u>Year</u>	<u>Design Day Resources w/NED</u>	<u>Design Day Demand</u>	<u>Reserve/(Deficiency)</u>
2014/15	155,033	146,968	8,065
2015/16	155,033	153,155	1,878
2016/17	155,033	157,039	-2,006
2017/18	155,033	160,686	-5,653
2018/19	155,033	164,526	55,507
2019/20	220,033	167,773	52,260
2020/21	220,033	171,229	48,804

<u>Year</u>	<u>Design Day Resources w/NED</u>	<u>Design Day Demand</u>	<u>Reserve/(Deficiency)</u>
2021/22	220,033	174,088	45,945
2022/23	220,033	176,851	43,182
2023/24	220,033	179,790	40,243
2024/25	220,033	182,421	37,612
2025/26	220,033	184,768	35,265
2026/27	220,033	187,295	32,738
2027/28	220,033	189,944	30,089
2028/29	220,033	192,341	27,692
2029/30	220,033	194,851	25,182
2030/31	220,033	197,886	22,147
2031/32	220,033	200,609	19,424
2032/33	220,033	203,366	16,667
2033/34	220,033	206,238	13,795
2034/35	220,033	209,190	10,843
2034/36	220,033	212,101	7,932
2036/37	220,033	214,790	5,243
2037/38	220,033	217,519	2,514

However, making a decision to remove all of the propane assets from the portfolio once the NED capacity comes on line would reduce the available design day resources by 34,600 Dth. As shown in Table Staff Tech-23(a) below, comparing the available resources without the propane plants to the demand forecast in Table III above would show that the Company would have a resource deficiency as early as 2026-2027 or only 8 years following the in-service date of the NED project.

**Table Staff Tech-23(a)**

<u>Year</u>	<u>REVISED Design Day Resources w/NED</u>	<u>Design Day Demand</u>	<u>Reserve/(Deficiency)</u>
2014/15	155,033	146,968	8,065
2015/16	155,033	153,155	1,878
2016/17	155,033	157,039	(2,006)
2017/18	155,033	160,686	(5,653)
2018/19	155,033	164,526	20,907
2019/20	185,433	167,773	17,660
2020/21	185,433	171,229	14,204
2021/22	185,433	174,088	11,345
2022/23	185,433	176,851	8,582
2023/24	185,433	179,790	5,643



<u>Year</u>	<u>REVISED Design Day Resources w/NED</u>	<u>Design Day Demand</u>	<u>Reserve/(Deficiency)</u>
2024/25	185,433	182,421	3,012
2025/26	185,433	184,768	665
2026/27	185,433	187,295	(1,862)
2027/28	185,433	189,944	(4,511)
2028/29	185,433	192,341	(6,908)
2029/30	185,433	194,851	(9,418)
2030/31	185,433	197,886	(12,453)
2031/32	185,433	200,609	(15,176)
2032/33	185,433	203,366	(17,933)
2033/34	185,433	206,238	(20,805)
2034/35	185,433	209,190	(23,757)
2034/36	185,433	212,101	(26,668)
2036/37	185,433	214,790	(29,357)
2037/38	185,433	217,519	(32,086)

Further, taking the original demand forecast shown in Table I of the Company’s filing and updating it to include the most recent design day estimate for returned capacity-exempt load of 3,363 Dth per day (see the Company’s response to Staff request Staff Tech-40) and the design day demand for the Company’s Keene Division and potential new service territories of 6,500 Dth per day (see the Company’s response to Staff request Staff Tech-11), would result in the revised demand forecast shown in Table Staff Tech-23(b) below.

**Table Staff Tech-23(b)**

<u>Year</u>	<u>Design Day IRP</u>	<u>Design Day Updated</u>	<u>REVISED Capacity Exempt</u>	<u>Keene/ New Expansion</u>	<u>iNATGAS</u>	<u>REVISED Total Updated Design Day</u>
2014/15	146,630	145,184	3,363	0	0	148,547
2015/16	149,433	147,379	3,414	0	3,965	154,758
2016/17	153,799	149,581	3,465	0	5,619	158,665
2017/18	157,380	152,205	3,526	0	6,611	162,341
2018/19	160,740	154,823	3,586	1,716	7,800	167,926
2019/20	163,085	158,030	3,661	3,241	7,800	172,732
2020/21	165,466	160,457	3,717	4,862	8,800	177,835
2021/22	167,881	163,280	3,782	6,077	8,800	181,940
2022/23	170,331	166,010	3,845	6,500	8,800	185,156
2023/24	172,817	168,913	3,913	6,614	8,800	188,240
2024/25	175,339	171,513	3,973	6,715	8,800	191,001
2025/26	177,898	173,831	4,027	6,806	8,800	193,465
2026/27	180,494	176,327	4,084	6,904	8,800	196,116

