

City of Barre, VT
Regular Meeting of the
Barre City Planning Commission – Special Meeting
Thursday, October 10, 2024 AT 5:30 PM

Participation: Fully Remote for this meeting
Join Zoom Meeting

<https://us06web.zoom.us/j/83132944524?pwd=OY7bpA4Xp6W6PoMaXOCjgyinPLafJx.1>

Meeting ID: 831 3294 4524

Passcode: 381609

AGENDA

Page No.	Agenda Item #	Description
	1	Call to Order
	2	Adjustments to the Agenda
	3	Public comment (for something not on the agenda)
2	4	Approval of Minutes: for the September 12, 2024 meeting
	5	Old Business
	6	New Business
4		Encore Renewable Energy: present/discuss the proposed 107 Allen Street Battery Energy Storage Project
25		Municipal Plan: Review Section 2 Housing
	7	Confirmation of next meeting date of November 14, 2024
	8	Staff updates – as needed
	9	Roundtable
	10	Adjourn

Barre City Planning Commission

September 12, 2024 Meeting Minutes

Present: David Sichel (Chair), Becky Wigg (Vice Chair), Joe Reil (Secretary), Rosemary Averill, Caitlin Corkins, Wendy Ducey, Raylene Meunier

Absent: None

Staff: Janet Shatney (Director of Planning, Permitting & Assessing)

Visitors: Reuben MacMartin and Niki Sabado from the Central Vermont Regional Planning Commission (CVRPC)

1. Call to Order.

5:30pm.

2. Adjustments to the Agenda.

None.

3. Approval of Minutes.

a. July 25, 2024.

Wigg moved to approve, Meunier seconded, unanimous in favor.

4. Public comment (for something not on the agenda).

None.

5. Old Business.

a. Any review or comments from the 2 public hearings for Zoning and Flood Hazard Rules work with the City Council

Sichel noted that City Council approved interim zoning changes and they will be in effect soon with a reminder that these are temporary and will need to be reviewed again in the future.

First and second reading of Flood Hazard ordinance were approved with a minor clerical error.

6. New Business.

a. TOD Raise Grant: (Transit-oriented development, Rebuilding American Infrastructure with Sustainability and Equity). New downtown planning area development plan introduction

Shatney noted that City Manager applied for grant and we now need to take action on it. Introduced Reuben MacMartin and Niki Sabado from the CVRPC and indicated they'd met previously for initial discussions and to begin considering what area to look at.

MacMartin introduced himself, noting that the Chittenden County Regional Planning Commission (CCRPC) is the main grant requester and CVRPC is included as a sub-recipient, and that Niki Sabado will be the lead for the Barre City portion of this project.

Sabado introduced and discussed various aspects of the grant, which is intended to provide opportunity for the Department of Transportation to invest in local transit-related projects, for various local benefits. Overall project will have impacts across the Norwest region of Vermont. The final design document is due in March 2025 with several public meetings to occur in the meantime.

There was some questions and discussion about the types of changes that this might result in. MacMartin suggested some possibilities, that the final plan/deliverables would include guidelines on things like infill and upfill, and ways that existing spaces may be used (e.g., replacing unused parking). There were further questions and discussion about the proposed location for the study, including what areas may be appropriate to exclude or include and how this may interact with existing overlay districts and zoning regulations, and how this effort may intersect with the North Main to Summer Street Plan that VHB is working on (and how this plan seems to have stalled).

A map of the city was reviewed with suggestions for how to expand the proposed location with further discussion to come, with consensus that the BOR area (but not surrounding streets) should be included.

Next steps are to review the scope and confirm that and the boundary lines, as well as confirming the list of local stakeholders to involve. Sabado will work with Shatney and further discussion will occur in the next Planning Commission meeting. Shatney will reach out to VHB to confirm their status and intentions on the North Main to Summer Street plan and Sabado will review to see if there is interest in CVRPC using the money from that grant for this project.

7. Confirm Date of Next Meeting.

- a. October 10, 2024.

8. Staff Updates.

Shatney discussed specific Development Review Board challenges in needing to approve projects based on regulations and not personal feelings and briefly discussed guidelines on historic structures. Other updates included in agenda packet.

9. Round Table.

None.

10. Adjourn.

6:49 pm, **Reil moved to adjourn, Corkins seconded, unanimous in favor.**

**Encore Renewable Energy
Allen Street Battery Energy Storage System (BESS) Project
Barre City Planning Commission
October 10, 2024**

Proposed Project: a 5 Megawatt/4 Hour (i.e. 20 MWH AC) battery energy storage system (BESS) constructed next to Encore's 2.2 MW AC solar project ("I Love Cows, LLC") located at 107 Allen Street. Total footprint: 0.5 acres. Estimated Project Lifetime: 25 years.

System Benefits: The BESS will "soak up" excess solar generation during midday hours and discharge energy into Green Mountain Power's (GMP) grid at peak hours of electricity demand ("peak shaving"). This will reduce GMP's need to purchase imported higher-cost gas-powered electricity from peaker plants in Massachusetts and Connecticut, which in turn will reduce upward pressure on electricity rates for GMP's customers, including Barre City. The BESS will also provide back-up electricity to the grid in case of power outages, improving grid reliability. Thirdly, the BESS will help GMP regulate electrical grid voltage and frequency, improving grid stability.

Tax Benefits:

- Based on Vermont Public Utility Commission regulations, the project will pay \$5,000/year in property taxes to the City of Barre (rate of \$0.25/KWH, so 20,000 KWH * \$0.25 = \$5,000);
- Based on Vermont Public Utility Commission regulations, the project will pay \$10,000/year in Uniform Capacity Tax (into the State Education Fund) to the State of Vermont (rate of \$0.50/KWH, so 20,000 KWH * \$0.50 = \$10,000).

Note: this is in addition to the \$29,000/year in property taxes to Barre City and \$10,000/year in UCT tax to State of Vermont from the "I Love Cows" 2.2 MW AC solar project.

Encore "Good Neighbor" Policy: Encore would like to make a \$20,000 contribution to Barre as a gesture of its intention to be a good neighbor to the city with this BESS project. This could go to the school system, the fire department or some other entity yet to be determined.

Orderly Development: Overall, the Central Vermont Regional and Barre City plans loosely identify areas that have specific limitations, planned conservation measures, or otherwise may be unsuitable for development. Based on our review, no specific policies or land conservation measures were found in the Regional Plan or Town Plan that would be affected by the Project. Therefore, the siting of the Project as proposed does not conflict with the development or conservation goals and policies within these Plans: the Project is consistent with the character and land use at the Project site and surrounding area without impacting areas prioritized for conservation or protection. Indeed, the Barre City Town Plan supports responsible development of renewable energy generation throughout the City, and the project is located on the Central Vermont RPC Solar Resources map as having "solar potential". Accordingly, in Encore's judgement, the Allen Street Storage Project **will not** unduly interfere with the orderly development of the region.

Fire Risk: Encore met with the Deputy Chief of the Barre Fire Department (BFD) and provided BESS equipment technical specifications. Encore will conduct field-based orientation and training (along with the battery manufacturer) in system fire prevention and response for BFD staff.

Timeline: Encore intends to submit its application for a Certificate of Public Good (CPG) to the VT Public Utility Commission in January 2025, with the hope of obtaining the CPG by June 2025, and starting construction by the end of 2025 or early 2026. Commercial Operation is scheduled for July 2026.



August 27, 2024

City of Barre
City of Barre Planning Commission
Central Vermont Regional Planning Commission
ePUC Statutory Entities
Adjoining Landowners
Host Landowner

Re: Section 248(j) Permitting Process; Allen Street Storage, LLC's 45-Day Notice to Persons and Entities Entitled to Notice Pursuant to Public Utility Commission Rule 5.402(A), for a Proposed 5 MW Battery Energy Storage System (BESS) to be located off Allen Street in Barre, VT.

Dear Persons and Entities Entitled to Notice:

Allen Street Storage, LLC ("Petitioner"), is pleased to provide you with this 45-Day notice in advance of filing a petition for a Certificate of Public Good with the Vermont Public Utility Commission ("Commission" or "PUC"), for a 5 MW battery energy storage system (BESS), to be known as the "Allen Street Storage Project" ("Project"). The Petitioner proposes to construct the Project on property located off of Allen Street in Barre, Vermont ("Site"). This notice is provided in accordance with 30 V.S.A. § 248(j), Vermont Statutes Annotated ("Section 248"), and Public Utility Commission Rule 5.402.

Pursuant to Commission Rule 5.402, the following letter includes information sufficient to understand the overall Project including the facility's location, a description of the proposed Project, a site plan, a description of how the Petitioner plans to transport equipment and materials to the site, and a preliminary identification and analysis of potential aesthetic and environmental impacts. This letter also describes the rights of the noticed parties to comment on the Project plans and participate in the Section 248 review process.

This letter contains descriptions of the following:

- I. 30 V.S.A. § 248 Process Information;
- II. Project Description and Location;
- III. Site Selection
- IV. Construction and Transportation
- V. Preliminary Assessment of Environmental and Aesthetic Impacts;
- VI. Project Benefits; and
- VII. Conclusion and Expected Filing Date.

