



DG 17-048  
Planning and Budgeting  
CNG Facility  
PB-5: Staff Questions 6-33, Staff 6-35 through Staff 6-39

Please see below for the documents and information requested in the various questions listed above.

- Capital Project Expenditure Application – Attachment PB-5.1 (attached to Business Case)
- Business Case – Attachment PB-5.1
- Details of the \$1.8 to \$2.2 million estimate discussed in the testimony of William Clark in DG 14-091:

The estimated costs used in DG 14-091 to perform the DCF analysis were \$2,245,000 and are listed below. The costs can also be found in Attachment SRH-1 that was attached to Stephen Hall's testimony. As the parties to that proceeding were aware, the costs were direct costs only and did not include overheads or AFUDC.

Compressors	1,000,000
Piping, meter set, survey, etc	865,000
Land (pro-rated)	200,000
Contingency	180,000
Total	2,245,000

- Over Expenditure Application – Attachment PB-5.2
- Project Cost History – The project cost history and budget variances were reviewed in the monthly meetings described in the response to PB-1. In addition, discussion of the cost history and variances is included in the Over Expenditure Application provided as Attachment PB-5.2 and in the information provided in response to PB-4. Detail of the costs incurred over the life of the project is included in Attachment PB-5.4.xlsx.
- Project Close Out Report (including supporting documents) – Attachment PB-5.3
  - Note: Items listed in Section 3 of the Project Close Out Report do not apply in all cases. Indication that the location of the documents is the "Local W Drive" means that is the location if the document is available. In addition, the "Project Charter" referenced in Item 3.4b is really the same as the "Business Case" referenced in Item 3.4a. Budget documentation is provided in response to PB-3 and PB-4. Status Reports and a discussion of Risks and Issues are included in the Monthly CapEx Update meetings and documentation discussed in response to PB.1 (see Attachment PB-1.3, for example). In addition, please see Section 5 of the Project Close Out Report for a list of Lessons Learned and Section 7 for any Open Issues.

2016 was the first year of using the Project Close Out Reports, and the Financial information in Section 8 relates on to 2016 rather than the entire life of the project. Liberty will continue to "fine tune" its use of the Project Close Out report.

- Summary of expenditures – Attachment PB-5.4.xlsx



**Liberty Utilities**  
WATER GAS ELECTRIC

**PROJECT TITLE: LIBERTY UTILITIES – CNG FACILITY IN CONCORD, NH**

**PROJECT SPONSOR: LIBERTY UTILITIES – EAST (ENERGYNORTH NATURAL GAS)**

**PROJECT LEAD: BILL CLARK**

**DATE: APRIL 08, 2014**

**PROJECT ID: 8840-C18806**

**BUSINESS PLAN NUMBER:**

**RECOMMENDATION:**

This capital project is for construction of a Compressed Natural Gas (CNG) facility on land currently owned by EnergyNorth on Broken Bridge Rd. in Concord, NH. Liberty Utilities Corp will construct, own and operate a compressor station at this location. iNATGAS and AVSG LP will construct, own and operate a CNG fueling and filling terminal on adjoining land leased from EnergyNorth. The Liberty Compressor Station will compress and deliver CNG to the iNATGAS/AVSG LP facility. Liberty Utilities' capital investment in this project is budgeted for \$2,250,000.

Liberty Utilities filed with the NHPUC on April 4<sup>th</sup> for approval of a Special Contract to deviate from the existing tariff to allow for the sale of CNG to iNATGAS and AVSG LP. Liberty is also in the process of applying for building permits with the City of Concord.

The expected start date is June/July 2014 with a station commencement date of November 2014.

**OBJECTIVE(S)**

The Objective for this project is incremental revenue growth from the distribution receipts of the iNATGAS/AVSG LP meter. Three models have been prepared that calculate expected revenues from the investment in this project. At the negotiated take or pay minimum requirements it is projected that Liberty will recover its investment in 5.5 years. If the baseline projections are met, the investment will be recovered in 4 years and if the accelerated projections are achieved, the Company will recover its investment in 3 years and 4 months.

**BACKGROUND**

On November 19, 2013, Liberty entered into a letter of intent with iNATGAS regarding this project, and on April 4<sup>th</sup>, 2014, Liberty entered into a special contract and a lease. Under the Special Contract, Liberty will provide firm transportation of compressed natural gas to iNATGAS's CNG fueling station for a term of 15 years. The natural gas commodity will be procured by iNATGAS

under Liberty's G-54 firm CGA sales rate for at least one year or from a third party marketer thereafter and delivered by Liberty to the meter set located at the CNG compressor station. The Special Contract has a fixed delivery charge as well as yearly "take or pay" minimum requirements. The fixed delivery charge is \$.061 per therm for all therms metered at the delivery point and will remain in effect for the term of contract and will not be subject to any adjustments.

