

Knepper Applicable PHMSA Training Completed			
	Online Computer Based Training	Status	Date
1	PHMSA-PL1DIMP Introduction of Distribution Integrity Management Program WBT	Successful	5/3/2011
2	PHMSA-PL1GLAW Introduction to Gas Laws WBT	Successful	8/11/2014
3	PHMSA-PL1HCA High Consequence Areas WBT	Successful	7/4/2005
4	PHMSA-PL1ICDA Internal Corrosion Direct Assessment WBT	Successful	4/1/2011
5	PHMSA-PL1IPROC Integrity Management Processes WBT	Successful	7/6/2005
6	PHMSA-PL1ODOR Natural Gas Odorization WBT	Successful	4/4/2011
7	PHMSA-PL1PRESS Fundamentals of Gas Pressure Regulators WBT	Successful	2/26/2007
8	PHMSA-PL1IRA Introduction to Risk Assessment Methods WBT	Successful	4/25/2015
9	PHMSA-PL2FLMEC - Fundamentals of Fluid Mechanics WBT	Successful	4/24/2015
10	PHMSA-PL2P195 Introduction to Part 195 WBT	Successful	4/14/2015
11	PHMSA-PL3CP Fundamentals of Pipeline Corrosion and Cathodic Protection WBT	Successful	8/14/2007
12	PHMSA-PL3ECDA External Corrosion Direct Assessment WBT	Successful	4/1/2011
13	PHMSA-PL3ELEC Fundamentals of Basic DC Electricity WBT	Successful	8/18/2007
14	PHMSA-PL3OQ Operator Qualification WBT Course	Successful	1/31/2006
15	PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs WBT	Successful	6/8/2010
16	PHMSA-PL3PP Fundamentals of Plastic Pipe WBT	Successful	4/12/2007
17	PHMSA-PL3REG Regulatory Overview WBT	Successful	4/8/2015
18	PHMSA-PL3SCADA Fundamentals of SCADA Systems WBT	Successful	3/14/2011
19	PHMSA-PL3SCCDA Stress Corrosion Cracking Direct Assessment WBT	Successful	8/23/2006
20	PHMSA-PL3WELD Introduction to Pipeline Welding WBT	Successful	6/1/2007
21	PHMSA-PL4LNG Fundamentals of Liquefied Natural Gas (LNG) WBT	Successful	6/15/2005
	COURSES	Status	Date
1	PHMSA-PL1297 Gas Integrity Management (IM) Protocol Course	Successful	5/5/2005
2	PHMSA-PL4253 Liquefied Natural Gas (LNG) Safety Technology and Inspection Course	Successful	7/29/2005
3	PHMSA-PL1250 Safety Evaluation of Gas Pipeline Systems Course	Successful	12/15/2005
4	PHMSA-PL2284 (HAZWOPER) Refresher for Pipeline Safety Representatives	Successful	1/9/2007
5	PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Programs Course	Successful	1/11/2007
6	PHMSA-PL3256 Pipeline Failure Investigation Techniques Course	Successful	2/9/2007
7	PHMSA-PL1255 Gas Pressure Regulation and Overpressure Protection Course	Successful	4/12/2007
8	PHMSA-PL1310 Plastic and Composite Materials Course	Successful	6/15/2007
9	PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course	Successful	6/15/2007
10	PHMSA-PL3254 Joining of Pipeline Materials Course	Successful	6/15/2007
11	PHMSA-PL3257 Pipeline Safety Regulation Application and Compliance Procedures Course	Successful	8/17/2007
12	PHMSA-PL3600 Root Cause/Incident Investigation Course	Successful	8/21/2009
13	PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course	Successful	6/11/2010
14	PHMSA-PL3293 Corrosion Control of Pipeline Systems Course	Successful	6/25/2010
15	PHMSA-PL3291 Fundamentals of (SCADA) System Technology and Operation Course	Successful	4/1/2011
16	PHMSA-PL3355 Safety Evaluation of Control Room Management Programs	Successful	8/29/2014
17	PHMSA-PL1245 Safety Evaluation of Distribution Integrity Management Programs (DIMP) Course	Successful	4/23/2015
18	PHMSA-PL2258 Safety Evaluation of Hazardous Liquid Pipeline Systems Course	Successful	5/15/2015

