

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

DG 22-045

Winter 2022–2023 and Summer 2023 Cost of Gas  
(RDAF and Gas Holder)

Department of Energy Data Requests - Set 6 (Partial)

Date Request Received: 3/20/23  
Request No. DOE 6-1

Date of Response: 3/30/23  
Respondents: Luke Sanborn  
Jennifer Goodman – N.H.  
Preservation Alliance  
John Murphy – GZA  
James Wieck – GZA  
William Haswell – Haley & Aldrich

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**REQUEST:**

Ref: Supplemental Petition to Recover RDAF Reconciliation and Gas Holder Costs (Dec 8, 2022)

Liberty states that it is responsible for remediating the contamination at the Gas Holder Site as the successor to the company that caused the contamination, and that “the Commission has long held that Liberty may recover those remediation costs from customers because the contamination resulted from the then-prudent Commission-approved processes for serving customers.”

Supplemental Petition (Dec 8 2022) at 3. Liberty now “seek[s] Commission approval to divert the funds that would have been spent on the demolition process toward the stabilization work [expected to last for] decades.” *Id.* at 4.

- a. In the Company’s view, will Liberty continue to be responsible for “minor upkeep” on the Gas Holder? If so, why? Please define the types of expenses that constitute “minor upkeep” -- consistent with the “broken window” suggested at the recent technical session” and provide an estimated range in the thousands of dollars regarding of what “reasonable” upkeep would entail. Please explain the company’s methodology and materials relied upon. Please provide an estimate of “minor upkeep” Liberty will spend in the next 10 years, and information regarding “minor upkeep” expended on the Gas Holder building from 2000 to the present, exclusive of stabilization costs at issue in this docket.
- b. The Company estimates that the stabilization achieved by Phase I and Phase II is expected to last “for decades.” Please state explicitly how many decades Phase I and Phase II are expected to last respectively, and provide support.
- c. Please estimate the number of testing wells that would be necessary to verify or test remediation of the ground directly under the Gas Holder building in the event that the

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building had been or will be demolished. How much would each well cost to construct? What sort of testing and well-maintenance costs have been incurred on this site over a 10-year period? Specifically, what costs does Liberty anticipate incurring for wells related to ground under the Gas Holder (were it torn down)?

- d. Please explain how Liberty will pay for “major” upkeep on the Gas Holder building, (due either to failure of stabilization, acts of God, unexpected costs or some other reason) so as to avoid customers from paying for stabilization costs in excess of the limit established herein. Do Liberty and/or the New Hampshire Preservation Alliance have warranties or other insurance on stabilization work from the contractors employed? Please be specific.
- e. Please confirm that, if approved by the Commission, the reasonable stabilization costs at issue in this docket (\$2.4 million) will constitute a “final recovery in lieu of demolition.” Does Liberty expect this requested total would increase based on the date the work was performed? Please explain and provide support.
- f. Estimates at issue have included a 25% contingency. Please explain what the contingency is expected to cover (inflation, weather delay, construction unknowns associated with an 1880s building, something else?) and why, in Liberty’s view, 25% is an industry standard. Please provide support.

**RESPONSE:**

- a. Yes, Liberty will be responsible for the maintenance of the Gas Holder because Liberty owns the building and surrounding property. Liberty is currently responsible for maintenance of the Gas Holder (the Company has incurred costs over recent years to make the structure safe) and Liberty would have been similarly responsible for maintenance of the site had the Gas Holder been demolished. The maintenance after demolition would have included minor expenses such as mowing the area and maintaining the fence, but Liberty would have also remained responsible for major costs if, for example, the environmental cap failed after severe flooding.

The past costs for minor upkeep are not entirely representative of future costs. Past costs have consisted of grounds maintenance/mowing, security maintenance (fencing), and tree maintenance/removal. Costs for these items for the past three years are included in Attachment DOE 6-1.a. Future costs may also include window/door maintenance, painting, and limited shingle repairs.