#### ALTERNATIVES/OPTIONS

##### Status Quo:

The alternative for Liberty is to simply not collaborate on the development of a CNG facility and allow others to pursue this market. If Liberty chooses this alternative CNG developers may by-pass Liberty entirely and tap directing into the TGP transmission line as has been done already by a competitor. Also, a neighboring gas distribution utility may partner for development of a CNG facility in proximity to our franchise territories. The market demand for CNG will support a finite amount of these facilities and if this facility is not constructed Liberty could lose an opportunity for significant revenue growth.

#### FINANCIAL ASSESSMENT

A financial assessment was completed in preparation for the Special Contract with the NHPUC. Please see the attached Revenue Requirement spreadsheet titled Concord CNG Revenue Requirement.

#### RISK ASSESSMENT AND QUALITATIVE EVALUATION

Due diligence has been completed on environmental aspects of this project and no concerns were identified. Meetings with City of Concord Planner, Manager and Mayor have resulted in positive feedback for this project. The project is appropriately zoned for the area. A consultant is being retained to oversee bids, permitting, construction and engineering.

#### IMPLEMENTATION/ACTION PLAN

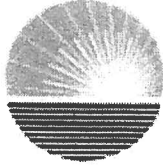
A Special Contract with NHPUC has been applied for. The City of Concord building permits to be applied for in the next 2 weeks. The approval timeframe is expected to be 2-3 months. Construction anticipated to begin in July, 2014 and completion of the CNG facility in November, 2014.

#### REVIEWED BY:

PROJECT LEADER: BILL CLARK

DIRECTOR/VP: 

FINANCE:



# Liberty Utilities<sup>SM</sup>

WATER GAS ELECTRIC

## LIBERTY UTILITIES - CAPITAL PROJECT EXPENDITURE APPLICATION

DIVISION/COMPANY: Liberty Utilities Corp/EnergyNorth Natural Gas	HOME OFFICE REF #: 8840 C18806
PROJECT TITLE: Concord CNG Facility	EXPECTED PROJECT TOTAL: \$2,250,000
PROJECT TYPE (circle one): System Maint / System Project / Growth /	
PROJECT START DATE: 7/15/2014	PROJECT END DATE: 12/15/2014
CURRENT UTILITY EARNINGS STATUS:	JOB COST/FWO #:
Type of Capital Project: <input checked="" type="checkbox"/> Growth <input type="checkbox"/> Improvement Upgrades <input type="checkbox"/> Infrastructure Replacement	
PROJECT DESCRIPTION & LOCATION: This Project is for construction of a CNG filling and fueling facility located in Concord, NH. EnergyNorth will be constructing a compressor station that will deliver compressed natural gas to an adjoining filling and fueling station to be constructed by iNATGAS/AVSG LP. EnergyNorth capital expense for construction of the compressor station is \$2,250,000. iNATGAS and AVSG LP have signed a 15 year contract with take or pay minimums to receive the compressed natural gas produced by the compressor station.	
IS THIS PROJECT GROWTH RELATED? IF "YES", DESCRIBE THE SPECIFIC LOCATION (MAP) AND LIST APPLICABLE DEVELOPERS WHERE GROWTH WILL OCCUR (CONSULT WITH DEVELOPMENT SERVICES REGARDING FUNDING). Yes. Station will be located at 20 Broken Bridge Rd. Concord, NH adjacent to existing EnergyNorth take station and LNG Peak Shaving facility.	
PERMITTING REQUIREMENTS, INCLUDING POTENTIAL IMPACT ON EXISTING PERMITS, AND TIMING OF AND RISKS ASSOCIATED WITH OBTAINING APPROPRIATE PERMITS FOR PROJECT. City of Concord building permits and NHPUC special contract approval still pending	
COST ESTIMATE FOR TOTAL PROJECT, NATURE OF ESTIMATE (FIRM FIXED PRICE, INTERNALLY OR EXTERNALLY GENERATED), TIMING OF SPENDING BY QUARTER, AND RISKS ASSOCIATED WITH COST ESTIMATES. Externally generated from quotes	
WILL THERE BE ASSETS GREATER THAN \$5,000 THAT ARE CURRENTLY IN SERVICE REMOVED AS A RESULT OF THIS PROJECT? No	
IF YES, PLEASE DETAIL THE SPECIFIC ASSETS THAT WILL BE REMOVED:	

1. Original Cost of Plant to be removed (if known):
2. What is the replacement cost of the plant being removed (if original cost not known)?
3. Original Work Order of Plant to be removed (if known):
4. Is the Plant being removed reusable?
5. What is the year of original installation of the plant being removed?