<u>Year</u>	<u>Design Day IRP</u>	<u>Design Day Updated</u>	<u>REVISED Capacity Exempt</u>	<u>Keene/ New Expansion</u>	<u>iNATGAS</u>	<u>REVISED Total Updated Design Day</u>
2027/28	183,129	178,945	4,145	7,006	8,800	198,896
2028/29	185,802	181,312	4,200	7,099	8,800	201,412
2029/30	188,513	183,792	4,257	7,196	8,800	204,046
2030/31	191,265	186,790	4,327	7,314	8,800	207,230
2031/32	194,056	189,480	4,389	7,419	8,800	210,089
2032/33	196,889	192,203	4,452	7,526	8,800	212,981
2033/34	199,762	195,040	4,518	7,637	8,800	215,995
2034/35	202,678	197,957	4,585	7,751	8,800	219,093
2034/36	205,636	200,832	4,652	7,863	8,800	222,148
2036/37	208,638	203,489	4,714	7,967	8,800	224,970
2037/38	211,683	206,184	4,776	8,073	8,800	227,834

Comparing the Revised Total Updated Design Day forecast in Table Staff Tech-23(b) to the Revised Design Day Resources w/NED in Table Staff Tech-23(a) would then show the resulting deficiency of resources in Table Staff Tech-23(c) beginning as early as 2023-2024 or only 5 years following the in-service date of the NED project.

**Table Staff Tech-23(c)**

<u>Year</u>	<u>REVISED Design Day Resources w/NED</u>	<u>REVISED Total Updated Design Day</u>	<u>Reserve/(Deficiency)</u>
2014/15	155,033	148,547	6,486
2015/16	155,033	154,758	275
2016/17	155,033	158,665	(3,632)
2017/18	155,033	162,341	(7,308)
2018/19	155,033	167,926	17,507
2019/20	185,433	172,732	12,701
2020/21	185,433	177,835	7,598
2021/22	185,433	181,940	3,493
2022/23	185,433	185,156	277
2023/24	185,433	188,240	(2,807)
2024/25	185,433	191,001	(5,568)
2025/26	185,433	193,465	(8,032)
2026/27	185,433	196,116	(10,683)
2027/28	185,433	198,896	(13,463)
2028/29	185,433	201,412	(15,979)
2029/30	185,433	204,046	(18,613)
2030/31	185,433	207,230	(21,797)
2031/32	185,433	210,089	(24,656)

<u>Year</u>	<u>REVISED Design Day Resources w/NED</u>	<u>REVISED Total Updated Design Day</u>	<u>Reserve/(Deficiency)</u>
2032/33	185,433	212,981	(27,548)
2033/34	185,433	215,995	(30,562)
2034/35	185,433	219,093	(33,660)
2034/36	185,433	222,148	(36,715)
2036/37	185,433	224,970	(39,537)
2037/38	185,433	227,834	(42,401)

Because of the many variables at play in any demand forecast and the uncertainty of market conditions in the future, it is imperative that EnergyNorth or any utility maintain as much flexibility in its portfolio to be able to adapt to its customers’ needs and to changing market conditions. Having the NED capacity in place allows the company to hold on to its propane facilities for as long as deemed necessary. Further, maintaining that flexibility provides the Company with negotiating leverage with any future project developer.



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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-40

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

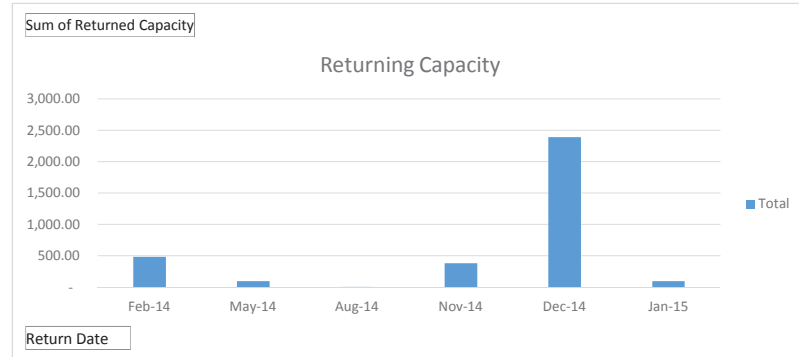
Please provide supporting detail for the amount of reverse migration of capacity exempt customers experienced to-date by month. Are these confirmed conversions? Are they taking default service supply as well as slice of system capacity?

