

Docket No. GMCB-017-15con

Certificate of Need Application
Replacement Boiler Plant
Southwestern Vermont Medical Center
October 13, 2015

Document prepared by:
James Trimarchi, Director Planning
Southwestern Vermont Medical Center
100 Hospital Drive
Bennington, VT 05201
802 440 4051
James.trimarchi@svhealthcare.org

Table of Contents

	Page
List of Appendices	3
Transmittal Letter and Verification under Oath form	4
Cover Sheet, CON Application Form	7
Organizational Chart	9
Project Description	10
CON Statutory Criteria 1	15
CON Standard 1.9	15
CON Standard 1.10	16
CON Standard 1.11	16
CON Standard 1.12	18
CON Standard 3.4	18
CON Statutory Criteria 2	18
CON Statutory Criteria 3	20
CON Statutory Criteria 4	20
CON Statutory Criteria 5	20
CON Statutory Criteria 6	21
Financial tables	Appendix 9

List of Appendices

Appendix 1	Project Timeline
Appendix 2	Design Schematics (current and future state)
Appendix 3	Cost estimates in CSI16 format
Appendix 4	Quote, Trane Building Services, construction partner
Appendix 5	Quote, Manheim CNG Center, compressed Natural Gas distributor
Appendix 6	Efficiency Vermont memo
Appendix 7	References
Appendix 8	FGI and Guidelines for Design and Construction of Health Care Facilities attestation, Trane Building Services
Appendix 9	Financial Tables

October 13, 2015

Donna Jerry, Health Care Administrator
Green Mountain Care Board
89 Main Street, Third Floor, City Center
Montpelier, VT 05620

RE: Docket No. GMCB-017-15con
CON for replacement boiler plant at Southwestern Vermont Medical Center

Dear Ms. Jerry,

This application is pursuant to Certificate of Need (CON) statute 18 V.S.A. 9440(c)(2)(A). Southwestern Vermont Medical Center (SVMC) is applying for a certificate of need to replace the boiler plant on SVMC's Bennington Campus. Replacing the boiler plant requires a CON because the project cost is estimated to be \$3,275,000 and exceeds the threshold for invoking CON jurisdiction per statute.

SVMC requests approval to replace its boiler plant for the following reasons;

- The current boilers are more than 35 years old and significantly beyond their useful life of 25 years and inefficiently burn outdated and #6 oil;
- The proposed replacement boilers burning natural gas have advanced capabilities;
 - More energy efficient, saving 4,199 MMBTU's (Million British Thermal Units) annually;
 - Lower operating costs, saving of almost \$400,000, annually;
 - Cleaner burning, saving 1,888 metric tons of carbon dioxide (equivalent to removing 392 automobiles);

SVMC intends to construct a 2,000 sq ft prefabricated metal building to house the replacement boilers. The primary boiler fuel will be natural gas with #2 fuel oil backup. The project involves decommissioning and removal of the existing oil boilers and two 20,000 gallon underground #6 fuel oil storage tanks. SVMC will fund the entire project from operations, no debt will be incurred. In accordance with the CON statute, all expenses associated with the project have been considered as part of the project and are reported in this CON application.

Attached with this letter is the signed and notarized Verification of Oath form and check for \$4093.75 representing 0.125% of the total project cost of \$3,275,000.

We thank the Green Mountain Care Board for considering this important project.