PROPOSED SOURCE OF FUNDS (COMPANY, DEVELOPER LXA, HUF, ETC.)  
Company Capital Budget.

#### CATEGORY & STATUS OF PROJECT

(tick as appropriate)

Safety ☐

Mandated ☐

Impending Regulatory Obligation ☐

Rate Recovery-Immediate Return ☐

Rate Recovery (3 to 6 months) ☐

Rate Recovery (6 to 12 months) ☐

Rate Recovery (12 to 18 months) ☒

#### FINANCIAL SUMMARY

NEXT ANTICIPATED TEST YEAR

Rate Recovery (over 18 months)

x

Will this, and other approved projects, cause a rate shock

If yes, is customer affordability an issue?

Have Health & Safety implications been considered?

Yes

Has Environmental Compliance review been done?

Yes

Has Tech Services review been done?

Was this Capital Expenditure included in the Annual Budget?

No

#### ANALYSIS OF PROJECT VALUE

Design/Engineering ☐

Material ☐

External contractor costs ☐

Internal costs ☐

Other costs (contingency) ☐

Working capital requirements ☐

Project Total Cost ☐

#### CAPITAL EXPENDITURE BUDGET UTILIZATION

(A) Capital budget

(B) Over (under) run vs. Budget

(C) (A+B) Total Estimated Project Cost

(D) Less Approved Spend to Date

(E) Less Future Approval Requests

(F) (C-D-E) Approval Amount Requested (current application)

Authorized Amount	To be spent in:	
	Current Year	Future Years
2,250,000	2,250,000	

	Name	Signature	Date		
Requesting Party	Bill Clark	<i>William Clark</i>	4/09/2014		
President - LU East - NH	<b>RICHARD LEEHR</b>	<i>Richard Leeher</i>	4/15/14		
Vice President Finance					
CFO					
CEO					



## Over Expenditure Application | 2016

Requesting Region or Group:	Gas-Engineering	Date of Request (MM/DD/YY):	3/2/2016
Project Name:	Liberty Utilities-CNG Facility In Concord, NH & 8840-C18806		
Requesting Region:	Liberty Utilities-East(EnergyNorth)	Sponsor (Name):	Shawn Furey
Project Start Date:	4/1/2015	Project Completion Date:	9/1/2016
Original Project Budget (\$):	\$2,250,000	Requested Cash Over Expenditure (\$):	\$1,249,000
Project Type: (Click appropriate box)	<input type="checkbox"/> Safety <input type="checkbox"/> Mandated <input checked="" type="checkbox"/> Growth <input type="checkbox"/> Regulatory Supported <input type="checkbox"/> Discretionary	Nature of Estimate: (Click appropriate box)	<input type="checkbox"/> Fixed or Firm Price <input checked="" type="checkbox"/> Estimate - Internal <input type="checkbox"/> Estimate - External <input type="checkbox"/> Other (specify details)

### Details of Request

#### Project description

This capital project is an Over Expenditure Application for the construction of a Compressed Natural Gas (CNG) facility on land currently owned by EnergyNorth on Broken Bridge Rd in Concord NH. Liberty Utilities will construct, own and operate a compressor station at this location. INATGAS and AVSG LP will construct, own and operate a CNG fueling and filling terminal on adjoining land leased from EnergyNorth. The Liberty Compressor Station will compress and deliver CNG to the INAT/AVSG LP facility.

On November 19, 2013, Liberty entered into a letter of intent with INATGAS regarding this project, and on April 4<sup>th</sup>, 2014, Liberty entered into a special contract and a lease. Under the special project, Liberty will provide firm transportation of compressed natural gas to INATGAS's CNG fueling station for a term of 15 years. The natural gas commodity will be procured by INATGAS under Liberty's G-54 sales rate for at least one year or from a third party marketer thereafter and delivered by Liberty to the next meter set located at the CNG compressor station. The special contract has a fixed delivery charge as well as yearly "take or pay" minimum requirements. The fixed delivery charge is \$.061 per therm for all therms metered at the delivery point and will remain in effect for the term of contract and will not be subject to any adjustments. The NHPUC approved the special contract between the two companies.

