



Vernon Advent Christian Home

Q004 Responses to GMCB

RE: Docket No. GMCB-001-22con, Replacement of Vernon
Green Skilled Nursing

August 7, 2023

ADMINISTRATIVE DOCUMENTS


**STATE OF VERMONT
GREEN MOUNTAIN CARE BOARD**

Verification Under Oath to file with Certificate of Need Application, correspondence and additional information subsequent to filing an Application.

1. My name is M. Bradford Ellis. I am the Executive Director of Vernon Advent Christian Home, Inc. I have reviewed the **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility.**
2. Based on my personal knowledge and after diligent inquiry, I attest that the information contained in **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility** is true, accurate and complete, does not contain any untrue statement of a material fact, and does not omit to state a material fact.
3. My personal knowledge of the truth, accuracy and completeness of the information contained in the **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility** is based upon either my actual knowledge of the subject information or upon information reasonably believed by me to be true and reliable and provided to me by the individuals identified below in paragraph 4. Each of these individuals has also certified that the information they have provided is true, accurate and complete, does not contain any untrue statement of a material fact and does not omit to state a material fact.
4. The following individuals have provided information or documents to me in connection with the **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility** and each individual has certified, based either upon his or her actual knowledge of the subject information or, where specifically identified in such certification, based on information reasonably believed by the individual to be reliable, that the information or documents provided are true, accurate and complete, do not contain any untrue statement of a material fact, and do not omit to state a material fact:
 - (a) M. Bradford Ellis, Executive Director, Vernon Advent Christian Home, Inc.
Vernon, VT - Q004 responses and assisted with Financials
 - (b) Sabrina Krafchuk, Assistant Administrator, Vernon Advent Christian Home, Inc.,
Vernon, VT - Q004 responses


- (c) Joseph McCarron, Proprietor, Capital Care Associates, Manchester NH – Q004 responses and Financial Tables
- (d) James Vekasy, Architect, SWBR Architects, Rochester NY – Q004 responses
- (e) Chris Yandow, Director of Preconstruction, Engleberth Construction, Colchester, VT – Project construction management and cost estimation
- (f) Lisa Trundy-Whitten, Certified Public Accountant, Berry Dunn, Portland, ME – Financial Feasibility Consultants
- (g) Carol DuMond Stryker, Green House Project Project Coach, Green House Project, Linthicum, MD – Q004 responses
- (h) Charlie Hopkins, Senior Engineering Consultant, Efficiency Vermont, Winooski, VT – Q004 response

5. In the event that the information contained in the **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility** becomes untrue, inaccurate or incomplete in any material respect, I acknowledge my obligation to notify the Greer Mountain Care Board and to supplement the **Q004 Responses to GMCB questions asked on June 22, 2023 RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Facility** as soon as I know, or reasonably should know, that the information or document has become untrue, inaccurate or incomplete in any material respect.



M. Bradford Ellis
Executive Director
Vernon Advent Christian Home, Inc.

On 8/7/2023, M. Bradford Ellis appeared before me and swore to the truth, accuracy and completeness of the foregoing.



Notary public
My commission expires
[seal]





VERNON HOMES

A COMMUNITY OF CARING. SEASONED WITH GRACE.



Years of Caring:
Our Legacy of Grace Continues...

DELIVERED ELECTRONICALLY

August 7, 2023

Donna Jerry
Senior Health Policy Analyst
Green Mountain Care Board
144 State Street
Montpelier, VT 05633-3601

RE: Docket No. GMCB-001-22con, Replacement of Vernon Green Skilled Nursing Home
Submission of Question Responses

Dear Donna,

Please see the accompanying responses to your review questions dated June 22, 2023.

Also, for your information, we are actively engaged with the Division of Rate Setting and will keep you apprised of this process as well as any developments attendant to the rate determinations for the Project.

We trust this is adequately responsive to your needs. Thank you for your continuing support and diligence in your review. We remain immediately available to you as continuing needs or questions arise.