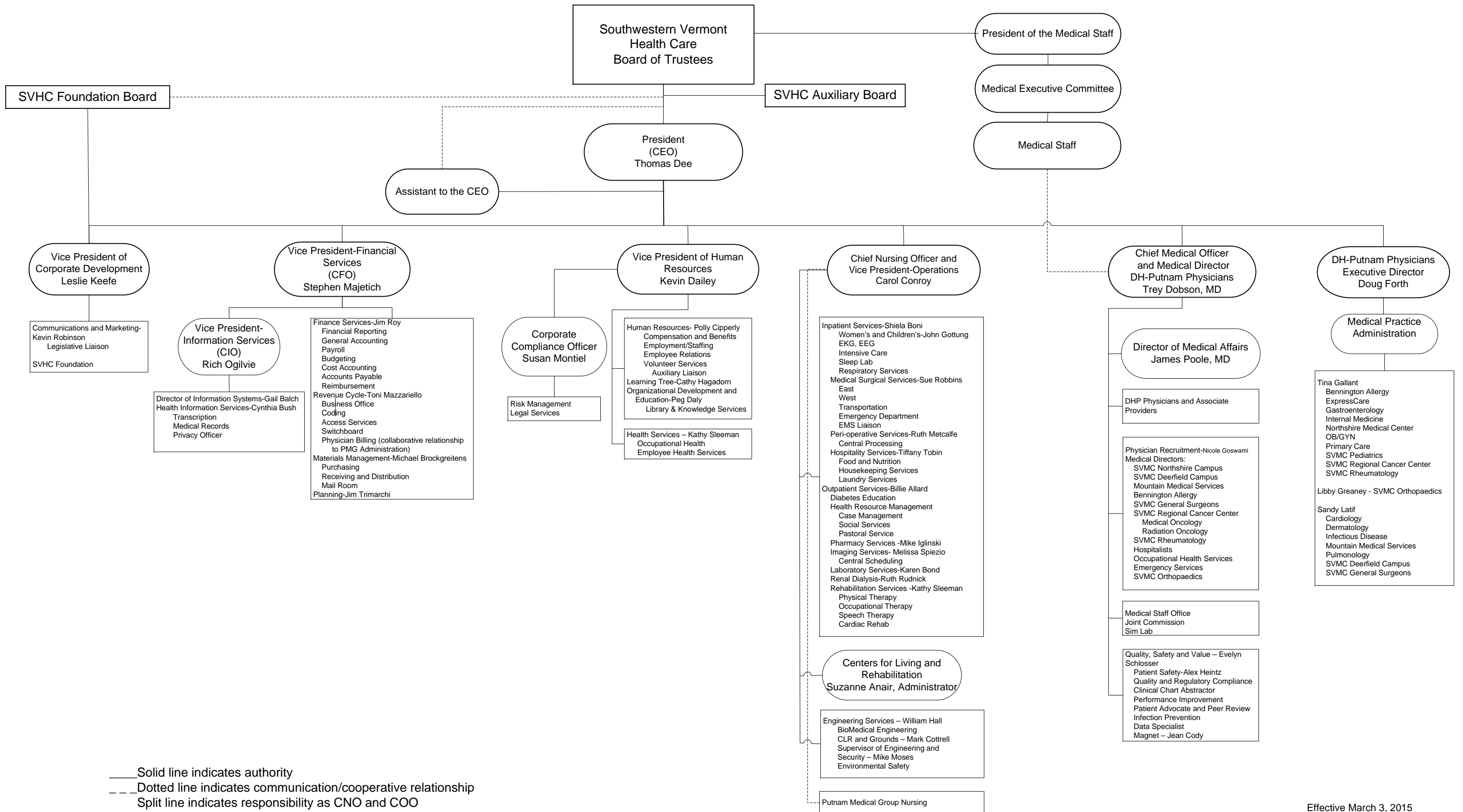


James Trimarchi, Director Planning

802 440 4051

James.Trimarchi@svhealthcare.org

Southwestern Vermont Health Care Organizational Chart ~ 2015



_____ Solid line indicates authority
 - - - - - Dotted line indicates communication/cooperative relationship
 - - - - - Split line indicates responsibility as CNO and COO

Project Description

Southwestern Vermont Medical Center (SVMC) proposes to replace its aged and inefficient oil burning boilers on the Bennington Campus with modern, clean burning efficient boilers that decrease operating expenses and reduce harmful emissions. The total project cost of is estimated to be \$3,275,000 and is expected to reduce operating expenses by \$400,000 annually. We request CON approval by January 31, 2016 to maintain the project timeline (appendix 1).