- b. Phase One:

The Phase One design by highly-regarded engineer Structures North averted total loss and served as a “down-payment” that avoids duplicative or stranded costs and carries a life span of 10 years or more with basic maintenance.

Phase One stabilization included the construction of sixteen spoke beams that bear on the outside foundation wall and an interior masonry pier at the center of the building. Steel I-beams were placed on top of the spoke beams in four circular rings to provide bearing for the shoring. Thirty-two shoring towers were then constructed to the underside of the roof framing. These towers stabilized the roof from settling and/or collapsing. In addition, these towers will serve as the base to jack the existing roof framing members back into

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place when Phase Two commences. In addition, steel cables were installed to reinforce the top of the masonry wall that was in failure, serving as a temporary retention ring.

The roof holes were then patched, and an EPDM rubber roof patch was placed on the areas of roof failure. All windows received temporary painted plywood panels to prevent water intrusion and further deterioration. The roof patch and window panels should last at least ten to twenty years given regular inspection and repair as needed.

The interior stabilization and patching of the roof meet the terms of the existing Remedial Action Plan approved by NH DES by keeping the gas holder stable and weather tight.

This initial investment sets up Phase Two rehabilitation of the Gasholder and additional investment and long-term stewardship of the site. A highly competitive \$500,000 federal grant has already been secured by the N.H. Preservation Alliance for this work. Other funds are being sought from the Land and Community Heritage Investment Program, N.H. Community Development Finance Authority, and other sources. This project has attracted leaders of civic, cultural, environmental, and business sectors with large portfolios of successful projects.

#### Phase Two:

The Gasholder appears an intricate building design to the eye, but in reality, it is a rather simple building structure. The building consists of a foundation slab that sits twenty-five feet below grade, a circular brick foundation wall that extends from that foundation to just above grade, a brick exterior wall that sits upon the foundation that is twenty-seven feet high. On top of this exterior wall is a wood-framed roof structure that forms a cone on top of the building with a slate roof. A wood-framed cupola with windows sits atop the cone.

The building stood solid for over one hundred and twenty-five years apparently without issue until a large tree fell on the roof approximately 10 years ago, puncturing it and allowing rain and snow to get inside the structure. A temporary scaffold support and a temporary roof patching were installed, but the patch ultimately failed allowing the elements to again enter the building. This led to continual water damage that rotted the wood retaining ring and the subsequent failure of key structural components. The retainer beam failed, and the weight of the roof pushed the on the masonry behind it. The recently completed stabilization has secured the structure.

The proposed high-quality, durable historic restoration plan consists of stabilizing the structure (which is the completed Phase 1), removal of the slate roof to take the weight off, jacking the roof structure and cupola back to their correct position, repair and replacement of the retainer ring, structural reinforcement of the roof framing structure, repair of the masonry at the retainer ring, restoration of the cupola, restoration of the windows and doors, and reinstallation of the slate roof with new flashing and added new slate as needed.

Once Phase 2 is completed, the building if kept dry, should last forty to sixty years or more. This is a conservative estimate based on the following:

- The slate roof and its flashing have an expected life of seventy-five to one hundred years.