Sincerely,

M. Bradford Ellis
Executive Director

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Q004 RESPONSES

1. Provide a detailed breakdown of the demolition cost of \$245,791 associated with the demolition of the existing nursing home building recorded in Table 1.

The existing Vernon Green nursing home will be fully demolished. The budget provision for the demolition costs was developed based upon a total of 35,113 square feet at a cost estimate of \$7.00 PSF. This cost assumption was provided by Engelberth Construction based upon their preliminary review and assessment of the existing building conditions. Hazardous materials in the existing building were limited to asbestos where the Applicant has already commissioned and completed the asbestos removal. In connection with final bidding of the Project, more definitive scope and pricing of the demolition costs will be developed. The Applicant believes that the demolition cost estimate is reasonable and the reserves for Project contingencies are adequate to safeguard against any unforeseen circumstances and added costs.

2. The assumptions represent that with the project, the private pay rate structure will be 5% above the projected Medicaid rate. Identify what percent the current private pay rate is above the current Medicaid rate.

The current private rates structures are approximately twenty-five percent (25%) above the Medicaid rate where the blended private rate currently approaches \$400 per day while the Medicaid rate is in the range of \$300 per day. These rate structures will be materially increased as a result of the new Project, reflective of the capital cost associated with the new replacement building. The Applicant intends to maintain a minimum of a five percent (5%) margin of the private rate exceeding the approved Medicaid rate. The Applicant is confident that the projected private rate structures will remain aligned with the competitive market given the desirability of the Project and its attendant Green House program offerings.

3. Occupational (OT), Speech (ST) and Physical Therapy (PT) staff FTEs are not shown as a line item in Table 7 A, B and C (Staffing Report). Identify the line item where OT, ST and PT FTEs are included, the FTE level for each, and whether the costs associated with these staff are included in all affected financial tables. If not included revise and resubmit all the financial tables.

All operating expenses associated with therapy services are included in the Resident Services expense classification for the forecast period. Therapy services are all assumed to be contract services as is the case for current operations. As such, no therapy FTEs are included in the Staffing Report and are deemed by the Applicant as not applicable to the Staffing Report. The therapy services expense projections are based on actual cost per day in 2022 (\$154.88), inflated at 3% annually, and increased based on the forecasted census days.

4. It is represented that with the implementation of Universal Worker positions with the Green House model, staffing will be reduced from 71.55 to 63. Explain the impact this will have on your continued use of Travelers. In a table format, for 2023, 2024, 2025, 2026, 2027 and 2028, identify the total number of staff, the number/percent of permanent staff and the number/percent of Travelers.

The Project is anticipated to heighten appeal associated with employee recruiting and retention allowing for a projected lessening of agency utilization. Given the prevailing severity of challenges in the labor market, and particularly for nursing staff, future labor market conditions are indeterminate. The Applicant has chosen to be conservative in its financial projections associated with nursing agency. Specifically, during the forecast period leading to the new Project opening, agency expense projections are based upon

current actual utilization and inflated at 3%. Commencing in 2026, it is assumed that agency utilization will be reduced by ten percent (10%) per year.

The following provides the table requested associated with Travelers utilization:

Vernon Advent Christian Home, Inc. Profile of Travelers / Nursing Agency Utilization						
Staffing Source	2023	2024	2025	2026	2027	2028
Vernon Green Employees (FTEs)	62.35	61.89	61.31	53.51	54.20	54.85
Percent	87%	87%	86%	85%	86%	87%
Travelers / Nursing Agency (FTEs)	9.20	9.66	10.24	9.49	8.80	8.15
Percent	13%	13%	14%	15%	14%	13%
Total Staffing (FTEs)	71.55	71.55	71.55	63.00	63.00	63.00
Percent	100%	100%	100%	100%	100%	100%
Travelers / Nursing Agency Expense	826,834	867,834	919,904	852,751	790,500	732,794

5. Provide staffing information for at least two more Green House Model homes comparable to the facility Vernon Green is proposing using the same format as in your response to Q001, question 13.