SVMC requests approval to replace its boilers for the following reasons;

- The current boilers are more than 35 years old and significantly beyond their useful life of 25 years;
- The current boilers inefficiently burn outdated and #6 oil;
- The proposed replacement boilers burning natural gas have advanced capabilities;
 - More energy efficient, saving 4,199 MMBTU's (Million British Thermal Units) annually;
 - Lower operating costs, saving of almost \$400,000, annually;
 - Cleaner burning, saving 1,888 metric tons of carbon dioxide (equivalent to removing 392 automobiles);
 - Increased reliability and reduction in repair and maintenance costs;
 - Elimination of Hazardous Air Containment fees associated with burning #6 oil
 - Reduction in fire risk to patients and patient care facilities;

SVMC intends to construct a 2,000 sq ft prefabricated metal building to house the replacement boilers and steam plant. Facility design schematics (current and future state) are in appendix 2. This facility will relocate the boilers 200 yards from patient care areas and thereby increase patient safety by reducing fire risk to patients and patient care areas. Steam will be piped underground to the buildings throughout the Bennington campus. The steam will be used for heating buildings, hot water and sterilization. The steam will not be used for electricity generation.

The project also involves removal of the existing oil boilers and two 20,000 gallon underground #6 fuel oil storage tanks. We do not anticipate the need for environmental remediation and will work closely with Vermont's Department of Environmental Conservation as this project proceeds.

The primary fuel for the replacement boilers will be natural gas. The back-up fuel will be #2 oil. As such, the project also includes installation of a compressed natural gas decompression station and a 20,000 gallon above ground #2 fuel oil storage tank. After investigation, natural gas was selected as the fuel source because it is reliably available, clean burning, requires little operational oversight or dedicated employees, and will provide significant operational savings. Other energy options were investigated including; #2 oil, propane, biomass, geothermal, solar and wind. Although each of these other fuel options have benefits, on balance, natural gas

achieves the best performance, reliability and cost profile. We have worked closely with Efficiency Vermont to vet the options and develop the boiler design.

Consideration was given to the on-site storage of compressed natural gas, the design of the decompression station and the impact of natural gas deliveries on patients and the community. We expect that SVMC will average 3 deliveries of natural gas per week with 4-5 deliveries per week under rare peak conditions. Deliveries would enter campus using major thoroughfares, as do all box trucks, and increase truck deliveries to SVMC by a mere 10%. Once on SVMC's campus, all trucks are routed around the perimeter, away from patient and staff parking. These routes have proven safe and undisruptive to the neighboring community, patients and employees.

The cost of the project are necessary and reasonable. Less expensive alternatives the deliver reliability are not available or appropriate. The project will not disrupt current services or create undue impact on patients. The project will serve the public good through reducing SVMC's operating expenses, affording reliability to SVMC's steam generation system and by decreasing emissions that harm health.

Summary Project Description

Location of the proposed project– The replacement boilers would be installed on SVMC's Bennington campus. SVMC intends to construct a 2,000 sq ft prefabricated metal building to house the replacement boilers and steam plant. Steam will be piped underground and connect to the current steam pipes at the location of the current boilers. From there, the steam will be piped through the current pipe network throughout the campus.

Service to be added and proposed location were the services will be rendered– This project is not associated with any new clinical care services.

Description of the proposed service area– SVMC's serves the population within Bennington County, Western Windham County, the Eastern NY counties of Rensselaer and Washington and Northern Berkshire County, MA. The installation of a replacement boiler providing steam to SVMC's main campus in Bennington will serve these communities because residents typically travel to Bennington for care such as emergency care, imaging and diagnostic testing, inpatient care and surgeries.

Detailed description of equipment to be purchased– SVMC plans to purchase (Qty 3) Unilux High Pressure Steam Watertube Boilers, Model No. ZF 1600HS-LB, rated for 16530 MBH input capacity, 13390 MBH output capacity and 13222 lbs/hr of steam output when operating at 125 psig steam. The new boilers are equipped with BurnerMate Universal Industrial Boiler Control, Parallel positioning Combustion Control and Burner Management System with oxygen trim and combustion blower VFD. These boilers were chosen because of their efficiency levels and

manufacturer location. The boiler design allows 82% combustion efficiency and 1.8% percent oxygen content when burning natural gas and 85% combustion efficiency and 2.0% percent oxygen content when burning #2 fuel oil. This is considerable more efficient than our current boilers burning #6 fuel oil and delivering 78% combustion efficiency and 6.3% percent oxygen content. The replacement boilers will save approximately 4,199 MMBTU annually. The boilers are locally made in Schenectady, NY at the Unilux headquarter facility. There are an abundance of service companies centrally located to the hospital that can perform preventative maintenance and repairs on the boilers.