Included as attachments to this letter are:

- I. Location Map / Preliminary Site Plan
- II. Preliminary Natural Resources Map
- III. Aesthetics Mitigation Plan for “I Love Cows” solar array
- IV. Representative Equipment Specifications

I. 30 V.S.A. Section 248 Petition and Notice

The State permitting process for energy storage facilities, PUC Rule 5.402, requires the Petitioner to provide notice to certain entities and persons identified in that rule at least 45 days prior to a formal filing with the PUC. These include:

- The affected municipal legislative bodies;
- The affected municipal and regional planning commissions;
- All adjoining landowners;
- The host landowner;
- The Public Utility Commission.
- The Department of Public Service
- The Agency of Natural Resources
- The Natural Resources Board
- The Agency of Agriculture, Food and Markets; and
- Green Mountain Power (GMP), the interconnecting utility.

Each planning commission has the right under 30 VSA § 248(f)(1)(C) to submit recommendations to the Petitioner within 40 days of the petitioner’s submittal to the planning commissions. Each municipal and regional planning commission has the right under 30 VSA § 248(f)(1)(A) to convene a public hearing on the proposed petition.

The Petitioner’s application to the Commission must address any written comments provided to the Petitioner in response to the 45-day advance submission that are related to the Section 248(b) criteria and any oral comments related to those criteria made at a public hearing conducted pursuant to 30 VSA § 248(f)(1)(A).

Under 30 VSA § 248(f)(1)(D), each planning commission has the right to make recommendations to the Commission after a petition is filed. The Commission will give due consideration to any such recommendations. Recommendations made to the Commission pursuant to this right, or the lack of such recommendations, shall not preclude municipal and regional planning commissions and municipal legislative bodies for exercising their right to appear as parties pursuant to 30 VSA § 248(a)(4)(G)-(I).

Please send all recommendations during this 45-Day notice period to:

Vermont Public Utility Commission
c/o Clerk of the Commission
112 State Street
Montpelier, VT 05620-2701

AND

Encore Renewable Energy
Attn: Sam Carlson
50 Lakeside Avenue, Suite 110
Burlington, VT 05401
Tel: (802) 861-3023
sam@encorerenewableenergy.com

For additional information regarding this process, including your commission's right to participate in the Public Utility Commission proceeding, please refer to the "Public Participation and Intervention in Proceedings Before the Public Utility Commission" found on the Commission's website at: <https://puc.vermont.gov/document/public-participation-and-intervention-proceedings-public-utility-commission>.

Because the Petitioner plans to file the petition under Section 248(j), please see Commission's Section 248(j) procedures document, found on the Commission's website at <https://puc.vermont.gov/document/section-248j-procedures>.

II. Project Description and Location

The Petitioner is proposing a 5 MW battery energy storage system (BESS) project on property located at 107 Allen Street in Barre, Vermont (behind the Spaulding Education Alternatives School). The BESS will occupy roughly 1/2 acre of the greater 45-acre parcel. The electricity stored and discharged by this Project will flow to GMP's electric grid.

The Site location, equipment footprint, and approximate property boundaries are shown in the preliminary site plan attached as Exhibit 1. Allen St is approximately 500 feet to the east of the Project. In summary, the Project will consist of:

- Approximately 2 battery storage units, each approximately 16 feet by 60 feet, installed on approximately 0.32 acres of the Site:
 - Mounted on a concrete pad;
 - Approximately 10 feet high;
 - Connected to one (1) Power Conversion System
 - Connection to one (1) pad-mount transformer with secondary oil containment;
- A 7-8 ft high agricultural style perimeter fence;
- Temporary staging area (0.2 acres) for delivery and short-term storage of materials; and

- An approximate 500-ft access road to provide access to the Project site, which will be shared with the “I Love Cows” solar project.

III. Site Selection

This site was selected because of the site’s proximity to substation infrastructure, access to three phase transmission infrastructure, even topography, and limited environmental impacts. In addition, siting the BESS next to the “I Love Cows” solar array will allow the solar array to charge the BESS during the day when solar generation is at its maximum, which will enable the BESS to discharge electricity in the evening hours when electricity demand is often peaking. This will enable both projects to realize the electrical system benefits which can be achieved by pairing a renewable energy generation facility with a battery storage facility.

Once the Petitioner selected the Site, the Petitioner worked with its consultants to configure the Project in a way that would maximize the potential energy storage benefits and other electrical system benefits while minimizing environmental and aesthetic impacts. The Petitioner will continue working with all stakeholders prior to filing the CPG petition and thereafter to address any remaining issues germane to the permitting process.

IV. Construction & Transportation

The Petitioner proposes to deliver materials for the Project using trucks and state and local roads, which are accustomed to the type of traffic representative of the proposed daily delivery of materials. Deliveries will be made during business hours to a temporary construction staging area on the Site, located off the permitted access drive that will be improved as part of the I Love Cows Solar Project. Most transportation activity will occur during the construction phase, which would last between two and four months.

The Project is not expected to require oversize or overweight deliveries. Access to and from the Site will be restricted by perimeter fencing to secure the Site and prevent the public from entering the facility. All equipment associated with the Project will be installed in accordance with all applicable regulations and electrical codes.

V. Preliminary Impact Assessment

i. Aesthetics

In preparation for this 45-Day Notice, the Petitioner engaged T.J. Boyle Associates of Burlington, Vermont to perform a preliminary review of potential aesthetic impacts resulting from the Project. The Project is proposed within an existing agricultural field and would be setback approximately 500 feet from Allen Street to the east of the Project. Preliminary review and consultation with TJ Boyle indicate that the landscaping plan approved for the “I Love Cows” solar project (for which construction is due to begin in Q4 2024) will remain unchanged, and will also effectively mitigate any negative aesthetic impacts of the proposed BESS project from surrounding roadways and private properties. The landscaping plan for “I Love Cows” is shown on the attached site plan for Allen Street Storage project. In short, preliminary

findings by T.J. Boyle indicate that the Project will not result in undue impacts to the aesthetic and scenic and natural beauty of the area.

The Petitioner will continue to work with Barre, adjoining property owners, and T.J. Boyle Associates to address any additional potential aesthetic impacts. The Petitioner will file the complete T.J. Boyle aesthetic report, and final mitigation measures, where warranted, with the complete petition. A copy of the aesthetic mitigation plan approved for the “I Love Cows” solar project, which will also screen the elements of the BESS as noted above, has been included with this notice. Petitioner intends to enter into a Memorandum of Understanding with the “I Love Cows” solar project to ensure that the aesthetic mitigation plantings will be installed and maintained in a manner that enables both projects to comply with aesthetic permitting criteria and the applicable municipal screening ordinance.

ii. Environmental

The Petitioner has engaged VHB, Inc. to perform preliminary due diligence as well as detailed natural resource assessments and delineations, including both database and field surveys. Results of those studies will be provided in the final petition.

Given that the project is located within an existing agricultural field, the likelihood of impacts to most natural resources is low. VHB will conduct natural resource assessments, and impact analyses (where applicable) will be completed for criteria considered under Section 248 and as relevant to any additional necessary environmental permitting. In addition, this site was extensively reviewed for environmental impacts as part of project permitting for the “I Love Cows” solar project (approved by the Public Utility Commission on September 26, 2023).

The Petitioner will consult with state and federal agency staff as necessary pending results of detailed natural resource studies, which will inform Project design to avoid resources where possible and/or secure necessary permits, reviews, and approvals.

VI. Project Benefits

The Project is being developed in cooperation with GMP to provide system benefits which battery energy storage systems make possible. The Project will enable the stored electricity to be dispatched into the grid on-demand during critical hours, thereby reducing the large expense incurred by GMP during times of peak system load, saving ratepayers money.

Secondly, the Project paired with the “I Love Cows” solar array, will promote a more resilient distribution circuit which helps reduce the likelihood of outages for ratepayers and the need for most costly distribution upgrades.

More generally, the Project will contribute to the achievement of GMP’s and the State of Vermont’s renewable energy objectives, in addition to both local and State tax revenues.

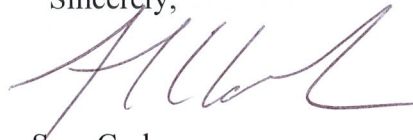
VII. Conclusion and Expected Filing Date

The Project is not expected to result in undue adverse impacts to the applicable criteria. The Petitioner looks forward to submitting the full Section 248(j) petition package, which will contain all of the information required by the PUC to evaluate the merits of the Project for potential award of a Certificate of Public Good, and inform others of the Project's impacts and value.

The Petitioner intends to file a Section 248(j) Petition and supporting materials with the PUC soon after the expiration of this 45-day notice period, which is expected to be no sooner than October 15, 2024.

We look forward to receiving any input or suggestions you may have as we move through the Section 248 process. If you have any questions you may direct them to the Petitioner by phone at 802-861-3023 or by email at sam@encorerenewableenergy.com.