**RESPONSE:**

As shown in Attachment Staff Tech-40, there are 18 former capacity-exempt (grandfathered) customers who have returned to default service supply over the last 12 months. These are confirmed conversions. Of the 18 who did return to default service, 7 have re-enrolled with a marketer and have been allocated their 'slice' of system capacity to take with them.

Return Date	Name	Meter #	Returned Capacity	Re-enrollment Date
Feb-14	WEBSTER VALVE	D1551	487.30	Dec-14
May-14	MILFORD SCHOOL DISTRICT		68.18	Oct-14
May-14	BALES ELEMENTARY SCHOOL		32.14	Oct-14
Aug-14	WINNESQUAM BOATS LLC		0.55	
Nov-14	OSRAM SYLVANIA	D1291	170.40	
Nov-14	LA CARRETA RESTAURANT		10.30	Apr-15
Nov-14	BLUE SEAL FEEDS-PLANT		31.90	
Nov-14	UNION LEADER	D1441	114.60	
Nov-14	LIFE IS GOOD WHOLESALE		23.34	
Nov-14	LIFE IS GOOD WHOLESALE		34.45	
Dec-14	INDIAN HEAD REALTY TRUST	D1961	57.70	
Dec-14	HITCHINER MFG CO	D1761	415.95	Apr-15
Dec-14	HITCHINER MFG CO INC	D1751	368.96	Apr-15
Dec-14	ST GOBAIN PERFM PLASTICS	D2051	914.40	
Dec-14	NASHUA CORP	D1021	631.20	
Dec-14	RED OAK PROPERTY MGNT		0.74	Jan-15
Dec-14	MARKET BASKET		1.00	
Jan-15	CHOMERICS DIVISION-PARKER	D1351	99.93	
<b>Total</b>			<b>3,463.03</b>	
<b>2014</b>			<b>3,363.10</b>	

Row Labels	Sum of Returned Capacity
Feb-14	487.30
May-14	100.31
Aug-14	0.55
Nov-14	384.99
Dec-14	2,389.95
Jan-15	99.93
<b>Grand Total</b>	<b>3,463.03</b>



REDACTED

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-44

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Please explain whether the NED project is the least cost alternative on a unit cost or total cost basis or both. Is the cost difference between the NED project and the next least cost alternative due solely to the commitment to a 20 year term for the NED project versus a 15 year term under the two alternative projects?

**RESPONSE:**

The NED project is the least cost alternative on both a per unit basis and a total cost basis. Because the NED project has the lowest demand charge out of the 3 alternatives and the contracted volumes are the same, then the NED unit cost would be less than the alternatives. As presented in Table IV on Bates p. 35 and in the Company's response to Staff requests Staff 1-16 and Staff 1-17, the overall portfolio costs for the 20-year term of the NED contract are over \$500 million less than the closest alternative.

The contract term of the projects has no bearing on the cost analysis because it must be assumed that a 15-year contract will be extended upon expiration in order for the Company to satisfy projected demand just as a 20-year contract would be extended upon expiration.

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

DG 14-380

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

Staff 2015-03-17 Tech Session Data Requests

Date Request Received: 3/23/15  
Request No. Staff Tech-47

Date of Response: 4/2/15  
Respondent: Francisco C. DaFonte

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**REQUEST:**

Please provide a map of the Company's service territory showing the major components of its distribution system, as well as any existing and planned interconnections with interstate pipelines and the TGP Concord and Hudson laterals. Please identify each component and describe their maximum operating pressures and the typical operating pressure experienced.

**RESPONSE:**

Attachment Staff Tech-47 is a map of the EnergyNorth distribution system showing the typical operating pressures for the high pressure and intermediate pressure feeders and associated interconnects with Tennessee on the Concord Lateral. In addition, the map shows the location of the proposed interconnect with the NED project which would back feed the Nashua high pressure feeder. The attachment also contains an actual hourly flow graph for a 60 heating degree day on January 24, 2013 which shows the representative flows from each of the company's interconnects with Tennessee and the single interconnect with PNGTS in Berlin. As described in the Company's response to Staff request Staff Tech-7, the Nashua service territory is the Company's largest demand center and is shown in the graph at an approximate average flow rate of 2,500 Mcf per hour with a peak hour at about 2,700 Mcf/h. The Company's design day is estimated at 71 heating degree days which would increase the hourly flow rates at each of the interconnects with Tennessee. The map also provides the location by service area of the EnergyNorth LNG and propane plants.