Number of square feet of renovation/new construction– SVMC will construct a 2,000 sq ft prefabricated metal building to house the boilers. The project also includes installation of a compressed natural gas decompression station and a 20,000 gallon above ground #2 fuel oil storage tank. Approximately 200 yards of steam piping will also be installed.

Total Project Cost– Total project costs are estimated to be \$3,275,000 comprised of 3 main components;

- 3 Unilux steam boilers \$1,206,250
- Metal building and decompression station \$ 583,000
- Installation of boilers, permits, contingency, etc. \$1,485,750

There are no information technology expenses associated with this project.

A summary of the construction and installation expenses in CSI16 format appears below;

Division	SUMMARY- DO NOT CHANGE	MATERIAL Cost	LABOR Cost	OTHER Cost	TOTAL Cost
1	General	\$ -	\$ 580,750.00	\$ -	\$ 580,750.00
2	Sitework	\$ 55,000.00	\$ 355,000.00	\$ -	\$ 410,000.00
3	Concrete	\$ 30,000.00	\$ 25,000.00	\$ -	\$ 55,000.00
4	Masonry	\$ -	\$ -	\$ -	\$ -
5	Metals	\$ -	\$ -	\$ -	\$ -
6	WoodPlastics	\$ -	\$ -	\$ -	\$ -
7	ThermalMoisture	\$ 64,000.00	\$ 30,000.00	\$ -	\$ 94,000.00
8	DoorsWindows	\$ 8,000.00	\$ 9,000.00	\$ -	\$ 17,000.00
9	Finishes	\$ 4,500.00	\$ 2,500.00	\$ -	\$ 7,000.00
10	Specialties	\$ -	\$ -	\$ -	\$ -
11	Equipment	\$ -	\$ -	\$ -	\$ -
12	Furnishings	\$ -	\$ -	\$ -	\$ -
13	Special Construction	\$ 245,000.00	\$ 40,000.00	\$ -	\$ 285,000.00
14	Conveying	\$ -	\$ -	\$ -	\$ -
15	Mechanical	\$ 846,250.00	\$ 720,000.00	\$ -	\$ 1,566,250.00
16	Electrical	\$ 75,000.00	\$ 185,000.00	\$ -	\$ 260,000.00
	TOTAL	\$ 1,327,750.00	\$ 1,947,250.00	\$ -	\$ 3,275,000.00

These costs are reasonable and necessary. The complete CSI detail appears in appendix 3 and quotes from our construction partner (Trane Building Services) and from our compressed natural gas distributor (Manheim CNG Center) appear in appendix 4 & 5, respectively.

We anticipate the replacement boilers to decrease operating expenses by \$400,000 annually primarily driven by a reduction in fuel and staff expenses. The efficient boilers burning natural gas require less expenses per MMBTU than the current inefficient boilers burning #6 oil. Also fewer staff are required to operate and maintain the replacement boilers than are required to operate and maintain the aged and outmoded current boilers.

How will the project be financed– SVMC plans to finance this capital project from operating revenue, thereby no debt will be incurred specifically to this project. The cost of this project was included in the capital fiscal year 2015 & 2016 capital budgets submitted to the Green Mountain Care Board (GMCB).