Sincerely,



Sam Carlson

Senior Project Development Manager
Encore Renewable Energy

- Attachment 1 – Preliminary Site Plan for Allen Street Storage
- Attachment 2 – Preliminary Natural Resources Map
- Attachment 3 – Representative Equipment Specifications
- Attachment 4 – Aesthetic Mitigation Plan approved for “I Love Cows” solar project

Copy to:

Holly R. Anderson
Clerk of the Commission
Vermont Public Utility Commission
112 State Street
Montpelier, Vermont 05620-2701

Department of Public Service
June E. Tierney, Commissioner
112 State Street - Third Floor
Montpelier, Vermont 05620-2601

Agency of Natural Resources
Secretary Julie Moore
1 National Life Drive, Davis 2
Montpelier, Vermont 05620-3901

Agency of Agriculture and Food Markets
Secretary Anson Tebbetts
116 State Street
Montpelier, Vt 05620-2901

Green Mountain Power
163 Acorn Lane
Colchester, VT 05446

Central Vermont Regional Planning Commission
29 Main St, Suite 4
Montpelier, VT 05602

Barre City Council
6 North Main Street
Barre, VT 05641

Barre City Planning Commission
c/o Janet Shatner, Director
Planning, Permitting and Assessing Services
6 North Main Street, Suite 7
Barre, VT 05641

Town of Barre Selectboard
149 Websterville Road, PO Box 116
Websterville, VT 05678-0116

Town of Barre Planning Commission
149 Websterville Road, PO Box 116
Websterville, VT 05678-0116

Natural Resources Board
District #6 Environmental Commission
10 Baldwin Street
Montpelier, VT 05633-3201

Department of Historic Preservation
Laura V. Trieschmann
1 National Life Drive
Deane C. Davis Building, 6th Floor
Montpelier, VT 05620-0501

Adjoining Landowners in City of Barre:

Wall Street Investments
PO Box 763 Barre, VT 05641-0763

Fecteau Residential Inc
PO Box 703
Barre, VT 05641-0703

Fecteau Residential Inc
PO Box 703
Barre, VT 05641-0703

City of Barre
6 N Main St
Barre, VT 05641-4115

City of Barre
6 N Main St
Barre, VT 05641-4115

Paul & Michelle Dickinson
66 Essex St
Barre, VT 05641

Jeremy R & Danielle Kilian
9 Elliot St
Barre, VT 05641

Kelsey A Letourneau
45 Allen St
Barre, VT 05641

The Barre Unified Union School District
120 Ayers St
Barre, VT 05641

Yeung Wan Chun and Yeung Wong Hung Ying
110 Allen Street
Barre, VT 05641-0980

Premier Properties Allen Street LLC
PO Box 980
Barre, VT 05641-0980

Andre Chouinard, Trustee of the Chouinard Family Revocable Trust
120 Allen St
Barre, VT 05641

Gerald P Booth & Merchants Trust Co-Trustees; Madeline E Booth Rev Trust
C/O Kathy Rouleau
84 Miller Road
Barre, VT 05641

Wall Street Investments
PO Box 763
Barre, VT 05641-0763

Washington Investment Corporation
PO Box 666
Barre, VT 05641

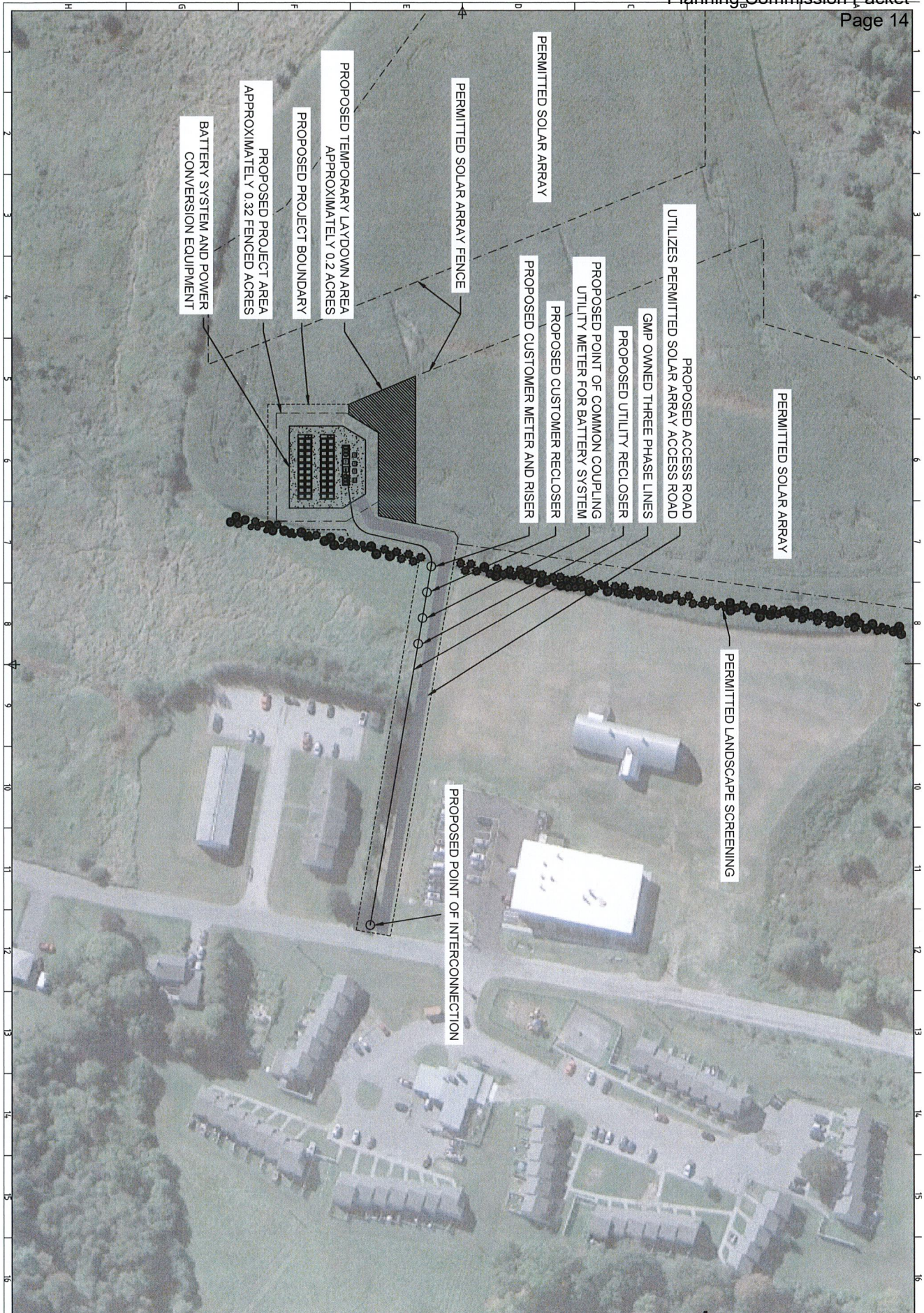
Town of Barre Abutting Landowners:

Merry Meadows LLC
96 Morrison Rd
Barre VT 05641

Joel Paquet
PO Box 333
S Barre VT 05670

Landowner

Encore Renewable Energy
50 Lakeside Avenue, #110
Burlington, VT 05401



PERMITTED SOLAR ARRAY

PERMITTED SOLAR ARRAY FENCE

PROPOSED SOLAR ARRAY

PERMITTED LANDSCAPE SCREENING

PROPOSED ACCESS ROAD

UTILIZES PERMITTED SOLAR ARRAY ACCESS ROAD

GMP OWNED THREE PHASE LINES

PROPOSED UTILITY RECLOSER

PROPOSED POINT OF COMMON COUPLING UTILITY METER FOR BATTERY SYSTEM

PROPOSED CUSTOMER RECLOSER

PROPOSED CUSTOMER METER AND RISER

PROPOSED TEMPORARY LAYDOWN AREA APPROXIMATELY 0.2 ACRES

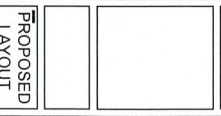
PROPOSED PROJECT BOUNDARY

PROPOSED PROJECT AREA APPROXIMATELY 0.32 FENCED ACRES

BATTERY SYSTEM AND POWER CONVERSION EQUIPMENT

PROPOSED POINT OF INTERCONNECTION

E-100
PROPOSED LAYOUT

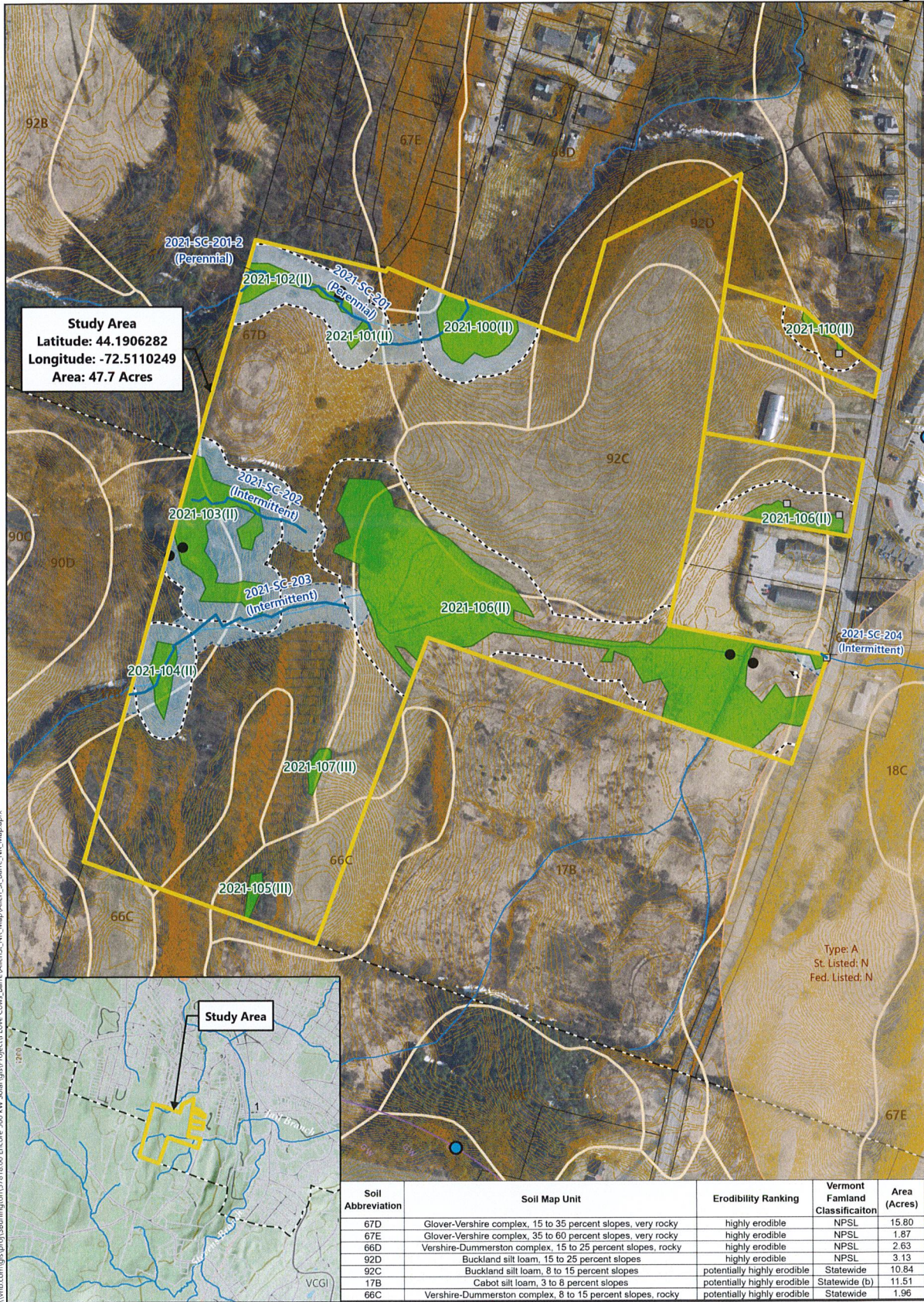


NOT FOR CONSTRUCTION

ALLEN ST ENERGY STORAGE, LLC
 4.992MW AC BATTERY SYSTEM (BESS)
 BARRE, VT
 44.187875, -72.511570



ENCORE RENEWABLE ENERGY
 50 LAKESIDE AVE #110
 BURLINGTON, VT 05401
 802-861-3023
 ENCORE ECO



v:\vhb.com\gisp\0300\Sullivan\57818.00 Encore 500 MW Solar\gisp\Project\1 Love Cows Barre, Allen, St. Barre, N.R. Map.aprx



**Encore Renewable Energy
I Love Cows Solar Project** | Barre City, Vermont

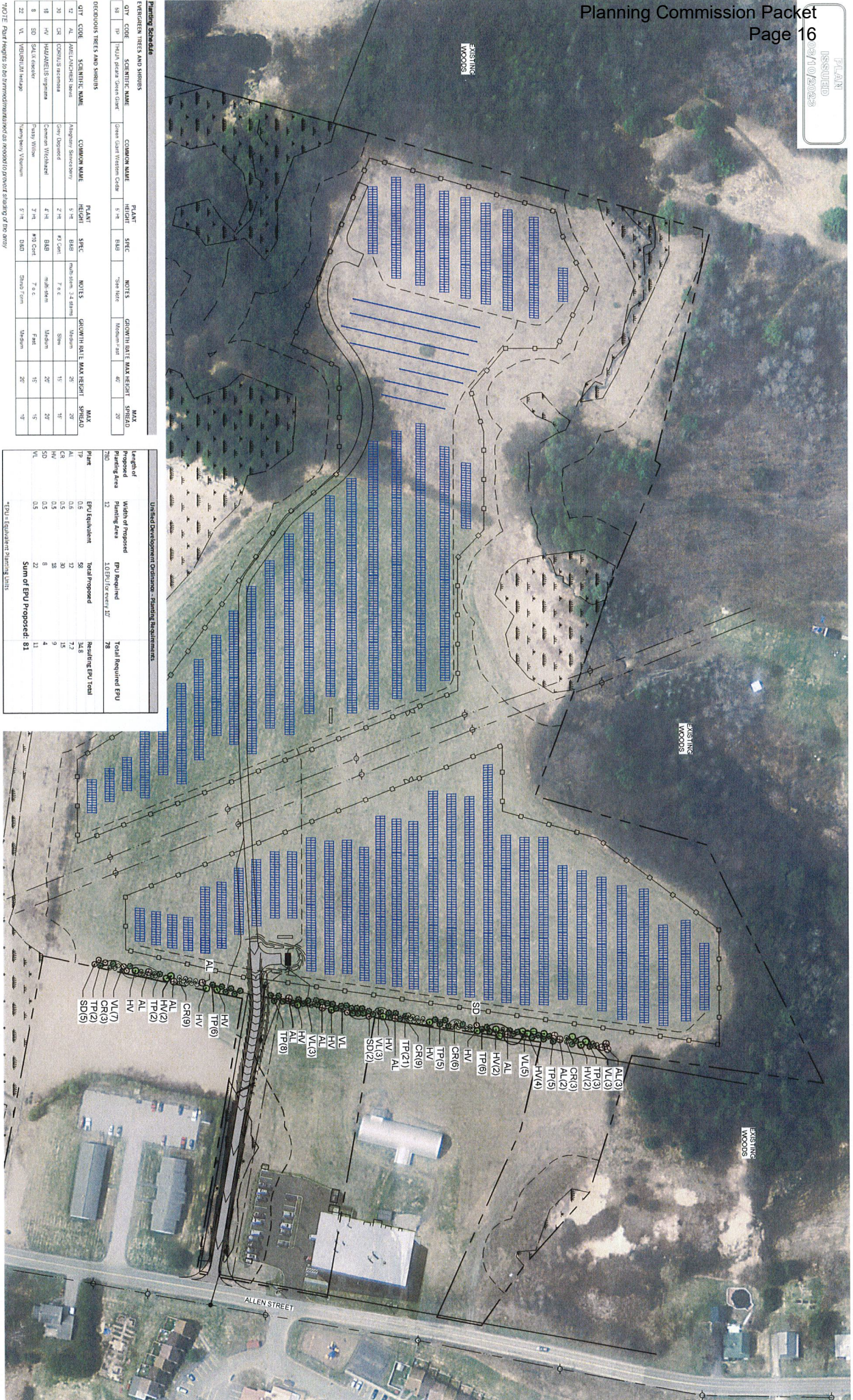
- ▭ Study Area (VHB)
- ▭ VSWI Wetland (ANR)
- ▭ Delineated Waters (VHB)
- ▭ Delineated Wetlands (VHB)
- ▭ Riparian Buffer (VHB)
- ▭ Stream (ANR)**
- ▭ Waterbody (ANR)
- Delineation Data Point (VHB)
- Private Well (ANR)
- + Public Water Source (ANR)*
- ▭ Ground Water SPA (ANR)
- ▭ Surface Water SPA (ANR)*
- ▭ AE/VCE Confirmed Vernal Pools*
- ▭ Deer Wintering Areas (ANR)*
- ▭ Rare, Threatened, Endangered Species (ANR)
- ▭ Uncommon Species (ANR)*
- ▭ Natural Communities (ANR)*
- ▭ NRCS Soil Boundary (VCGI)
- ▭ VT State Boundary (VCGI)*
- ▭ County Boundary (VCGI)*
- ▭ Town Boundary (VCGI)
- ▭ Parcel Boundary (VCGI)
- ▭ 1 ft. Contour (VCGI)

Natural Resources Map
Sources:
Background Imagery by VCGI (Collected in 2018)
VCGI (Vermont Center for Geographic Information - Various Dates)
ANR (Vermont Agency of Natural Resources - Various Dates)
FWD (Vermont Fish and Wildlife Department - Various Dates)
VHB (Vanasse Hangen Brustlin - 2021)

Wetlands and Waters investigation performed by VHB (L. Keszei, B. Galligan) on September 3 & 10 & 28, 2021 and October 15, 2021
Reviewed by ANR District Wetland Ecologist on October 29, 2021

**Slightly varied from State mapping

PLAN
ISSUED
3/10/2023



Planting Schedule

PLANT CODE	SCIENTIFIC NAME	COMMON NAME	PLANT HEIGHT	SPEC	NOTES	GROWTH RATE	MAX HEIGHT	SPREAD
AL	AMELANCHIER	Striped Spicebush	5-14'	8480	multi stem, 2-4 stems	Medium	20'	20'
CR	CRATAEGUS	Cornus racemosa	7-14'	83 Cor1	7-8' x 6'	Slow	15'	18'
TP	TRIFOLIUM	Trifolium repens	4-14'	83B8	multi stem	Medium	20'	20'
VL	VIBURNUM	Viburnum acerifolium	7-14'	810 Cor1	7-8' x 6'	Fast	15'	15'
SD	SALIX	Salix glauca	2-14'	810D	Shrub form	Medium	20'	10'

NOTE: Plant heights to be implemented as needed to protect shading of the array.