(20) Cast Iron Bare Steel Replacement Program:

A cast iron/bare steel replacement program (“CIBS Program”) shall be implemented that will be based on a construction year (April through December). By no later than January 15 of each year, EnergyNorth shall provide a copy of its CIBS Plan, defined below, to Staff for review and comment. EnergyNorth shall meet with Staff in technical sessions to discuss the plan to be implemented for the subsequent construction year. After review by Staff, EnergyNorth will take all reasonable steps to carry out and implement the plan, taking into account Staff comments.

The CIBS plan, which will cover cast iron and bare steel pipe replacements, will describe each replacement project, itemizing the proposed projects by general category, along with the targeted amount of investment to be made during the following construction year, which budget shall not be less than the CIBS base amount for capital expenditures described in paragraph e below (“CIBS Plan”). The CIBS Plan will prioritize cast iron and bare steel pipe replacements based on factors including leakage, material condition, age and other components affecting pipe integrity. The CIBS Plan will not address replacement of cast iron and bare steel pipes required in public works projects and/or carried out pursuant to the Cast Iron Encroachment Policy referenced in Condition 12 above.

EnergyNorth agrees to engage in an annual evaluation and selection process to identify and target investments to be proposed in the CIBS Plan, as follows:

- a. It will undertake an annual review of the performance of its distribution system as it relates to the integrity of its cast iron and bare steel pipelines. This review will provide: (1) a detailed analysis of leak activity over the preceding ten years on the bare steel and cast iron gas mains, and (2) an evaluation of which main segments represent the highest priority segments for replacement. Consideration will be given to the age of the main, the date the leak(s) occurred, leak classification, type of leak, number of clamps used in leak repair, condition of main when repaired, specific leak location, building types in the area of the main segment and quantity of bare steel services attached to the potential segment to be replaced.
- b. Adjustments in the priority of main segment replacement could be made due to planned paving projects, public relations, or identification of new main segments by operating personnel in the field that were not captured through EnergyNorth’s data systems.
- c. Using the process identified in (a) and (b) above, EnergyNorth shall rank and prioritize those mains to be replaced in the associated construction year and provide its plans to the Commission.
- d. Categories of spending will include the following:

- 1.1 unprotected bare steel main replacement, as determined by the evaluation and selection process;
- 1.2. cast iron main replacement as determined by the evaluation and selection process;
- 1.3. cast iron or bare steel main replacement candidates requested by field operating personnel; and
- 1.4. bare steel services replaced as a result of a segment of bare steel main or cast iron main that is selected.

Categories of spending that are not included in the CIBS:

- 2.1. costs of moving inside meters to outside;
- 2.2. costs of reconnecting existing plastic services or existing coated steel services from cast iron mains or bare steel mains to the newly installed replacement main;
- 2.3. costs of any mains replaced made of polyethelene or steel that have a protective coating;
- 2.4. costs of any mains that are abandoned;
- 2.5. costs of coated steel mains that “act as bare steel mains” such as poorly coated steel mains or disbonded steel mains, unless approved by the Safety Division;
- 2.6. incremental costs of upsizing with the exception of (n) below; and
- 2.7. carryover costs in aggregate exceeding 5% of the approved estimated total expenditures under the CIBS program for the construction year, unless approved by the Safety Division. Such carryover costs include items such as restoration costs not incurred during the construction year.
- 2.8. Replacements made under the Cast Iron Encroachment Policy are not eligible for accelerated rate recovery in the Cast Iron/Bare Steel Program unless a special circumstance is approved by the Safety Division.