In addition to the two Green House Model home comparatives submitted with the original CON Application, the Applicant has undertaken outreach to the Green House Project resource team for added comparatives. The following provides staffing data for the two additional comparatives, where Comparative #2 represents a portfolio of multiple (7) Green House Homes.

Vernon Advent Christian Home, Inc. GHP Staffing Comparatives 12-Bed Green House Model			
	Vernon GHP	Comp. #1	Comp. #2
Universal Workers (FTEs)			
7:00am - 3:00pm	3	2	3
3:00pm - 11:00pm	2	2	2
11:00pm - 7:00am	1	2	1
Licensed Nursing (FTEs)			
7:00am - 7:00pm	0.7	0.5	0.50
7:00pm - 7:00am	0.7	0.5	0.33

Notes:

Comparative #1 represents the Clark Lindsey Green House Project located in Urban, IL. The Project represents two Green House Homes of 12-Beds, one providing Assisted Living & Memory Care and one providing Skilled Nursing Services with both situated in a campus community.

Comparative #2 represents a portfolio of seven (7) Green House Projects operated by Southern Administration Services, LLC based in Little Rock, Arkansas (Rison; Bentonville (2); Paragould; Little Rock; Mena; and Walnut Ridge). The portfolio represents multiple Green House Homes of 12-Beds providing Skilled Nursing Services.

The Vernon Green House Project (“GHP”) represents a consistent Universal Worker staffing complement with the two comparatives totaling six (6) FTEs for each Green House Home. The shift differential represented by Comparative #1 results from the Memory Care program where night shift coverage typically presents a more intensive need for these residents.

The Vernon GHP reflects a marginally higher Licensed Nursing staffing level (.7 vs .5) contrasted with the comparatives. This differential results from the influence of the short stay rehab Green House home of Vernon where skilled nursing services are more intensive.

6. By shift, identify each of the services provided, title of the staff providing each service, and license and/or certification required.

The following provides a Staffing Profile of the five (5) Green House Homes represented by the Project.

Vernon Advent Christian Home, Inc. Green House Project Staffing Profile			
	Licensing Certification	FTEs	Hours Per Week
Administration			
Chief Financial Officer		0.75	30.00
Licensed Administrator	LNHA	1.00	40.00
Bookkeeper		1.00	40.00
Receptionist		1.20	48.00
Human Resources Dir.		0.75	30.00
Admissions/Social Work Staff		0.50	20.00
Activity Coordinator		0.40	16.00
Total Administration		5.60	224.00
Building & Grounds			
Maintenance		0.75	30.00
Grounds		0.25	10.00
Total Building Grounds		1.00	40.00
Dietary		-	-
Housekeeping		-	-
Laundry		-	-
Nursing Administration			
Director of Nursing	RN	1.00	40.00
ADON	RN	1.00	40.00
MDS Coordinator	RN	1.00	40.00
Total Nursing Administration		3.00	120.00
Nursing & Resident Services			
Direct Care		38.80	1,552.00
Indirect Care		14.62	584.80
Total Nursing & Resident Services		53.42	2,136.80
Total Staffing			
		63.02	2,520.80

The five (5) Green House Homes are represented by four (4) Long Term Care homes and one (1) Short Term Care home dedicated to short-stay and rehabilitative services. The Nursing & Resident Services classification for staffing represents the Universal Workers who are Licensed Practical Aides providing both Direct & Indirect Care. The following schedule profiles the staffing associated with Nursing & Resident Services.