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- The repaired and repointed masonry should last more than fifty years, again as long as the building is kept watertight.
  - The roof structure, once completed, will be stronger than the original design and if kept dry should stand another fifty to a hundred years.
- c. The estimated cost to complete the site investigation that would be required by NHDES within the footprint of the Gas Holder is \$329,375 and is described in GZA GeoEnvironmental, Inc.'s (GZA's) report dated December 27, 2022, titled "Calculation of Basis of Maximum Owner Contribution, 1888 Gas Holder House Demolition Alternative, Manufactured gas Plant, Concord, New Hampshire." The site investigation includes construction of seven overburden and three bedrock groundwater monitoring wells at an estimated cost of \$93,000. An additional \$39,500 is estimated to be needed to construct access to the drilling/monitoring well construction locations due to the depth of the foundation of the Gas Holder House.
- d. The responsibility for "major" repairs depends on the precise work to be done. The contractors have provided a one-year guarantee on their work, which is industry standard for such work. Otherwise, Liberty will be responsible for the building that it owns. The builders posted insurance for the construction, a normal Liberty requirement for outside contractors, and Liberty carries its own insurance. Whether the insurance would cover any future "major" repair will, again, depend on the work required, the cause for the issue that requires repair, and the precise terms of the applicable insurance policies.
- e. Confirmed that "if approved by the Commission, the reasonable stabilization costs at issue in this docket (\$2.4 million) will constitute a 'final recovery in lieu of demolition.'" Liberty does not expect this requested total to increase based on the date the stabilization work will be performed because the \$2.4 million represents the costs Liberty would have incurred in 2022 and is, in effect, the final costs of the completed demolition.
- f. GZA: The opinion of potential cost (OPC) was prepared by GZA based on review of local cost data (contractor quotations) for demolition, excavation, monitoring/recovery well construction, and waste transportation and disposal services; industry cost averages; RSMeans 2022 Cost works Data; and GZA's experience with oversight of demolition, subsurface investigation, and remediation projects. The 25 percent cost contingency has been included to cover unforeseen conditions that may occur during the planned work.

The OPC should be considered a Class 3 estimate as defined by the American Society of Cost Engineers. Class 3 estimates are generally prepared to form the basis for budget authorization, appropriation, and/or funding. As such, they typically form the initial control estimate against which all actual costs and resources will be monitored. Typical accuracy ranges for Class 3 estimates are -10% to -20% on the low side, and +10% to +30% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Given the quickly shifting economic environmental and escalating construction costs combined with the technical challenges associated with the site, we feel as though the 25% contingency is an appropriate contingency for the OPC presented.

H&A: A 25% contingency is an industry standard for environmental remediation work at this phase of design development. The contingency includes costs for unanticipated

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conditions such as design details that haven't been developed, scope changes from data gaps, and work complications which become apparent during the design process, as well as bid uncertainty related to inflation or other market conditions (both scope and bid contingency). At a high level, EPA suggests a design contingency for soil excavation in the range of 15% to 55%, plus a bid contingency of an additional 10% to 20% resulting in a total contingency range of 16.5% to 66% (per A Guild to Developing and Documenting Cost Estimates During the Feasibility Study by USEPA dated July 2000). The 25% contingency here is in the lower half of this range.

SUMMARY OF MAINTENANCE EXPENSES FOR THE FORMER CONCORD NH MANUFACTURED GAS PLANT  
For the Period of January 1, 2019, through December 31, 2022