Liberty Utilities original estimate for this project was made on 4/8/2014 and for the amount \$2,025,000; however, the revised project estimate as of 3/1/2016 is \$4,654,000. The original business case is attached to this form. In the 4<sup>th</sup> quarter of 2015, the company took initiatives to reduce capital spend and deferred the remaining INAT gas work to 2016 and therefor the remaining charges were deferred from the fourth quarter of 2015 to quarters two and three of 2016. The 2016 capital budget request was set prior to the deferral decision and is reflected in the below chart. The purpose of this application is to request the additional 2016 funds required to complete the project and meet the terms of our contract with INAT Gas. The additional funds required to complete this project will be from re-allocation of the 2016 Capital Budget project line item amounts.

8840-C18806	2016 Approved Budget	2016 Revised Budget	Difference
Budgeted Amount	\$160,000.00	\$1,409,000	\$1,249,000

## Over Expenditure Application | 2016

### What caused (or is causing) the expected Over Expenditure?

These items were not included in the original 2014 estimate:

- Expand original scope \$610K
- Engineering - \$150K over budget
- Asphalt, Clearing, Piping, Fencing and Compressor Building - \$550K over budget

### What will this Over Expenditure achieve? Why is the Over Expenditure necessary?

Liberty has completed and spent 70% of the required amount on the project to date. The remaining authorization will allow complete the remaining 30% of the installation. This will cover the cost to construct the compressor structure, filling station canopies, fencing, paving, and piping installation

Comment [CB1]: Round all numbers in the table below to the nearest hundred and match the 2016 estimate to the rounded number on first page.

Comment [SF2]: Updated per Chir's Request

Comment [SF3]:

### What are the revised project financials as a result of this Over Expenditure? (IRR, NPV, etc.)

At the negotiated take or pay minimums it is projected that Liberty will recover its investment over 8 years vs. 5.5 years as indicated on the original estimate in 2014. If the baseline projections are met, the investment will be recovered in 6.5 years vs. 4 years as indicated on the original estimate. If accelerated projections are achieved, the company will recover its investment in 5.1 years vs. 3.3 years.

At the negotiated take or pay minimums the IRR reduces from 13.58% to 7.02%. If the baseline projections are met, the IRR reduces from 18.43% to 10.49%. If accelerated projections are achieved, the IRR reduces from 23.73% to 13.97%.

### What are the risks and consequences of not approving an Over Expenditure?

The developer could bypass Liberty Utilities putting at risk our investment to date.

### Are there other pertinent details that may affect the decision making process?

All permits have been signed by the city of Concord NH and approvals have been given by the NHPUC. The majority of the materials are currently on site (\$2,000,000 in value). The remaining 2016 work will cover the cost to construct the compressor structure, filling station canopies, fencing, paving, and piping install. Currently INATGAS along with RH-White, Arming, and Tri-County Contractors are scheduling their crews for the year and are awaiting an answer from Liberty Utilities whether or not the project is proceeding forward. Liberty has estimated that it will take 4 months from start to finish to place the CNG station into operation. The latest realistic start date for construction is July to achieve a fourth quarter in-service date, allowing for construction, testing, and contingency.

### Approvals and Signatures

Requestor	Name	Signature	Date
Director	Shawn Furey	Tisha Sanderson	3/3/2016
Regional or Functional Leader	Shawn Furey	Shawn Furey	5/23/16
Corporate, SVP Operations	Shawn Furey	Shawn Furey	6/16/16

Over Expenditure Application | 2016

Corporate, VP Finance

Corporate, President




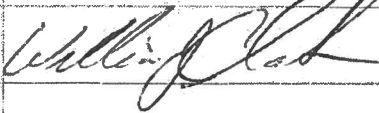
## Project Close Out Report | 2016

<b>Requesting Region or Group:</b>	EN	<b>Date of Closeout (MM/DD/YY):</b>	12/31/2016
<b>Project Number</b>	8840-C18806		
<b>Project Name:</b>	INAT Gas		
<b>Requesting Region:</b>	New Hampshire	<b>Sponsor (Name):</b>	Bill Clark
<b>Project Champion:</b>	Furey; Shawn	<b>Project Manager</b>	Furey; Shawn
<b>Project Start Date:</b>	1/1/2016	<b>Project Completion Date:</b>	12/31/2016
<b>Requested Capital (\$)</b>	\$1,409,000	<b>Expenditure Included in Approved Budget?</b>	YES

### Section 1. Approval

*Approval of the Project Closeout and Assessment Report indicates an understanding and formal agreement that the project is ready to be closed. By signing this document, each individual agrees all administrative, financial, and logistical aspects of the project should be concluded, executed, and documented as described herein.*

*Further, by signing this Report, it is accepted that CWIP (FERC Account 107) should be transferred to Utility in Plant Service (FERC Account 101)*