Vernon Advent Christian Home, Inc. Nursing & Resident Services Staffing Profile					
	FTEs 1st	FTEs 2nd	FTEs 3rd	Total FTEs	Hours Per Week
Long Term Care Green House Homes (4)					
<u>Direct Care - 4 Long Term Care (LTC) Homes</u>					
Registered Nurse	2.95	2.95	-	5.90	236.00
Licensed Practical Nurse	-	-	2.30	2.30	92.00
Licensed Nurse Aide	10.70	7.40	4.00	22.10	884.00
Total LTC Direct Care	13.65	10.35	6.30	30.30	1,212.00
<u>Indirect Care - 4 Long Term Care (LTC) Homes</u>					
Dietary Services (LNA)	3.00	1.88	0.52	5.51	220.40
Housekeeping Services (LNA)	1.20	1.00	0.80	3.00	120.00
Laundry Services (LNA)	0.50	0.80	0.50	1.80	72.00
Resident Services/Activities (LNA)	0.60	0.20	-	0.80	32.00
Total LTC Indirect Care	5.30	3.88	1.82	11.11	444.40
Total Long Term Care Green House Homes (4)	18.95	14.23	8.12	41.4	1,656.40
Short Term Care Green House Home (1)					
<u>Direct Care - 1 Short Term Rehab Home</u>					
Registered Nurse	1.00	1.00	1.00	3.00	120.00
Licensed Practical Nurse	-	-	-	-	-
Licensed Nurse Aide	2.70	1.80	1.00	5.50	220.00
Total STC Direct Care	3.70	2.80	2.00	8.50	340.00
<u>Indirect Care - 1 Short Term Rehab Home</u>					
Dietary Services (LNA)	1.28	0.47	0.13	1.91	76.40
Housekeeping Services (LNA)	0.55	0.25	0.20	1.00	40.00
Laundry Services (LNA)	0.10	0.18	0.12	0.40	16.00
Resident Services/Activities (LNA)	0.15	0.05	-	0.20	8.00
Total STC Indirect Care	2.08	0.95	0.45	3.51	140.40
Total Short Term Care Green House Home (1)	5.78	3.75	2.45	12.01	480.40
Total Green House Homes - Nursing & Resident Services (5)	24.73	17.98	10.57	53.42	2,136.80

Total Nursing & Resident Service staffing hours (2,136.80) represent eighty five percent (85%) of the total staffing hours (2,520.80). The Direct Care staffing constitutes nursing services and represents nursing hours per day of 5.05 and 5.67 for the Long-Term Care homes and Short-Term Care homes, respectively.

7. In response to Q001, question 11 it is stated that, “Green House Project homes have seen a reduction in the use of antipsychotic medication usage.” Please explain how this has been accomplished.

Contrasted with traditional nursing homes, Green House Project (“GHP”) homes report a lower percentage of elder residents using antipsychotic medications. More favorable data was reported during the COVID 19 Pandemic period as well as more currently. Following are among the Green House operating strategies used to support organizations in the reduction of antipsychotic medication utilization:

- The Green House Core Curriculum includes extensive training to support elders living with dementia.
- GHP offers tele-mentoring support for organizations to support elders living with dementia. Organizations participate in a monthly virtual call. Dementia experts provide training followed by case study presentations.
- The Green House Role relating to the nursing curriculum includes a process on how to identify triggers that create distress for elders and develop a well-being plan to alleviate them.
- GHP provides webinars on this topic. The webinars are recorded and are readily accessible to Green House organizations.
- GHP provides ongoing specialized sessions for how to support elders with dementia, routinely offered and updated for best practices.

8. In response to Q001, question 11, it is stated that the Green House model will provide a strategic approach to improving all areas of resident care for improved quality. Identify and explain each area of patient care that the Green House Model will improve and how those improvements will be accomplished especially for patients with dementia and psychiatric diagnoses.

In response to Q001, question 11, the Applicant states it is the “implementation” (*emphasis added*) of the Green House Project model that will provide a strategic approach to improving all areas of resident care for improved quality. To this end, the Applicant has been heavily invested in training its dedicated care team in the Green House Project model of operations. The success of any long-term care organization in providing exceptional care and achieving quality outcomes is a multifaceted endeavor dependent upon organizational leadership and effective management. Traditional nursing homes can provide exceptional quality care, yet several factors contribute to quality outcomes: ownership structure, facility administration, nursing leadership, market attributes, human resource management, financial management, environmental conditions, resident physical and cognitive status, etc. The Applicant seeks to replace an obsolete and institutional property where financial viability is being threatened and the resident environment is deficient. The implementation of the Green House model of operations supported by over 20 years of demonstrated history, is a compelling and sustaining solution to the Applicant’s circumstances.