Need for the project including data– SVMC requests approval to replace its boilers for the following reasons;

- The current boilers are more than 35 years old and significantly beyond their useful life of 25 years;
- The current boilers inefficiently burn outdated and “dirty” #6 oil;
- The proposed replacement boilers burning natural gas have advanced capabilities;
 - More energy efficient, saving 4,199 MMBTU’s (Million British Thermal Units) annually;
 - Lower operating costs, saving of almost \$400,000 annually;
 - Cleaner burning, saving 1,888 metric tons of carbon dioxide (equivalent to removing 392 automobiles);
 - Increased reliability and reduction in repair and maintenance costs;
 - Elimination of Hazardous Air Containment fees associated with burning #6 oil;
 - Reduction in fire risk to patients and patient care facilities;

Objective to be achieved by the project– SVMC seeks to replace the current aged and outmoded boilers with modern boilers that are more reliable and energy efficient. The energy efficiency translates into a reduction in carbon admissions, lower fuel costs and lower operating expenses. The savings achieved by implementing this project will provide additional resources that can be redirected towards patient care.

Impact on healthcare costs, access and quality– We do not anticipate that this project will directly impact healthcare costs, access or quality. However, the operational savings achieved by the project might secondarily allow resources to be leveraged to improve access and care quality. Moreover, implementation of modern boilers that decreasing operating expenses is part of SVMC’s strategy to reduce operating expenses and better manage rate increase requests. Lastly, installing boilers that create less pollution will increase the health of the surrounding community.

Project beginning and completion date– SVMC is poised to begin the project upon approval from the GMCB. Appendix 1 is a timeline for the project. We anticipate gaining swift approval for this project, breaking ground in March, 2016 and completing the project 9 months later in

Ms. Donna Jerry
Docket No. GMCB-017-15con
SVMC Boiler Plant CON Application
October 13, 2015
Page 14

November, 2016. We have a contract with our construction partner, Trane Building Services (www.Trane.com). Trane specializes in boiler installation projects and is committed to completing the project on time and under budget.

The remainder of this application addresses the CON statutes and CON standards indicated in the jurisdiction letter dated August 12, 2015.

CON Statutory Criteria

CON Statutory Criteria 1- the application is consistent with the health resource allocation plan;

The application is consistent with the health resource allocation plan as evidenced by consistency with specific CON standards demonstrated below.

CON Standard 1.9: Applicants proposing construction projects shall show that costs and methods of the proposed construction are necessary and reasonable. Applicants shall show that the project is cost-effective and that reasonable energy conservation measures have been taken.

The costs and methods of the proposed project are necessary and reasonable. Total project costs are estimated to be \$3,275,000 comprised of 3 main components;

- 3 Unilux steam boilers \$1,206,250
- Metal building and decompression station \$ 583,000
- Installation of boilers, permits, contingency, etc. \$1,485,750

There are no information technology expenses associated with this project.

The cost of the Unilux steam boilers is reasonable. Trane Building Services, our construction partner, specializes in boiler installation projects and frequently works with Unilux Advanced Manufacturing on commercial boiler fabrication and installation. Unilux is a local company (Schenectady, NY) that has been producing high quality boilers at competitive prices and installing them throughout the region since 1979. Because the company is local, time savings and expense mitigation is achieved through reduced crate and shipping duration and fees are minimized for travel for subsequent maintenance. Unilux steam boilers burning natural gas balance reliability, efficiency and convenience with price.

Construction of the metal building is necessary to house the replacement boilers at a safe distance from patient care areas. The cost of the metal building and decompression station are also reasonable. Costs have been dutifully negotiated and the facility has been value engineered. Similarly the costs for boiler installation, permitting and other dimensions of the project have been fully vetted as reasonable and necessary.

A summary of the construction and installation expenses in CSI16 format appears below;