DESCRIPTION	PROJECT NUMBER	SERVICE PERIOD	AMOUNT
LANDSCAPING/MOWING	DEF077	May 8-29, 2019	\$ 680.00
LANDSCAPING/MOWING	DEF077	Jun 4-25, 2019	\$ 591.00
LANDSCAPING/MOWING	DEF077	8/6-27/2019	\$ 2,538.00
LANDSCAPING/MOWING	DEF077	9/3-24/2019	\$ 470.00
LANDSCAPING/MOWING	DEF077	10/15-30/2019	\$ 150.00
LANDSCAPING/MOWING	DEF077	Jul 9 - 31, 2019	\$ 570.00
LANDSCAPING/MOWING	DEF077	Nov 8 - 14, 2019	\$ 520.00
LANDSCAPING/MOWING	DEF077	May 13-26, 2020	\$ 504.00
LANDSCAPING/MOWING	DEF077	July 8-29, 2020	\$ 736.00
TREE SERVICES	DEF077	6/11/2020	\$ 10,800.00
FENCE SERVICES	DEF077	June 16, 2020	\$ 6,208.60
FENCE SERVICES	DEF077	June 17-25, 2020	\$ 29,515.05
LANDSCAPING/MOWING	DEF077	August 5-26, 2020	\$ 618.00
LANDSCAPING/MOWING	DEF077	June 2-26, 2020	\$ 667.00
LANDSCAPING/MOWING	DEF077	Sept 2 - 10, 2020	\$ 184.00
LANDSCAPING/MOWING	DEF077	Oct 8 - 27, 2020	\$ 1,040.00
LANDSCAPING/MOWING	DEF077	May 2021	\$ 585.00
LANDSCAPING/MOWING	DEF077	June 2021	\$ 660.00
LANDSCAPING/MOWING	DEF077	July 2021	\$ 700.00
LANDSCAPING/MOWING	DEF077	Aug-21	\$ 1,715.00
LANDSCAPING/MOWING	DEF077	Sep-21	\$ 525.00
LANDSCAPING/MOWING	DEF077	Oct-21	\$ 467.00
LANDSCAPING/MOWING	DEF077	Nov-21	\$ 245.00
LANDSCAPING/MOWING	DEF077	5/18/2022	\$ 380.00
LANDSCAPING/MOWING	DEF077	6/2/2022-6/22/22	\$ 536.00
LANDSCAPING/MOWING	DEF077	7/13/22-7/27/22	\$ 440.00
LANDSCAPING/MOWING	DEF077	8/24/2022	\$ 193.00
LANDSCAPING/MOWING	DEF077	9/10/22-9/28/22	\$ 475.00
LANDSCAPING/MOWING	DEF077	10/21/2022	\$ 1,386.00
LANDSCAPING/MOWING	DEF077	11/1/2022	\$ 231.00
<b>TOTAL (LANDSCAPING/MOWING)</b>			<b>\$17,806.00</b>
<b>TOTAL (TREE SERVICES)</b>			<b>\$10,800.00</b>
<b>TOTAL (FENCE SERVICES)</b>			<b>\$35,723.65</b>

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

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Winter 2022–2023 and Summer 2023 Cost of Gas  
(RDAF and Gas Holder)

Department of Energy Data Requests - Set 6 (Partial)

Date Request Received: 3/20/23  
Request No. DOE 6-2

Date of Response: 3/30/23  
Respondent: Luke Sanborn  
John Murphy – GZA  
James Wieck – GZA

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**REQUEST:**

Ref: Supplemental Petition (Dec 8, 2022)

Liberty “also asks that the Commission find to be prudent Liberty’s decision to enter the Agreement and contribute the estimated costs of demolition, investigation, and remediation of any contamination found beneath the gas holder toward the stabilization of the Gas Holder.” Liberty asserts that “Liberty’s decision to enter the Agreement will result in savings to customers” and states it “will not seek approval of the total amount contributed to the gas Holder until the work is complete and the Commission would have the opportunity at a future hearing to determine if the money was prudently spent.” Supplemental Petition at 5.

- a. Please provide a chart whereby Liberty will track remediation expenses explicitly associated with the Gas Holder building, including but not limited to approved remediation and “minor maintenance costs” and perhaps “savings to customers.”
- b. In the opinion of the Company, (1)<sup>1</sup> why should the Commission determine that Liberty’s decision to enter into the contract was prudent? (2) Please provide similar types of contracts Liberty reviewed in reaching agreement with the New Hampshire Preservation Alliance (NHPA) on this contract. (3) What risks are born by the NHPA and what risks are born by Liberty? (4) What factors did Liberty consider in deciding to move forward to stabilize the Gas Holder instead of tearing it down? (5) Please cite to documentation produced to date and please provide any materials from 1995 to the present in which Liberty considered tearing down the Gas Holder (including but not limited to studies, estimates, project reviews, etc.). (6) Please provide any minutes, discussions, or presentations given to the Board of Directors or Senior Liberty (EnergyNorth) or Liberty (parent company) Officers regarding the option to either demolish or to stabilize and

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<sup>1</sup> Liberty has added numbers to organize its responses.

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remediate the Gas Holder, including but not limited to the decision to execute the contract with the NHPA.