Providing the highest level of quality care for residents [patients] is imperative to success in long-term care. The Applicant has followed research outcomes of the Green House Project model compared with traditional nursing homes evidencing Green House (“GH”) homes consistently outperform in achieving quality outcomes. This is supported by a study published in 2016 entitled “New Evidence on the Green House Model of Nursing Home Care: Synthesis of Findings and Implication for Policy, Practice and

Research”¹. After evaluating the impact of the Green House model on person-centered nursing home quality care measures, the study revealed that adoption of the Green House Project model lowered hospital readmissions among residents of GH homes. It was also found that the MDS [Minimum Data Set] measures of poor-quality stemming from bedfast residents, catheter use, and pressure ulcers (Afendulis et al., pp. 481, Table 1) were notably diminished in the GH homes operating environment.

The study concludes in support of GH homes stating the model aims to “transform the culture of long-term care”. Moreover, the study amplifies that the Green House model is a preferable model of care and one “worthy of promotion” as it embodies “effective components of care and promote(s) person-centered resident quality of life” (Afendulis et al., pp. 491). While there are other models of nursing home care, researchers of this study encourage policy makers, providers, and other researchers to continue efforts in facilitating the adoption, implementation, and sustainability of evidence-based models of culture change following the example of GH homes.

The Applicant has a long history of providing dementia care and caring for individuals with a psychiatric diagnosis. The Applicant’s success in these areas is achieved by striving to adhere to regulatory requirements, innovation, and training for its care team. The Applicant will receive additional training through the Best Life Memory Care Approach series through the Green House Project (“GHP”) focused on the “accomplishments of people living with dementia (as opposed to their losses) thus enabling them to thrive beyond their diagnoses.”²

Green House Project’s Best Life is a unique and holistic approach to dementia care that helps people and organizations support those living with dementia to live rich and rewarding lives. Differentiating Best Life from other dementia care approaches is a strong foundation in GHP’s core values and the attendant four (4) principles, as follows:

1. Power of Normal: Best Life strives to create a culture of normalcy to allow for individuals to live in the least restrictive environment possible and experience culturally typical activities.
2. Focus on Retained Abilities: Best Life focuses on the value of providing people living with dementia (PLWD) the ability to experience real relationships with pets, nature, and people of all ages.
3. Dignity of Risk: Best Life illuminates the reality that there is dignity in enabling PLWD the right to take risks.
4. Advocacy: Best Life advocates for PLWD to have expanded experiences and choices, as well as the right for rehabilitation. As a standalone educational option for progressive minded memory care, assisted living, and nursing home providers, Best Life brings the best of GHP’s [Green House Project] knowledge and expertise into communities through training, coaching, and ongoing education.

¹ Christopher C. Afendulis et al., Green House Adoption and Nursing Home Quality, 51 HEALTH SERVICES RESEARCH: SPECIAL ISSUE – GREEN HOUSE MODEL OF NURSING HOME CARE 455, 467 (Feb. 2016), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5338208/pdf/HESR-51-454.pdf> DOI: 10.1111/1475-6773.12436

² Green House Project: An Approach that Focuses on Accomplishments Rather than Losses (2017), available at <https://thegreenhouseproject.org/solutions/best-life-memory-care/>

Quality Care outcomes result from the implementation of sustained and proven Best Practices responsive to the ever-changing and individualized resident's needs and circumstances. Resident needs and circumstances are highly variable where every potential care solution requires modification and customization to achieve the highest possible outcome. The Applicant firmly believes that the Green House Project model and its key tenets of Real Home, Meaningful Life and Empowered Staff ideally exemplifies and promotes these Best Practices.