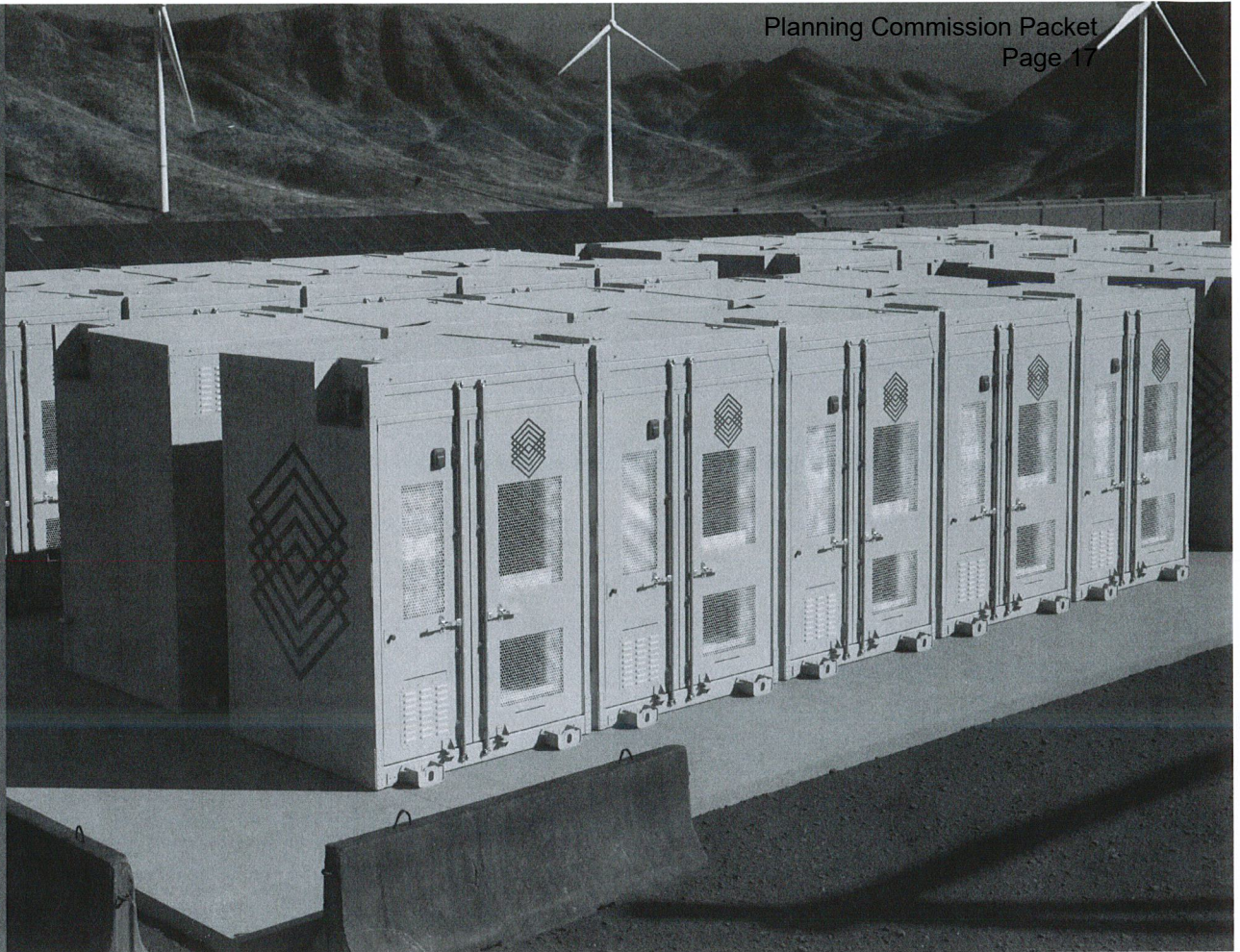
United Development Ordinance - spacing requirements

Plant	Length of Proposed Planting Area	Width of Proposed Planting Area	EPU Required (1 EPU/500 sq ft)	Total Required EPU
TP	12	12	1.44	78
AL	12	12	1.44	78
CR	12	12	1.44	78
VL	12	12	1.44	78
SD	12	12	1.44	78
Total Proposed			54.8	
Sum of EPU Proposed				81

*EPU = Equivalent Planting Units



750 LFP KORE BLOCK



Using the latest lithium iron phosphate (LFP) battery tech, KORE Power 750 LFP DC Block systems offer cutting-edge energy storage technology for applications ranging from microgrid to commercial and utility-scale. The flexible modular design allows maximum impacts a wide range of applications grid augmentation, renewables integration, and peak offsetting with minimal manufacturing and installation lead times.



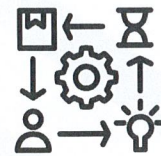
Scaleable to Grid+

KORE Power 750 LFP DC Block solutions offer the flexibility of being utilized in a single-block configuration for microgrid or small-scale energy storage projects to multiple blocks for large-scale C&I applications or complete grid-scale deployment for utility providers and municipalities.



KAMS Remote Monitoring

Combining AI-powered intelligence, automation, and human oversight KORE Power's next-generation KAMS (KORE Asset Management System) platform goes beyond simply monitoring state of charge, remotely analyzing and optimizing energy storage systems around the world.



Vertical Integration

Unique amongst clean energy manufacturers and integrators, KORE Power's vertically-integrated structure interlaces cell manufacturing, system development, and solution deployment, yielding factory-built solutions with minimized production and installation lead times.

ELECTRICAL	Capacity	750 kWh
	Voltage	1339 Vdc
	Voltage Range	1176 - 1491 Vdc
	Energy Per String	750 kWh - 10.5 MWh
	Energy Footprint	154 kWh/m ²
	Discharge Duration	2 Hours
	Maximum Charge Power	375 kW @ .5C
	Maximum Discharge Power	750 kW 375 kW (Continuous)

MECHANICAL	Configuration	2P420S
	Cell Chemistry	Lithium Iron Phosphate (LFP)
	Cell Manufacturer	KORE Power
	Battery Management System	KORE Power KP-MC
	Discharge Depth	100%
	Cycle Life	6,000 cycles to 80% SOH 8000 cycles to 70% SOH

ENVIRONMENT	Dimensions WxDxH	7.5' x 7' x 10' (2286mm x 2134mm x 3048mm)
	Weight	21,500 lbs (9,752 kg)
	Temperature Range	-22 - 122 °F (-30 - 50 °C)
	Optimal Operating Temperature	73 ± 39 °F (23°C ± 4 °C)
	Optimal Operating Humidity	5 - 85% RH
	Altitude	<6,561 ft (2,000 m)
	IP Rating	IP55
	Enclosure Type	NEMA Type 3R

SAFETY	Asset Management ¹	KORE Asset Management System (KAMS)
	Cooling	HVAC
	Catastrophic Failure Mitigation	Off-gas detection with dedicated, fail-safe active & passive ventilation systems
	Fire Suppression	Addressable fire panel, smoke & heat detectors, heat activated sprinkler system with remote FDC dry standpipe connection, fire rated insulation, strobes, and horn; clean agent fire suppression
	Certifications / Compliance	UL 9540A, UL 1973 UN 38.3, IEEE 693, IEC 62619, IEC 62477-1, RoHS, REACH, UK CA, CE



KORE POWER

With clients in the industrial, utility, and defense markets, KORE Power has established itself as a leading U.S.-based developer of battery cell and energy storage solutions.