Division	SUMMARY- DO NOT CHANGE	MATERIAL Cost	LABOR Cost	OTHER Cost	TOTAL Cost
1	General	\$ -	\$ 580,750.00	\$ -	\$ 580,750.00
2	Sitework	\$ 55,000.00	\$ 355,000.00	\$ -	\$ 410,000.00
3	Concrete	\$ 30,000.00	\$ 25,000.00	\$ -	\$ 55,000.00
4	Masonry	\$ -	\$ -	\$ -	\$ -
5	Metals	\$ -	\$ -	\$ -	\$ -
6	WoodPlastics	\$ -	\$ -	\$ -	\$ -
7	ThermalMoisture	\$ 64,000.00	\$ 30,000.00	\$ -	\$ 94,000.00
8	DoorsWindows	\$ 8,000.00	\$ 9,000.00	\$ -	\$ 17,000.00
9	Finishes	\$ 4,500.00	\$ 2,500.00	\$ -	\$ 7,000.00
10	Specialties	\$ -	\$ -	\$ -	\$ -
11	Equipment	\$ -	\$ -	\$ -	\$ -
12	Furnishings	\$ -	\$ -	\$ -	\$ -
13	Special Construction	\$ 245,000.00	\$ 40,000.00	\$ -	\$ 285,000.00
14	Conveying	\$ -	\$ -	\$ -	\$ -
15	Mechanical	\$ 846,250.00	\$ 720,000.00	\$ -	\$ 1,566,250.00
16	Electrical	\$ 75,000.00	\$ 185,000.00	\$ -	\$ 260,000.00
	TOTAL	\$ 1,327,750.00	\$ 1,947,250.00	\$ -	\$ 3,275,000.00

These costs are reasonable and necessary. The complete CSI detail appears in appendix 3 and quotes from our construction partner (Trane Building Services) and from our compressed natural gas distributor (Manheim CNG Center) appear in appendix 4 & 5, respectively.

We anticipate the replacement boilers to decrease operating expenses by \$400,000 annually primarily driven by a reduction in fuel and staff expenses. The efficient boilers burning natural gas require less expenses per MMBTU than the current inefficient boilers burning #6 oil. Also fewer staff are required to operate and maintain the replacement boilers than are required to operate and maintain the aged and outmoded current boilers.

CON Standard 1.10: Applicants proposing new health care projects requiring construction shall show such projects are energy efficient. As appropriate, applicants shall show that Efficiency Vermont, or an organization with similar expertise, has been consulted on the proposal.

Efficiency Vermont has assigned a designated energy consultant to review the project design and support energy efficiency initiatives. This work has included providing technical assistance and recommendations, cost/benefit analyses and collaboration with architects and contractors. By partnering with Efficiency Vermont, SVMC is ensuring that every effort is being taken towards energy efficiency within the specifications of this project. A letter confirming engagement of Efficiency Vermont appears in appendix 6.

CON Standard 1.11: Applicants proposing new health care projects requiring new construction shall demonstrate that new construction is the more appropriate alternative when compared to renovation.

The project to replace SVMC’s boilers requires new construction. Careful consideration was given to renovation, however for the following reasons new construction was selected;

- New construction is less expensive than renovation of the current space
- New construction can occur without the hindrance and disruption of operations of the current boiler plant
- Decommissioning of current outmoded boilers and removal of the #6 oil tanks can occur more easily while the remote boiler plant is operational
- Appropriate space for a natural gas decompression station is not available adjacent to the current boiler plant
- The current boiler plant is nearby patient care areas and remotely locating the new boiler plant reduces fire risk to patients and patient care areas

SVMC explored several options as the fuel source for the replacement boiler system. Each fuel source was compared across 10 dimensions as illustrated in the table below.

Evaluation Dimensions	Potential Fuels Sources				
	#6 Oil (current)	#2/#4 Oil	Propane	Biomass	Compressed Natural Gas
Approximate cost per mMBTU of this fuel*	\$15.00	\$20.00	\$18.00	\$6.00	\$11.00
Estimated future change in this fuel's cost*	Rising	Rising	Stable	Stable	Stable
Emissions from burning this fuel*	High	Medium	Low	Very High	Low
Reliability of boiler burning this fuel	Low	Medium	High	Very Low	High
Availability of commercial fuel locally	Limited	Abundant	Abundant	Variable	Medium
Site requirements for this fuel	Small	Small	Large	Very Large	Medium
Staffing required for operation of boiler burning this fuel	Medium	Medium	Low	Very High	Low
Boiler maintenance burning this fuel	High	Medium	Low	Very High	Low
Safety of burning this fuel	Safe	Safe	Fire Risk	Less Safe	Very Safe
Environmental safety (bulk storage risk and spill impact)*	Worst	Medium	Limited	None	Limited

* US Energy Information Administration (www.eia.gov) and <http://www.epa.gov/climateleadership/documents/emission-factors.pdf>

References to support the analysis summarized in the table above appear in appendix 7.