e) EnergyNorth shall bear the initial \$500,000 of capital expenditures under the CIBS program (“the CIBS Base Amount”) (in accordance with the Handy Whitman index). The CIBS Base Amount excludes replacement projects required by public works projects and/or carried out pursuant to the Cast Iron Encroachment Policy referenced in Condition 12. Provided that investments were made in accordance with the approved CIBS plan, EnergyNorth will be allowed a permanent increase in its base distribution delivery rates to recover the annual revenue requirement for those investments that are found to be reasonable and prudent made in the preceding construction year and in excess of the CIBS Base Amount. The permanent capital investment recovery allowance will not take effect until the actual costs of the

previous construction year are approved by the Commission. Petitions for cost recovery will be submitted annually thereafter not later than May 1, for an effective date of July 1.

f) After Staff completes the review of the CIBS Plan for a given construction year, EnergyNorth shall track all capital investments made in accordance with the approved CIBS Plan. EnergyNorth will reconcile actual capital expenditures with the CIBS Plan targets at the conclusion of the CIBS Plan period.

g) EnergyNorth agrees that it will file a report with the Commission on May 15 of each year detailing the actual amount of capital investments made in accordance with implementing the CIBS Plan during the prior construction year ("CIBS Report"). The report will include a calculation of the incremental revenue requirement associated with the capital investments in rate base that exceeds the CIBS Base Amount, using the Commission-approved imputed or actual capital structure and cost of capital determined using the Commission-approved return on equity and cost of debt. If the Commission has not made a final determination in the first rate case by the time the first adjustment is to be calculated, a reasonable proxy will be used for the rate calculation and an adjustment will be made to the revenue requirement to reconcile to the approved cost of capital rates when the rates from the first rate case go into effect.

h) EnergyNorth agrees to file its annual CIBS Report on the prior construction year's activities at the time it makes its rate adjustment filing on May 15. The Settling Parties and Staff understand that, in implementing the CIBS Plan, the circumstances encountered during the year may require reasonable deviations from the original plan. In such cases, EnergyNorth shall include an explanation of any deviations in the report. For cost recovery purposes, EnergyNorth shall have the burden to show that any deviations were due to circumstances out of its reasonable control or, if within its control, were reasonable and prudent. The CIBS Report shall include a breakdown of footage replaced by municipal projects that involve Cast Iron /Bare Steel as well the footage replaced under the Cast Iron Encroachment Policy. Samples of reporting that Staff has reviewed previously are included in Attachment A.

i) The CIBS Program will remain in place through and beyond EnergyNorth's future rate cases until terminated by the Commission or by mutual agreement at the end of a given construction year, with a final capital allowance pertaining to the final year.

j) EnergyNorth can elect to not finalize its CIBS Plan until after the winter frost patrol ends in early April. By May 1, EnergyNorth shall finalize actual projects and provide a copy of the final CIBS Plan to Staff. In addition, the priority rankings of main segments for replacement will be subject to change over the course of the year due to new information. In such case, if EnergyNorth believes it is prudent to change

the rankings from the approved CIBS Plan, it will notify Staff, stating the reasons for the change prior to construction. If Staff does not believe that particular components of the revised plans are reasonable and the matter is not resolved between EnergyNorth and Staff, Staff may object and the matter may be referred to the Commission for resolution.

k) EnergyNorth acknowledges that Staff review will not relieve EnergyNorth of its obligation to operate its business and maintain safe, reliable service through expenditures and other capital investments in the ordinary course of business that are not set forth in the CIBS Plan, nor will it bind Staff to a particular position regarding the adequacy and/or effectiveness of the plan.

l) However, EnergyNorth will be authorized to include in its CIBS Plan the replacement of cast iron and bare steel pipe located in the vicinity of public works projects, where replacement is not required as a part of the project, but permitted for convenience or other reasons, as determined by the Safety Division.

m) EnergyNorth shall provide GIS Mapping or other electronic means that shows the project scope with each submittal of the CIBS Plan.