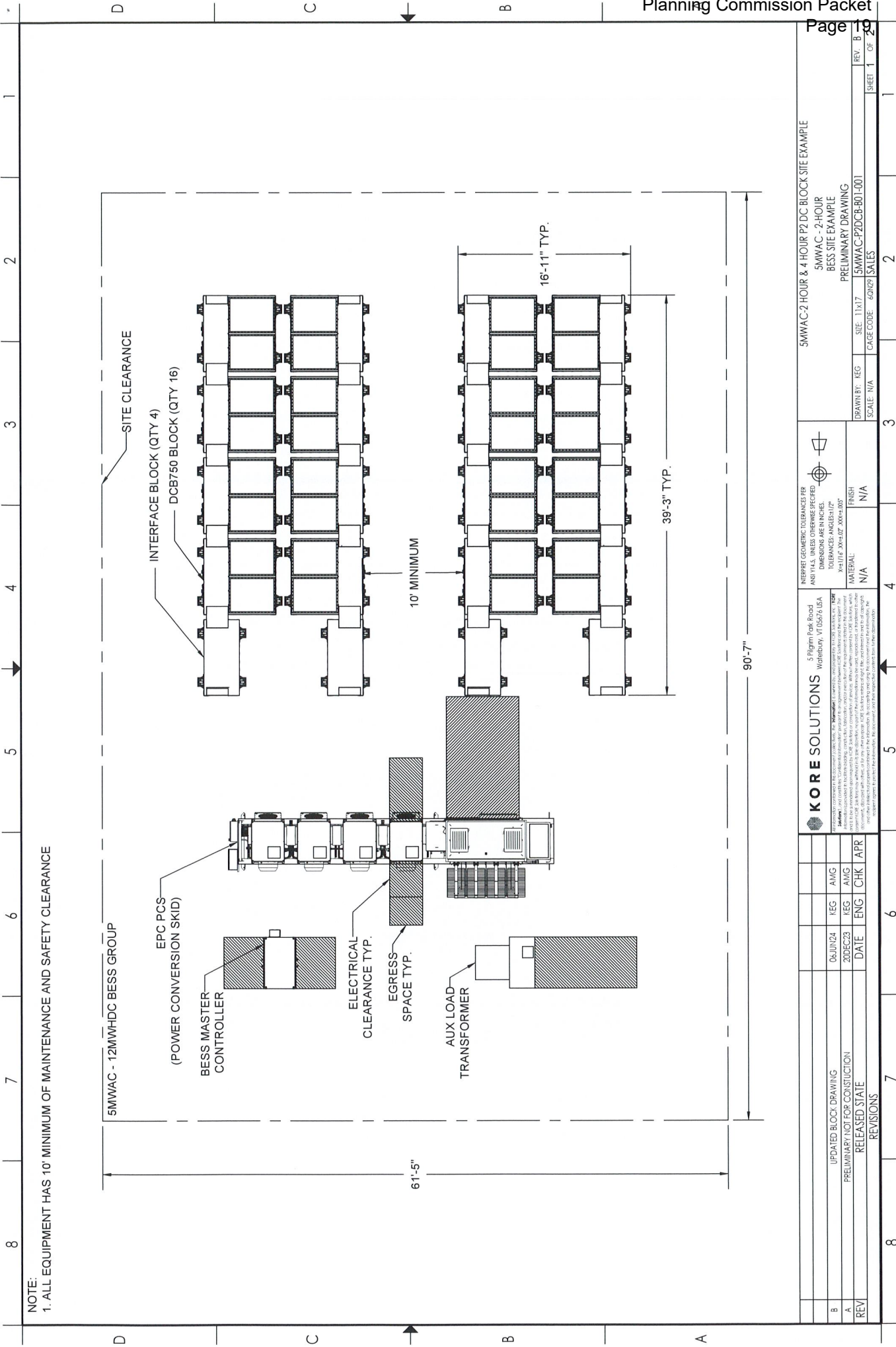
Uniquely positioned in the clean energy space, KORE Power's vertically integrated

structure provides end-to-end control of the entire manufacturing, production, and deployment process for our trusted clients, from battery cells to installation and asset management.

Discover more at [KOREPower.com](https://www.KOREPower.com)

Sales Inquiries
sales@korepower.com

General Inquiries
[korepower.com/contact](https://www.korepower.com/contact)



NOTE:
1. ALL EQUIPMENT HAS 10' MINIMUM OF MAINTENANCE AND SAFETY CLEARANCE

5MWAC-2 HOUR & 4 HOUR P2 DC BLOCK SITE EXAMPLE	
5MWAC - 2-HOUR BESS SITE EXAMPLE	
PRELIMINARY DRAWING	
DRAWN BY: KEG	SIZE: 11x17
SCALE: N/A	CAGE CODE: 64029 SALES
SHEET 1 OF 2	

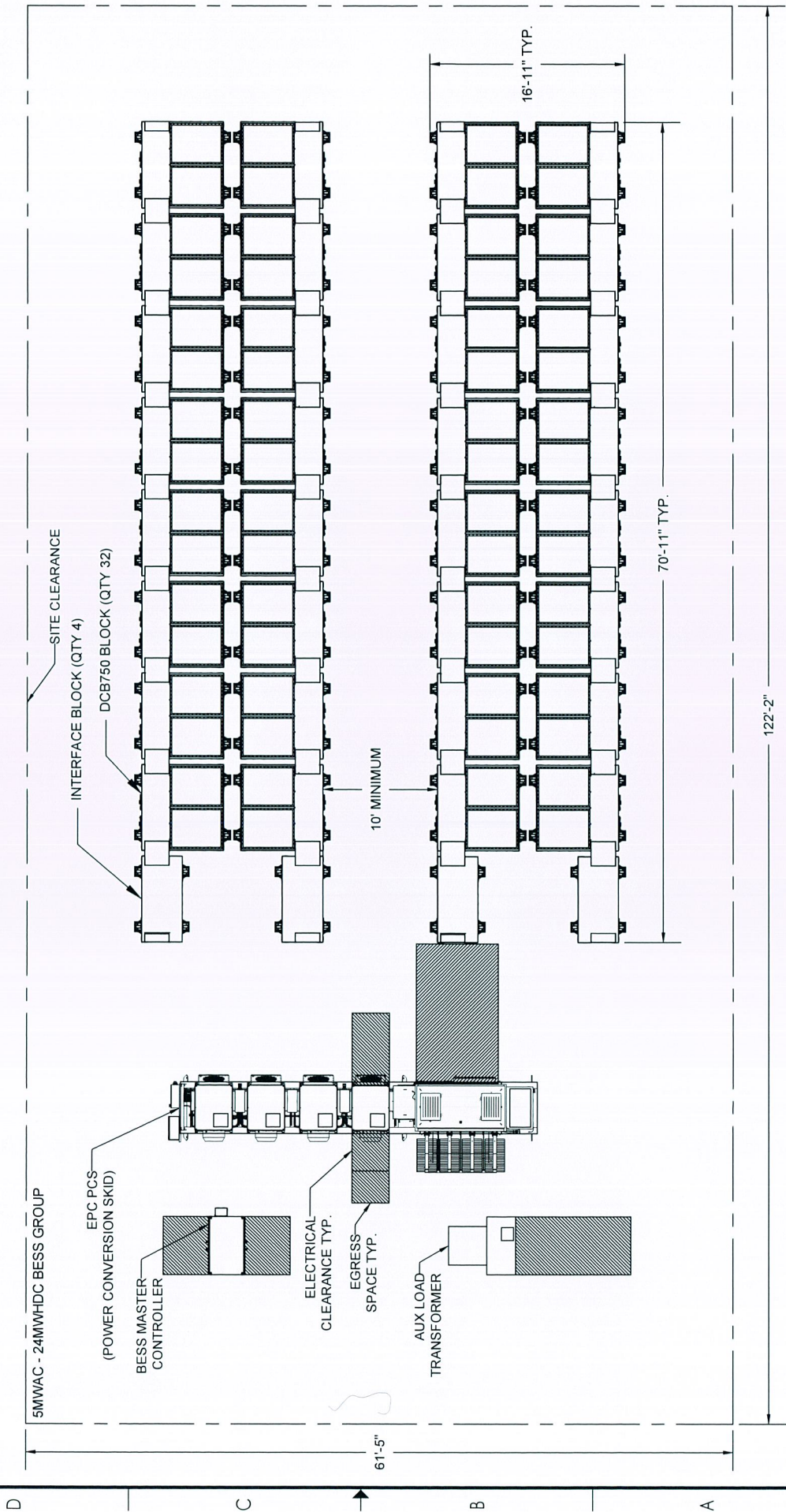
NEAREST GEOMETRIC TOLERANCES PER ANSI Y14.5, UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES ARE AS FOLLOWS:	
FRACTIONS	±0.005
DECIMALS	±0.005
ANGLES	±0.005
FINISH: N/A	
MATERIAL: N/A	

KORE SOLUTIONS
3 Pflugm Park Road
Woburn, VT 05096 USA
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REV	DATE	ENG	CHK	APR
B	06JUN24	KEG	AMG	
A	20DEC23	KEG	AMG	
REVISIONS				
UPDATED BLOCK DRAWING				
PRELIMINARY (NOT FOR CONSTRUCTION)				
RELEASED STATE				