9. Explain in more detail the operating efficiencies that will be gained and projected associated savings in years 2026, 2027 and 2028 and confirm whether these projected savings are included or excluded in the financial tables submitted.

Two elements of operating efficiencies result from the Universal Worker model. First, the traditional departmental cost structure is not applicable and thus conventional department heads, with the exception of nursing and dietary services, are eliminated. Secondly, the Universal Worker model yields efficiency of the interdisciplinary job descriptions where employee activities are more seamless and resident centric.

The operating efficiencies to be gained are largely labor related as evidenced by the projected reduction in employees. In addition, the appeal of the new Project environment coupled with the progressive nature of the Green House operating model are anticipated to yield more favorable experience in attracting and retaining quality staff. With regard to Property Management expenses, the new building will represent efficiencies associated with improved building systems (i.e., HVAC; Wastewater Treatment) as well as a material diminishment of Repairs & Maintenance costs attendant to the new Project contrasted with existing property conditions. All projected savings are included in the submitted financial tables and conform with the detailed financial projections.

10. Based on your revised assumptions and financial tables, confirm the year that the new facility is projected to achieve a positive profit margin.

As evidenced by the financial projections, the new facility achieves a positive profit margin in 2026, the first projected full year of new operations. For 2026, the financial projections (Table 3C With Project) report an operating margin of \$2,554,989 (22%) and Net Income of \$53,202 (after Depreciation & Interest).

11. Q001, question 6: Specify when the Financial Feasibility Study will be available for our review.

The financial projections submitted by the Applicant represent those that will be included in the Financial Feasibility Study. The Financial Feasibility Study will not be released pending issuance of the CON Approval and confirmation of Medicaid rate support for the Project. In turn, the CON Approval and the final issued Financial Feasibility Study will be required to undertake the final capital underwriting and secure the definitive commitments associated with the Applicant's Capital Plan.

12. Q001, question 7: Vernon Green states that “a more current market study and/or 3rd party and updated proforma appraisal of project may be required.” Explain whether a more current study is being developed and when it will be available for our review.

It is indeterminate whether the USDA permanent capital underwriting will require a third-party market study given the Project represents existing beds with favorable occupancy history. Indications are that an independent market demand study will not be required. A third-party Project appraisal will be required. The Project appraisal will be commissioned upon receipt of the CON Approval and issuance of the Financial Feasibility Study. A more current market study is not available for review.

13. Q001, question 8: Provide a copy of the letter provided by Efficiency Vermont in response to your request.

Pursuant to CON Standard 1.10 and in connection with the above referenced Project, we hereby confirm that Efficiency Vermont has been engaged by Vernon Advent Christian Home, Inc, (the “Applicant” or “Vernon Homes”). Please see the accompanying communications we have received from Efficiency Vermont evidencing our active engagement with them.

Efficiency Vermont will continue to work closely with Vernon Homes, SWBR Architects, and Engelberth Construction in the development and new construction of the Project. As a member of the Project Team, Efficiency Vermont has assigned a designated energy consultant who will provide support services as part of the design and development process, extending to the following scope of services:

- Provide Technical assistance & recommendations on energy efficiency opportunities.
- Develop Cost/benefit analyses of such options and alternatives.
- Collaborate with Vernon Homes, the Project Architect, and the Construction Manager
- Provide “Objective Expertise” for optimal systems and best practices.
- Introduce financial incentives and related assistance as required.

14. Q001, question 10: Vernon Green states that it intends to fundraise \$300,000 and notes that grants from foundations will be another avenue to pursue. Identify the number of Foundations you have identified and the planned use of such funds, if successful in receiving such grants.