n) No upsizing of pipe diameter shall be allowed for cost recovery within the CIBS Program on 60 psig systems. For low pressure systems (12 inches water column and below) no upsizing shall be allowed for cost recovery within the CIBS Program except for 3" nominal diameter low pressure pipe replaced with 4" nominal diameter pipe and other special circumstances as approved by the Safety Division.

o) EnergyNorth shall provide the Commission Staff with actual cutouts of the worst section within any bare steel main segment replaced prior to reconciling any cost adjustments for associated construction season. Cutouts shall be approximately 12 inches to 24 inches in length.

p) EnergyNorth shall provide a written report accompanying the actual cutouts in section 20(o) above that includes: photographs the replaced bare steel segment; a general description of the condition of the pipe; the street address from which it was taken; age of material; original wall thickness; measured depth of deepest pit of the cutout; operating pressure of replaced pipe; pH of soil condition of cutout surrounds; results of testing for microbiological acid producing bacteria (APB) and sulfate reducing bacteria (colonies per ML); and identification of the threshold of high bacteria counts.

II. Additional Granite State Electrical Safety Conditions (Electrical Underground Facility Protection)

Underground Damage Prevention Program Enhancement

1. Granite State Electric Company (Granite State) will institute a new Locating/Mark-Out Policy within the existing Underground Damage Prevention Program. The Locating/Mark-Out Policy will provide enhanced public safety by increasing the commitments and responsibilities associated with locating and marking private underground residential facilities within Granite State's franchise territory. Notwithstanding the exemption contained in RSA 374:53 concerning facilities not owned by the operator, Granite State accepts the additional responsibility of locating privately owned, residential underground electrical facilities pursuant to excavation notifications, and agrees to establish the Locating/Mark-Out Policy ("Policy") described below.

Policy Implementation and Potential Discontinuation

2. Locating/Mark-Out Policy will be implemented within 120 days of the Closing Date.
3. Granite State reserves the right to discontinue the Policy with Staff review and consent but without the necessity of obtaining formal Commission approval if the incremental costs of implementing the Policy, not including advertising and marketing costs or other non-field costs, exceed \$10,000 annually. In the event Granite State disagrees with Staff's decision not to consent, it may file a request for review with the Commission. Granite State will file written notification of any discontinuation of the Policy with the Commission.

Policy Requirements

4. Within Granite State's franchise territory, Granite State will mark privately owned, residential underground facilities up to the meter and including the service entrance upon receipt of notifications received via the One Call Notification System.
5. The electrical service includes primary service voltage levels as well as secondary voltage levels.
6. The electrical service also includes service from aerial distribution systems as well as underground systems.
7. Notifications received for underground excavation involving commercial properties are not included in the waiver or this Policy.
8. The location and marking of excavations involving underground electrical facilities beyond the meter, such as from a house to a barn, lamp post, pool, shed and other structures, are not included in this Policy.

9. Granite State's responsibility under the Policy shall not extend beyond marking out the facility, and does not include repairs to such facilities.
10. Field Markouts made under the Policy shall clearly indicate private electrical facilities that are not owned or operated by GSE.
11. During each year the Policy is in effect, Granite State shall maintain a level of accuracy for markouts made under the Policy that is commensurate with the level achieved for its own facilities. An audit or equivalent method may be used to determine the accuracy percentage of Policy markouts.
12. Granite State will not be required to mark such services defined in this Policy where the customer refuses Granite State access or denies such markout service.

Program Reporting

13. By January 31, 2013, Granite State shall submit an initial report to the Safety Division of the average accuracy level for markouts made of underground facilities pursuant to the One Call Notification System, and the derivation with sufficient detail supporting the determination of the average used to measure the accuracy level for the Policy. The initial report shall indicate the levels of markout accuracy obtained for Granite State facilities as well as privately owned, residential facilities. The report shall also contain the elements listed in item 14 below. Staff shall review and comment on the submittal, and Granite State shall incorporate Staff's comments into subsequent reports in following years.
14. Granite State shall keep track of costs expended and associated data, including but not limited to: number of notifications received, number of markouts made, address locations of markouts, quantity and locations of customer refusals, and dates of services performed. A summary report with subtotals by month shall be submitted to Staff annually, no later than January 31st for the previous calendar year's Policy.
15. The new Policy does not require Granite State to file a monthly E-26 report for markouts made under the Policy.