1 2 3 4 5 6 7 8

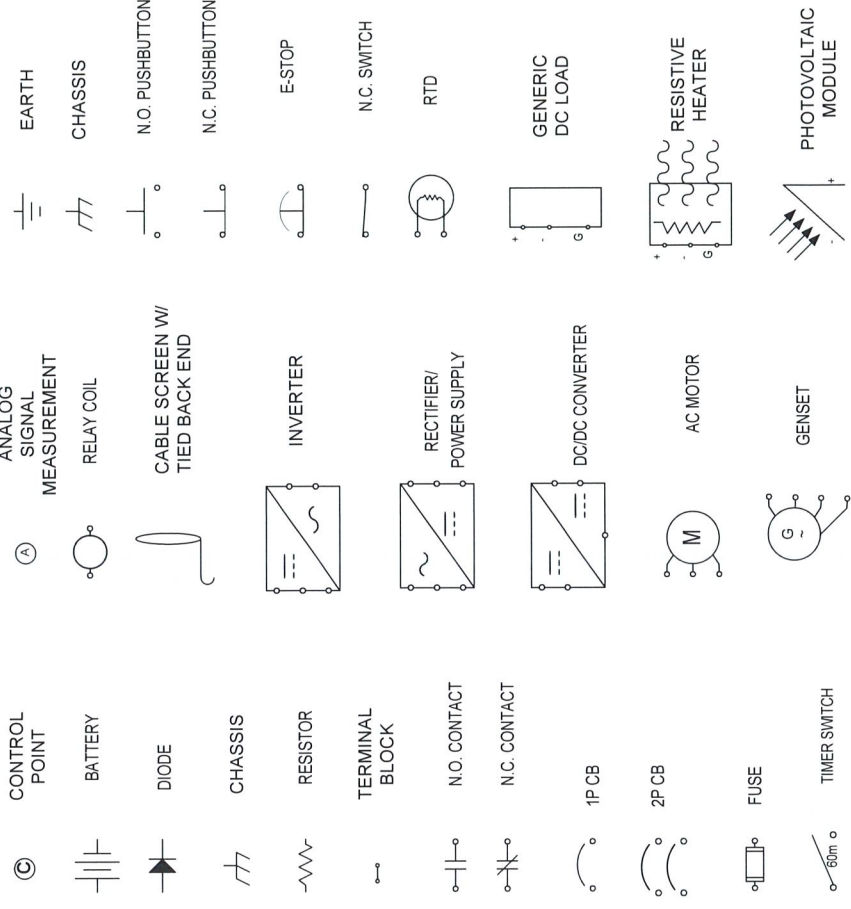
NOTE:
1. ALL EQUIPMENT HAS 10' MINIMUM OF MAINTENANCE AND SAFETY CLEARANCE



REV	DESCRIPTION	DATE	ENG	CHK	APR	PROPRIETARY: SEE SHIT 1	5 Pilgrim Park Road Warebury, VT 05676, USA	5MWAC-4 HOUR BESS SITE EXAMPLE PRELIMINARY DRAWING	5MWAC-P2DCB-801-001	SHEET 2 OF 2
	REVISIONS								SCALE: N/A	SHEET 2 OF 2

5MWAC P2DCB-J01-001 SINGLE LINE DIAGRAM

SYMBOL KEY:



Reference Designators	Description
AI	Analog Input
AO	Analog Output
AWG	American Wire Gauge
BT	Battery
CAP	Capacitor
CB	Circuit Breaker
CO	Carbon Monoxide Detector
COM	Communication Module
CR	Control Relay
CT	Current Transducer
CTR	Controller
DCA	Direct Current Aggregator
DDC	DC/DC Converter
DI	Digital Input
DIO	Diode
DMP	Damper/Louver
DO	Digital Output
DS	Light
ENCL	Enclosure
F	Fuse
FAN	Fan
FE	Free Issue Equipment
GEN	Generator
HD	Heat Detector
HMI	Human Machine Interface
HTR	Heater
IMD	Insulation Monitoring Device
INV	Inverter
J	Power Outlet
JB	Junction Box
K	Contact
MPPT	Maximum Power Point Tracker
PDB	Power Distribution Bus
PER/S	Power Equipment Room/Shelter
PGR/S	Power Generation Room/Shelter
PS	Power Supply
PV	Photovoltaic Module
REC	Rectifier
RT	Resistive Temp. Device
SA	Surge Arrestor
SD	Smoke Detector
SHNT	Shunt
SG	Switch Gear
SPD	Surge Protection Device
SW	Switch
TB	Terminal Block
TT	Temperature Transmitter
VT	Voltage Transducer

LABELS:

NOTE REFERENCE

REV REFERENCE

(06 A2) REFERENCE (SHEET, COORDINATE)

LINETYPES:

— WIRE

— BUS

--- ENCLOSURE OR BOUNDARY

--- ENCLOSURE OR BOUNDARY

NOTES:

1. ALL CONDUCTORS TO BE COPPER UNLESS OTHERWISE STATED

DRAWING REFERENCES:

J01 SINGLE LINE DIAGRAM

COLORS:

BK - BLACK

BN - BROWN

BU - BLUE

GN - GREEN

GY - GREY

OG - ORANGE

PK - PINK

RD - RED

VT - VIOLET

WH - WHITE

YE - YELLOW

KORE SOLUTIONS 5 Pilgrim Park Road Northbury, VT 05076 USA

INTERPRET GEOMETRIC TOLERANCES PER ANY ITL'S, UNLESS OTHERWISE SPECIFIED

TOLERANCES: ANGLES-DIMENSIONS ARE IN INCHES

FRACTIONS: 1/16 INCH

DECIMALS: 0.005 INCH

MATERIAL: N/A

FINISH: N/A

DATE: 07/01/24

SALES USE: KEG JAH

RELEASED STATE: DATE ENG CHK APR

REVISIONS:

5MWAC 2- & 4- HOUR P2 SYSTEM

5MWAC P2DCB-J01-001

SINGLE LINE DIAGRAM

COVER SHEET

DRAWN BY: KEG

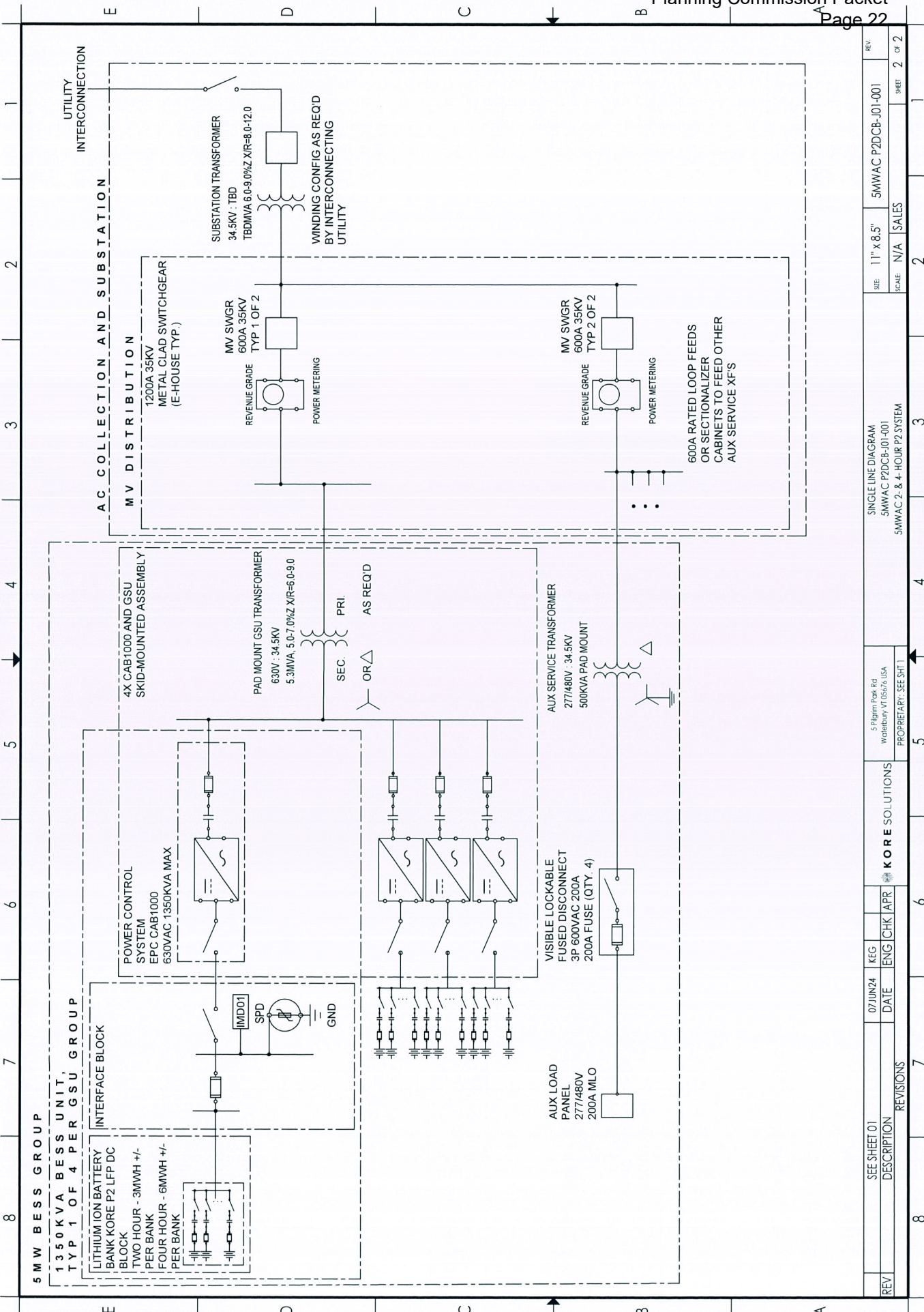
SCALE: N/A

SIZE: 11x17

CAGE CODE: 460291 SALES

REV. A N

SHEET 1 OF 2



8 7 6 5 4 3 2 1

E D C B A

5 MW BESS GROUP
 1350 KVA BESS UNIT,
 TYP 1 OF 4 PER GSU GROUP

LITHIUM ION BATTERY BANK KORE P2 LFP DC BLOCK
 TWO HOUR - 3MWH +/- PER BANK
 FOUR HOUR - 6MWH +/- PER BANK

INTERFACE BLOCK
 JMD01
 SPD
 GND

POWER CONTROL SYSTEM
 EPC CAB1000
 630VAC 1350KVA MAX

4X CAB1000 AND GSI SKID-MOUNTED ASSEMBLY

PAD MOUNT GSI TRANSFORMER
 630V : 34.5KV
 5.3MVA 5.0-7.0%Z X/R=6.0-9.0

SEC. OR Δ AS REQ'D

AUX SERVICE TRANSFORMER
 277/480V : 34.5KV
 500KVA PAD MOUNT

VISIBLE LOCKABLE FUSED DISCONNECT
 3P 600VAC 200A
 200A FUSE (QTY. 4)

AUX LOAD PANEL
 277/480V
 200A MLO

600A RATED LOOP FEEDS OR SECTIONALIZER CABINETS TO FEED OTHER AUX SERVICE XF'S

REVENUE GRADE POWER METERING

1200A 35KV METAL CLAD SWITCHGEAR (E-HOUSE TYP.)