Regionally, oil #6 is being discontinued as a fuel source and therefore this fuel will be increasingly difficult to obtain. Oil #6 also does not burn clean and would create a substantial environmental hazard if a tank leaked or there was a significant spill. As such, oil #6 was not chosen as a fuel source for the replacement boilers.

Oil #2/#4 is more readily available than oil #6, however projections indicate it will become increasingly more expensive. In addition, boilers burning oil create more pollution and need more maintenance and staff for operation than boilers burning other fuel sources. As such, oil #2/#4 is not the optimal fuel choice for SVMC’s replacement boilers.

Propane is a reasonable fuel source and has many desirable features. However, it is heavier than air and as such, a leak or spill would result in a significant safety risk. Moreover, propane storage requires significantly more space than natural gas and would require a considerably large decompression station. As such, propane was not selected as a fuel source for the replacement boilers.

Biomass is a cost effective solution. However it creates significant emissions and requires a very large space for storage. The associated boilers require more staff for operation and routine

maintenance. Lastly biomass boilers require a back-up boiler system. Although a renewable resource, biomass is not the best option as a fuel source for SVMC's replacement boilers. Compressed Natural Gas has the best balance of cost, efficiency, operations, site requirements and environmental risks. For our application, natural gas is the most logical fuel source.

Consideration was given to the on-site storage of compressed natural gas, the design of the decompression station and the impact of natural gas deliveries on patients and the community. The natural gas decompression station configuration allows the docking and simultaneous storage of three box trucks containing compressed natural gas tanks. When the tanks in one box truck are empty the system automatically switches to the tanks in the next available truck docked at the decompression. We expect that SVMC will have 3 deliveries of natural gas per week, each replacing one empty box truck, thereby rotating the stock.

Deliveries would enter campus using major thoroughfares, as do all box trucks currently entering campus to delivery supplies or equipment. These routes have been proven safe and undisruptive to neighbors and the local community. SVMC typically receives 3-5 deliveries from similar box trucks each day. Receiving compressed natural gas by box truck will increase truck deliveries to SVMC by a mere 10% (from 28 trucks /week to 31 trucks / week).

Once on SVMC's campus, all trucks are routed around the perimeter, away from patient and staff parking and towards the loading dock at the rear of the hospital. The trucks delivering natural gas to the decompression station would follow the same perimeter route. This route has been proven safe and undisruptive to patients and employees.

CON Standard 1.12: New construction health care projects shall comply with the Guidelines for Design and Construction of Health Care Facilities as issued by the Facilities Guidelines Institute (FGI), 2014 edition.

This project complies with the standards of;

- Guidelines for Design and Construction of Health Care Facilities, and
- Facilities Guidelines Institute (FGI), 2014 edition

Attestation of this compliance across the entire project is provided in a memo from our design and construction partner (appendix 8)

CON Standard 3.4: Applicants subject to budget review shall demonstrate that a proposed project has been included in hospital budget submissions or explain why inclusion was not feasible.

The project to replace the SVMC's boilers was included in fiscal years 2015 and 2016 capital budgets. The total cost of the project reported in this application is consistent with that indicated in budget submissions.

CON Statutory Criteria 2- the cost of the project is reasonable, because:

(A) the applicant's financial condition will sustain any financial burden likely to result from completion of the project;

SVMC's boiler plant is critical infrastructure whose modernization is long overdue. The hospital's overall financial health over the past 5 years has improved and replacing the current inefficient boilers with a more efficient boiler plant will further contribute SVMC's financial health. SVMC plans to finance this capital project from operating revenue, thereby no debt will be incurred. The cost of this project was included in the fiscal year 2015 & 2016 capital budgets submitted to the GMCB.

The hospital, several years ago embarked on a five year plan to reduce costs to prepare SVMC for "Health Reform". This effort is continuing today. Management considers the replacement boiler plant as a key initiative to realize operational savings that can be redirected to care transformation. Estimates suggest operational savings of \$400,000 annually through reduced fuel and staff expenses counter balanced by increased depreciation.