The Applicant has been formulating plans for its heightened fundraising efforts which are intended to promote the progressive nature and appealing attributes of the Project. These concentrated efforts remain pending assurances that the Project will materialize. The Applicant’s customary fundraising activities continue though have not historically yielded meaningful outcomes. The Applicant intends to actively leverage the planned development of the Project once it is assured to be delivered. The intended use of fundraising proceeds will generally be to subsidize continuing operations and to accumulate operating and capital reserves to be dedicated exclusively to the Applicant.

EXHIBIT A

Efficiency Vermont Letter



www.efficiencyvermont.com
888-921-5990 | 802-860-4095

M. Bradford Ellis
Executive Director, Vernon Homes
61 Greenway Drive, Vernon, VT 05354

Efficiency Vermont, Letter of Engagement

Dear Mr. Ellis,

My name is Charlie Hopkins, engineering consultant w/ Efficiency Vermont. Chris Greenwood provided me with the 95% CD set for the Vernon Greenhouse Project. Please take this letter as confirmation that the project has successfully engaged with Efficiency Vermont.

I have completed a first-pass review of the drawing set and have provided comments and guidance, below. As the project is significant I would encourage you to review/share the below comments with the design team and please keep us engaged as the project progresses. I would be more than happy to have a meeting/call to discuss at your convenience.

From my understanding there are two "parts" to the project:

- 1) Ground up new construction of 52,000 nursing home facility w/ offices – the "Green Building"
- 2) Renovation and small addition to existing building "Vernon Hall"

Green Building

EVT can support measures included in this project. For commercial new construction, EVT has developed a "four pillars" approach, which are the four main efficiency measures that design teams can focus on to get the most bang-for-buck on the efficiency side. Refer to the attached PDF. In summary, these measures are: HVAC efficiency, air leakage improvement from code, balanced ventilation w/ energy recovery and lighting. Note that our lighting incentives will be sunset entirely by December 31, 2023. If lighting is purchased prior to this date we can likely provide incentives for eligible fixtures. I would refer to the attached PDF, below are a few high-level notes:

- HVAC : main measure is the VRF heat pump system. This type of systems is an energy transformation project (I.e, using electrified heating instead of fossil fuel). GMP is actively looking for projects like this to incentivize and I would encourage the customer to reach out to GMP. We can help introduce if needed. Efficiency VT can support the VRF units based on their efficiency rating vs. code. For instance, a single VRF 20 ton unit would receive an EVT rebate of \$1500-2500. Again, GMP would be able to provide more incentive dollars for this as there is a significant amount of "theoretical" fossil fuel being offset by the electrified heating of the VRFs. GMP and EVT incentives can be combined.
 - o Heat pump water heater : same as above

20 Winooski Falls Way, 5th Floor • Winooski, VT 05404

- DOAS unit w/ heat pump: I need to evaluate this more, I am not familiar w/ the unit.
- Air leakage: is the customer interested in hiring a building envelope commissioning agent? This is the best way to ensure the project envelope is properly sealed. We can help support this work w/ incentives. See attached.

Vernon Hall

As this is a renovation, documenting existing conditions is the crux. I see improvements to the shell and lighting. I do not see much changing with HVAC.

- Insulation: I cannot find details of existing insulation levels, we would need this to further evaluate for incentives. This would be wall and roof assembly descriptions and estimated existing R values.
- Air leakage: similar to the above, I would recommend a envelope commissioning agent be brought in, at the very least to conduct a basic blower door test to establish an air leakage metric. This sets a baseline and can help the customer "see" how good/bad the existing envelope is and where they can best focus efforts to seal the envelope. Again, we can support this with incentives. A "post construction" blower door would need to be completed as well.
- Lighting : select Design Lights Consortium (DLC) rated fixtures. Request confirmation from the electrical sub if rebates are being applied at "point of sale"

Overall, there are measures Efficiency VT can and will support assuming our criteria is met. I would be happy to have a discussion with the owner and/or design team if that would be helpful to walk through this.

Thank you!

Charlie



Charlie Hopkins

Senior Engineering Consultant

20 Winooski Falls Way, 5th Floor
Winooski, VT 05404