**RESPONSE:**

- a. The Company already tracks gas holder costs and uses that information to build the LDAC rate in the annual cost of gas filings. *See, e.g.*, the 2022 filing at Bates 074\*, available here: [https://www.puc.nh.gov/Regulatory/Docketbk/2022/22-045/INITIAL%20FILING%20-%20PETITION/22-045\\_2022-08-03\\_ENGI\\_SCHEDULES.PDF](https://www.puc.nh.gov/Regulatory/Docketbk/2022/22-045/INITIAL%20FILING%20-%20PETITION/22-045_2022-08-03_ENGI_SCHEDULES.PDF)

The Company will continue to separately track gas holder remediation costs.

- b. The Company inserted numbers in part b. of this request above to organize its responses, which numbers are used below.
- (1) It is the contract between Liberty and NHPA that provides for Liberty to contribute the demolition costs toward the stabilization of the gas holder. Although approval of the contract may not be a prerequisite to allowing Liberty to recover the \$2.4 million, the Commission would have to endorse the concept that is embodied in the agreement.
- (2) Liberty is not aware of any similar agreements.
- (3) One can identify the risks borne by each party to the stabilization agreement by simply reviewing each section of the agreement. The two purposes of the agreement (which is the case for most contracts) is to document the terms of the agreement and then to address all the risks posed by the parties in a manner acceptable to both parties. For example, the provisions governing insurance were to address the risks each party faced if there was not sufficient insurance.
- (4) The primary factor in the decision relating to the gas holder was to pursue the least cost option to comply with the environmental requirements imposed by DES. As discussed at length in this docket, Liberty could satisfy DES requirements by either demolishing the gas holder, remediating any contamination found beneath, and installing a “cap,” or by making sure the gas holder remains standing and water-tight to serve as a cap over its footprint. Liberty understood that the demolition option was less expensive than the stabilization option and thus Liberty had decided to demolish the building. Prior to demolition, NHPA approached Liberty with a proposal to save the gas holder. The conversations with NHPA lead to the stabilization agreement that allows Liberty to satisfy the DES requirements at the lowest cost for customers.
- (5) Documentation of the evaluation by Liberty of the potential demolition of the Gas Holder House is included in Attachment DOE 6-2.b.5.1.zip and Attachment DOE 6-2.b.5.2.zip as follows:
- (a) January 29, 2014, letter by GZA GeoEnvironmental, Inc. (GZA) titled, “Brick Gas Holder House Status, Former Concord Coal Gas Plant (Site), One Gas Street, Concord, New Hampshire, DES Site # 198904063, Project RSN # 1479. Attachment DOE 6-2.b.5.a.



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- (b) February 24, 2014, letter by NHDES titled “Concord – Former Concord Coal Gas Site/Manufactured Gas Plant, DES Site #198904063, Project #1479, Letter Regarding Brick Gas Holder House Status, prepared by GZA GeoEnvironmental, Inc., and dated January 29, 2014.” Attachment DOE 6-2.b.5.b.
  - (c) October 13, 2015, letter by GZA titled “Construction Management Services - Gas Holder House Options Evaluation, Concord Manufactured Gas Plant – 1 Gas Street (Site), Concord, New Hampshire, DES Site # 198904063, Project RSN # 1479.” Attachment DOE 6-2.b.5.c.
  - (d) July 7, 2020, letter by GZA titled “Observations and Opinions of Probable Cost – Gas Holder House, Concord Manufactured Gas Plant – 1 Gas Street (Site), Concord, New Hampshire, DES Site # 198904063, Project RSN # 1479.” Attachment DOE 6-2.b.5.d.
  - (e) June 17, 2021, letter by GZA titled “1888 Gas Holder House Update, Former Concord Coal Gas Site, One Gas Street, Concord, New Hampshire, NHDES Site No. 198904063, Project RSN #1479.” Attachment DOE 6-2.b.5.e.
  - (f) March 19, 2021, letter report by GZA titled “Limited Hazardous Building Materials Assessment, Holder House, 1 Gas Street, Concord, New Hampshire.” Attachment DOE 6-2.b.5.f.
  - (g) December 27, 2022, Report by GZA titled “Calculation of Basis of Maximum Owner Contribution, 1888 Gas Holder House Demolition Alternative, Manufactured Gas Plant, Concord, New Hampshire.” Attachment DOE 6-2.b.5.g.
- (6) There are no such presentations. The decisions related to the gas holder did not require board approval, were made by the New Hampshire President, and were based on the documents that have been provided in discovery in this docket and on oral discussions.