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

DG 15-104

Cast Iron/Bare Steel Step Adjustment

Staff Data Requests - Set 1

Date Request Received: 5/8/15
Request No. Staff 1-2

Date of Response: 5/15/15
Respondent: Paul Kinch

REQUEST:

For each fiscal year 2009 through 2014, please provide the total annual overhead charged to capital projects by overhead category, the direct capital costs, and the overhead costs (by category) as a percent of direct capital costs (*see* company response to Staff 3-1 in DG 14-041, prior year CIBS filing). Please explain changes in the dollar amount of annual overhead charged between 2013 and 2014. Please provide a summary of 'Other' costs, and include a brief description of each cost category and the amount.

RESPONSE:

	FY 2009		FY2010		FY2011		FY2012		FY2013	FY2013		FY2014		FY2015	
COMPANY LABOR	916,022		1,096,635		933,738		1,141,149		329,391	1,874,931		2,566,556		3,366,211	
CONTRACTOR	8,586,380		7,359,143		6,222,342		7,422,798		1,521,217	8,912,770		25,478,710		34,041,826	
MATERIALS	995,569		634,931		979,731		965,492		244,710	582,323		847,266		549,049	
OTHER	1,746,050		1,760,376		1,105,262		554,975		255,833	3,441,395		(1,014,274)		(995,249)	
AFUDC	489,751		197,007		120,192		152,542		19,702	363,715		55,266		336,979	
TOTAL DIRECT	12,733,772		11,048,092		9,361,265		10,236,956		2,370,853	15,175,134		27,933,524		37,298,816	
		% of		% of		% of		% of			% of		% of		% of
OVERHEAD		Direct		Direct		Direct		Direct			Direct		Direct		Direct
		Spend		Spend		Spend		Spend			Spend		Spend		Spend
LABOR BURDENS	1,309,964	10%	1,927,073	17%	2,421,611	26%	2,427,777	24%	724,898	935,598	6%	1,610,199	6%	2,949,513	8%
APUC/LU CORP BURDEN														1,577,415	4%
OTHER BURDENS														314,757	1%
CONTRACTOR BURDENS	4,542,228	36%	4,728,159	43%	4,812,217	51%	4,049,785	40%	900,273		0%		0%		0%
MATERIAL BURDENS	264,093	2%	184,374	2%	86,683	1%	150,919	1%	42,631		0%		0%	384,956	1%
	6,116,285	48%	6,839,606	62%	7,320,511	78%	6,628,481	65%	1,667,802	935,598	6%	1,610,199	6%	5,226,641	14%
TOAL	18,850,057		17,887,698		16,681,776		16,865,437		4,038,655	16,110,732		29,543,723		42,525,456	

The change in dollar amounts of annual overhead charges between 2013 and 2014 was primarily due to an increase in the overall capital spend year over year mostly in contractor charges.

Other costs include the credit for cost of removal imbedded in the other cost categories as well as CIAC credits.

Cost categories:

- Company labor: Direct charges from Company employees derived from employee timesheets

- Contractor: Voucher payments and outside services
- Materials: Materials issued from purchasing
- Other: Cost of removal and CIAC receipts
- AFUDC: Allowance for funds used during construction
- Overhead company labor burdens: Labor overheads comprised of payroll taxes, pensions and benefits, back office costs, corporate allocations, incentive awards, insurance, time not worked, and telephone/internet. The Company also began recording separate burden categories in the 3rd quarter of 2014 for such items as construction management and supervision, engineering, and other indirect labor costs. These labor costs are now recorded as a burden expense to jobs rather than allocating as direct Company labor on the job. For comparative purposes with other years, the exhibit reflects management and supervisory labor on the company labor line rather than as a burden.