(B) the project will not result in an undue increase in the costs of medical care. In making a finding under this subdivision, the commissioner shall consider and weigh relevant factors including;

(i) the financial implications of the project on hospitals and other clinical settings, including the impact on their services, expenditures, and charges;

Installation of the replacement boiler plant will not impact care services nor result in an undue increase in the costs of medical care. In this context "costs of medical care" is assumed to be SVMC's revenue rather than SVMC's costs or expenses to deliver the care.

With installation of the replacement boiler plant, SVMC will realize operational savings (reduction in expenditures) and thereby no increase in charges will occur beyond annual rate increases approved by the GMCB.

We do not anticipate the replacement boiler plant to impact other clinical settings within the SVMC system, nor throughout the Vermont healthcare system. The replacement boiler plant should not impact visit volumes, charges or revenue from SVMC's primary care practices, surgery practices, imaging and laboratory services, emergency room or inpatient services.

(ii) whether the impact on services, expenditures, and charges is outweighed by the benefit of the project to the public;

The replacement of SVMC's boiler plant reduces hospital expenditures, decreases fire risk to patients and decreases pollution. Thereby the project cost is outweighed by the benefit to the public.

(C) less expensive alternatives do not exist, would be unsatisfactory, or are not feasible or appropriate;

Less expensive alternatives to replacing the boilers are not feasible. SVMC requires steam to heat buildings, deliver hot water and sterilize instruments. Boilers are the most efficient and cost effective method for producing the necessary steam. Boilers burning compressed natural gas efficiently and reliably produce steam while minimizing costs and emissions. Extensive exploration of alternatives including biomass has indicated that the proposed project is the optimal approach to meet SVMC's steam production needs.

(3) there is an identifiable, existing, or reasonably anticipated need for the proposed project which is appropriate for the applicant to provide;

The need for the proposed project is critical and falls two dimensions;

- The current boilers are more than 35 years old and significantly beyond their useful life of 25 years. SVMC requires steam to heat buildings, delivery hot water and for sterilization. SVMC needs a reliable and efficient boiler plant to meet these needs.
- The current boilers inefficiently burn outdated and "dirty" #6 oil thereby creating harmful emissions. The delivery of healthcare by SVMC should not create collateral harm to Vermonters through the production of undue amounts of pollution. The proposed boilers deliver comparable steam while producing significantly less emissions.

There is an identifiable and existing need for SVMC to replace its aged boilers with modern, more efficient and cleaner burning boilers.

(4) the project will improve the quality of healthcare in the state or provide greater access to healthcare for Vermont's residents, or both;

This project will improve the quality of healthcare in Vermont and maintain access to critical healthcare for residents of Southern Vermont. Replacing SVMC's aged and outmoded boilers will reduce SVMC's operating expenses and allow more resources to be directed at care delivery to improve quality and enhance access. Moreover, the replacement boilers will produce significantly less emissions that harm health. The replacement boilers will reduce harm to the environment and Vermonters, and facilitate resource relocation to quality and access.

(5) the project will not have an undue adverse impact on any other existing services provided by the applicant;

The replacement boiler plant will not impact existing care services provided by SVMC including, but not limited to, emergency department visits, inpatient volumes or imaging and laboratory studies. All construction, installation, connection to current facilities and operation will be done with minimal disruption of campus traffic flow, patient access and the patient experience.

Similarly, decommissioning and removal of the current boilers and underground oil tanks will create minimal patient inconvenience and not disrupt care delivery. The final connection of the replacement boilers to the current steam distribution system will be done with minimal interruption of steam flow. Lastly, there will be impact of neighborhood and campus traffic by compressed natural gas delivery by box trucks. As such, the project will not have an undue adverse impact on existing service provided by SVMC or the surrounding community.

(6) the project will serve the public good;

The replacement of SVMC's boiler plant reduces hospital expenditures, decreases fire risk to patients and decreases pollution. Thereby the project will serve the public good.