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

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Winter 2022–2023 and Summer 2023 Cost of Gas  
(RDAF and Gas Holder)

Department of Energy Data Requests - Set 6 (Partial)

Date Request Received: 3/20/23  
Request No. DOE 6-3

Date of Response: 3/30/23  
Respondent: Luke Sanborn

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**REQUEST:**

Ref: Liberty Response to DOE DR 4-6

Liberty “also asks that the Commission find to be prudent Liberty’s decision to enter the Agreement and contribute the estimated costs of demolition, investigation, and remediation of any contamination found beneath the gas holder toward the stabilization of the Gas Holder.” Liberty asserts that “Liberty’s decision to enter the Agreement will result in savings to customers” and states it “will not seek approval of the total amount contributed to the gas Holder until the work is complete and the Commission would have the opportunity at a future hearing to determine if the money was prudently spent.” Supplemental Petition at 5.

- a. Liberty’s response to DOE DR 4-6 references a response of (at least) two pages, however only one page was provided. Please provide a complete an updated response to DOE DR 4-6.
- b. Please confirm that Liberty’s responses to DOE DRs Set 1-6 are updated and accurate as of March 30, 2023.

**RESPONSE:**

- a. Please see Attachment DOE 6-3.a for the complete response to DOE 4-6.
- b. Response by counsel: The Company is not aware of any necessary updates to prior data responses but will continue to review the prior responses and update as necessary.

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

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Winter 2022–2023 and Summer 2023 Cost of Gas  
(RDAF and Gas Holder)

Department of Energy Data Requests - Set 4

Date Request Received: 1/20/23  
Request No. DOE 4-6

Date of Response: 2/3/23  
Respondent: Luke Sanborn  
Jennifer Goodman – N.H.  
Preservation Alliance

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**REQUEST:**

Ref: Liberty’s Petition

Please explain whether the Phase I Stabilization and Phase II Stabilization costs identified to preserve the Gas Holder building will be sufficient to preserve the building for the next twenty-five, fifty- and/or one- hundred years. If there are additional Phases, please describe the phases, quantify expenses, and explain who will pay for those expenses. If by Liberty, please indicate if expenses will be born by rate-payers or shareholders or both. Who will pay for standard maintenance and/or ancillary expenses? Please expand upon any supplemented answer to DOE DR 1-7 with regard to whether risk of cost arising from maintenance and/or ancillary expenses should be assigned to rate-payers rather than shareholders.

**RESPONSE:**

The Phase II rehabilitation work will last 40-60 years and easily much longer if the building is well-maintained. The 1888 Gasholder stood for more than hundred years prior to the damage to the roof caused by a falling tree. Our goal is to ensure that the property’s future business model and investment underwrites maintenance and future capital projects.

The Preservation Alliance does not anticipate future phases aside from costs related to the future development of the southern corridor of the City of Concord or a future developer. These costs would be the responsibility of parties other than Liberty. The Preservation Alliance is not in a position to address any future requirements that may exist with respect to Liberty’s obligations related to contamination of the site. However, under the current RAP approved by NHDES, Liberty is responsible for the maintenance of the Gas Holder as part of the approved CAP.

Standard maintenance, which is expected to be minimal, will be borne by Liberty. It is appropriate for customers to bear the costs of standard maintenance and ancillary expenses

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because customers would have been responsible for analogous ongoing costs to monitor the site and test wells after demolition.