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

DG 15-104

Cast Iron/Bare Steel Step Adjustment

Staff Data Requests - Set 1

Date Request Received: 5/8/15
Request No. Staff 1-3

Date of Response: 5/15/15
Respondent: Paul Kinch

REQUEST:

For each fiscal year 2009 through 2014, please provide a description and the amount of each of the employee related costs reflected in 'Overhead – Company Labor Burdens' (*see* company response to Staff 3-2 in DG 14-041, prior year CIBS filing).

RESPONSE:

					(NGRID)	(LIBERTY)		
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2013	FY 2014	FY 2015
PENSION	209,507	383,257	541,851	557,452	144,852	297,200	202,051	370,111
OTHER POST EMPLOYMENT BENEFITS	90,238	97,247	157,356	199,844	56,672			
BENEFITS	208,187	255,214	340,149	399,987	106,775	318,591	274,607	503,016
PAYROLL TAXES	79,240	59,905	122,520	173,522	51,537	256,838	138,102	252,972
VARIABLE PAY	7,829	20,745	10,208	9,036	1,950			
PAID ABSENCE	63,943	61,268	69,304	103,546	17,397			
VACATION	66,341	80,771	79,371	80,446	16,215			
UNION GOALS	22,548	21,584	47,042	(3,249)	11,473			
401K MATCH	21,812	22,130	31,213	43,281	10,642			
OTHER	(114)	32	(17,454)	3,797	5,777	62,970	995,439	1,823,414
TOTAL	769,531	1,002,153	1,381,560	1,567,662	423,290	935,599	1,610,199	2,949,513

Generally the rate is calculated by taking burden pool dollars divided by the appropriate labor base.

The schedule above reflects overhead burdens for all capital work in the April 2014 through March 31, 2015, fiscal year. The 2014 burden agrees with the 2014 burden in Staff 1-2.

Pensions: Company pension expense covering all pension programs
 Benefits: Company insurance costs for employee health, life, disability
 Payroll taxes: Company portion of FICA, Medicare, FUTA, SUTA
 Other: Comprises charges for rent, utilities, back office, company insurance, incentive awards, time not worked and a percentage of corporate allocations.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities
DG 15-104

Cast Iron/Bare Steel Step Adjustment

Staff Data Requests – Tech Session

Date Request Received: 5/15/15

Request No. Staff Tech-4

Date of Response: 5/25/15

Respondent: Gwyn Cassetty

REQUEST:

Re. Bates page 12, lines 14-19, Cassetty/Crabtree testimony relating to the significant overage variances for jobs completed early in the season were due to a change in the philosophy of allocating the supervision to construction jobs. Please explain in greater detail the change in philosophy of allocating the supervision and overheads, and please explain any other significant causes of these overages to construction jobs.

RESPONSE:

The Company's policy on allocating the supervisory oversight and overheads to capital construction jobs changed in 2014. Before May 2014, burdens for supervision and other overhead costs were allocated to jobs by identifying all open CWIP jobs at the end of a month and allocating a piece of the supervisory and overhead burdens using the ratio of an open CWIP jobs cumulative costs as a percentage of all open CWIP cumulative jobs costs. From May 2014 onward, burdens for supervision and other overhead costs were allocated to jobs by identifying all open CWIP jobs at the end of a month and allocating a piece of the supervisory and overhead burdens using the ratio of an open CWIP jobs costs for that month as a percentage of all open CWIP jobs costs for that month.

Other significant causes of overages are the cost of ledge removal, final paving, location of pipe, and time and material (T&M) charges.

Ledge removal costs are included in the estimates for known areas of ledge. However, it is not always possible to know all of these areas prior to excavation. When ledge is found on main replacement jobs, change orders are requested from the contractors, for documentation.

Final paving costs were higher than estimated in some cases. This is due to additional holes needed for service abandonments, pipe installation "in pavement" where the estimate was for "no pavement", and additional paving for additional footage installed.

One of the incremental jobs was done by an outside contractor due to the volume of work. The job was invoiced on time and material (T&M rates), but estimated using bid units.