Approver Name	Title	Signature	Date
Shawn Furey	Senior Engineer		2/22/2017
William Clark	Director of Business Development		2/22/17
Craig Jennings	Vice President-Operations and Engineering		

*Tisha Sanderson Director, Finance Tisha Sanderson 2/28/17*

### Section 2. Final Deliverable/Deployment Checklist

*Sponsor to respond to each question. For each "no" response, include an issue in Open Issues section.*

## Project Close Out Report | 2016

Item	Question	Response
2.1	Do you agree that the product and/or service is ready to be deployed?	Yes
2.2	Do you agree the product and/or service has sufficiently met the stated business goals and objectives?	Yes
2.3	Do you fully understand and agree to accept all operational requirements, operational risks, maintenance costs, and other limitations and/or constraints imposed as a result of ongoing operations of the product and/or service?	Yes
2.4	Do you agree the project should be closed? If no, please explain:	Yes
<b>Rate your level of satisfaction with regards to the project outcomes listed below</b>		
2.5	Project Quality	3
2.6	Product and/or Service Performance	3
2.7	Scope	2
2.8	Cost (Budget)	2
2.9	Schedule	4

### Section 3. Project Documentation Checklist

*Project Manager Respond to each question. For each "no" response, include an issue in Open Issues section.*

Item	Question	Response	
3.1	Have project documentation and other items (e.g., Business Case, Project Plan, Charter, Budget Documents, Status Reports) been prepared, collected, filed, and/or disposed?	Yes	
3.3	Were audits (e.g., project closeout audit) completed and results documented for future reference?	Yes	
3.4	Identify the storage location for the following project documents items:	See below	
Item	Document	Location (e.g., Google Docs, Webspace)	Format
3.4a	Business Case	Local W Drive	Electronic
3.4b	Project Charter	Local W Drive	Electronic
3.4c	Project Plan	Local W Drive	Electronic
3.4d	Budget Documentation and Invoices	Local W Drive	Electronic
3.4e	Status Reports	Local W Drive	Electronic
3.4f	Risks and Issues Log	Local W Drive	Electronic
3.4g	Final deliverable	Local W Drive	Electronic

## Project Close Out Report | 2016

3.4h	If applicable, verify that final project deliverable for the project is attached or storage location is identified in 3.4.	Local W Drive	Electronic
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### Section 4. Project Team

*Project Manager to list resources specified in the Project Plan and used by the project.*

Name	Role	Type (e.g., Contractor, Employee)
Shawn Furey	Project Manager	Employee
RH-White	Site Work	Contractor
Anderson Welding	Inlet Piping	Contractor

### Section 5. Project Lessons Learned

*Project Team to identify lessons learned specifically for the project. State the lessons learned in terms of a problem (issue). Describe the problem and include any project documentation references (e.g., Project Plan, Issues Log) that provide additional details. Identify recommended improvements to correct a similar problem in the future.*

Problem Statement	Problem Description	References	Recommendation
Need to do a better job with project estimation	Future projects need better AFUDC and Burden estimates	N/A	Do a better job during project estimating and accounting for burdens and AFUDC

### Section 6. Post-Implementation Support Plans

*Project team to identify plans for post-implementation activities after project closeout. Refer to the Benefits Realization review gate for information about the Post-Implementation Review of Business Outcomes deliverable.*

## Project Close Out Report | 2016

Action	Planned Date	Assigned To	Frequency
Post-Implementation Review of Business Outcomes (actual review)	N/A	N/A	N/A
Post-Implementation Review of Business Outcomes (approval)	N/A	N/A	N/A

### Section 7. Open Issues

*Project Manager and Functional Lead to describe any open issues and plans for resolution within the context of project closeout. Include an open issue for any "no" responses in the Final Product and/or Service Acceptance Checklist and the Project Artifacts Checklist sections.*

Issue	Planned Resolution
INAT Gas still needs to gas up station	Contact INAT to gas up. Liberty contract fulfilled Dec 1, 2016

### Section 8. Financials

*Project Manager and Functional Lead to provide details for the following tables.*

Financial Descriptor	Amount
Total Actual Project Costs (including all Regional, Corporate and 3 <sup>rd</sup> party costs)	\$1,693,132
Total Budgeted amount	\$1,409,000
Variance	\$-284,132

Reasons for Variance	Impact
Not including AFUDC in estimate	Overbudget

## Project Close Out Report | 2016

*Project Manager to list of all work orders associated with project that should be closed once Close Out Report is accepted.*

Registry of All Job Codes (Regional, Corporate, LABs)	
Work Order 1	8840-ENIC0110
Work Order 2	8840-PA-INAT GAS
Work Order 3	
Work Order 4	
Work Order 5	