MV SWGR 600A 35KV TYP 1 OF 2

REVENUE GRADE POWER METERING

600A 35KV TYP 2 OF 2

WINDING CONFIG AS REQ'D BY INTERCONNECTING UTILITY

SUBSTATION TRANSFORMER 34.5KV : TBD
 TBDMVA 6.0-9.0%Z X/R=8.0-12.0

UTILITY INTERCONNECTION

A C COLLECTION AND SUBSTATION

M V DISTRIBUTION

SINGLE LINE DIAGRAM
 5MWAC P2DCB-101-001
 5MWAC 2- & 4-HOUR P2 SYSTEM

5 Pilgrim Park Rd
 Waterbury, VT 05676, USA
 PROPRIETARY - SEE SHT 1

KORE SOLUTIONS

ENG CHK APP

07/JUN/24

DATE

REVISIONS

REV DESCRIPTION

SEE SHEET 01

REV. 2 OF 2

SHEET 2 OF 2

SCALE: N/A SALES

SIZE: 11" x 8.5"

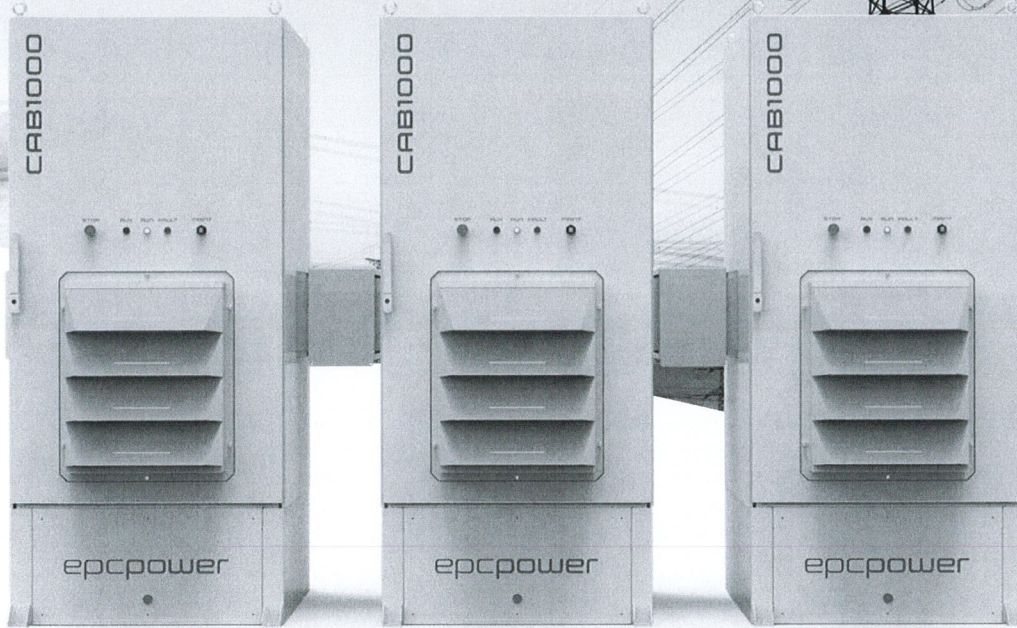
5MWAC P2DCB-101-001

CAB1000/AC

Up to 1500 VDC

Utility Grade Storage Inverter

Scalable from 1 to 6 MW



Return on Investment

- 99% max conversion efficiency
- Low shipping & installation cost
- Modular 1-1.5 MW blocks
- Monetizable dynamic performance



Modular / flexible configuration

- 1-1.5 MW blocks, up to 1500 VDC
- Configurable up to 6 MW
- Individual AC connections or combined throat
- Able to mix storage, PV & DC-DC in a single lineup



Simple O&M

- Easily maintainable
- Modular design with low component count
- Extended warranty available



Easily Transportable

- Standard freight = low transportation cost
- Moveable with pallet jack or standard forklift
- No crane required
- Separable building blocks



Advanced Technology

- Parallel UPS functionality
- Fully parameterizable grid support
- Certified to standards: UL1741 / IEC
- ZVRT / LVRT / 4-quadrant high bandwidth control
- Harmonic control

The CAB1000 scalable platform was specifically developed to offer a straightforward and simple solution to developers of Utility-grade energy storage systems. In ~1 MW blocks, the CAB1000 platform offers a single modular system which is tailored to Utility systems of all sizes. The scalable power conversion system also boasts high-performance controls and system redundancy.

With world-class power density and an easy to install design, your energy storage system will be commissioned quickly and easily. The energy storage PCS has never been more flexible or straightforward.

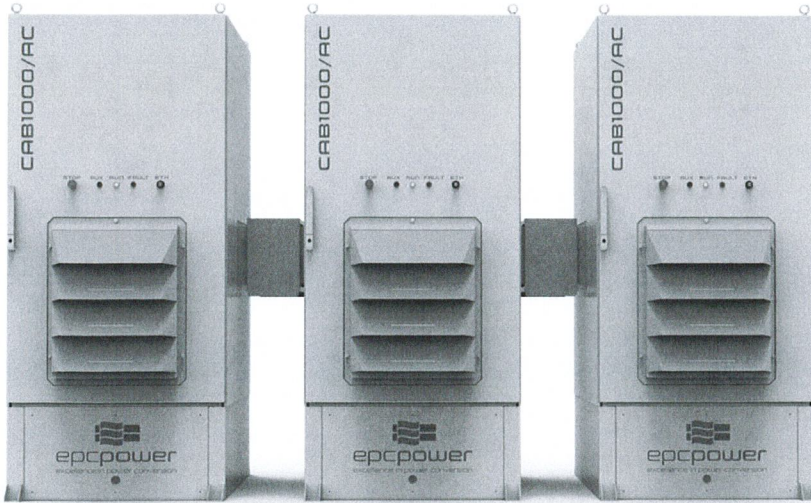
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13250 Gregg Street, Suite A-2 | Poway, CA 92064 | +1.858.748.5590

info@epcpower.com

February 2022

epcpower



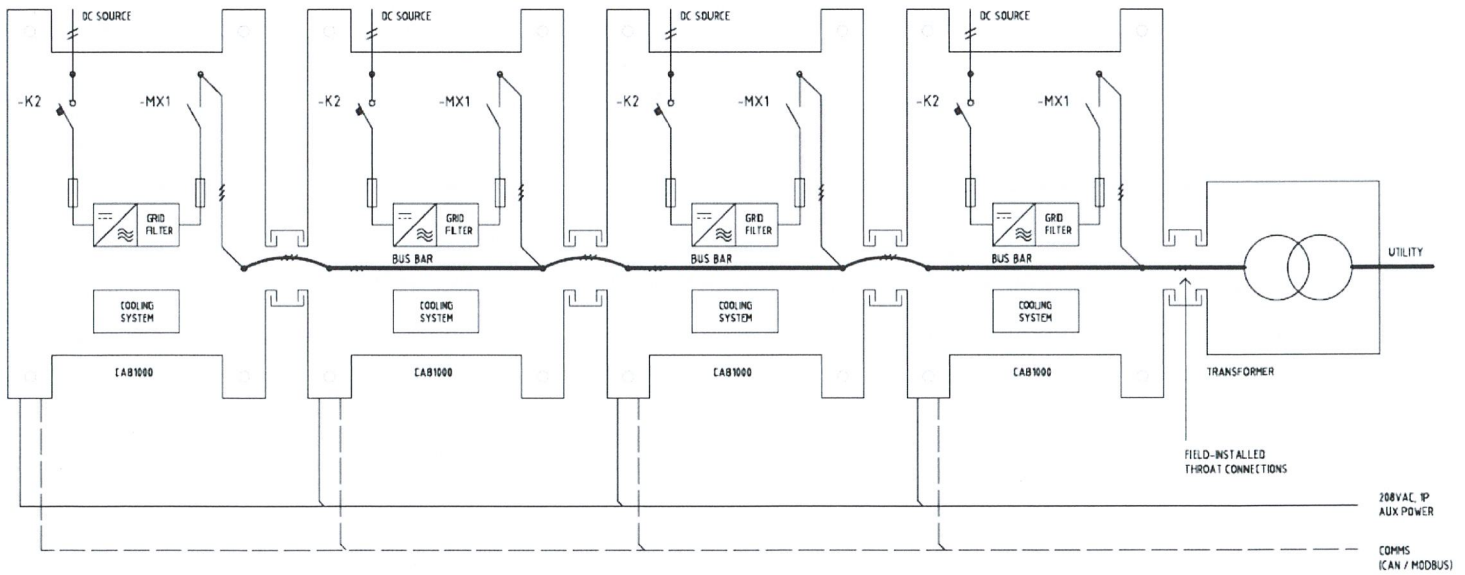
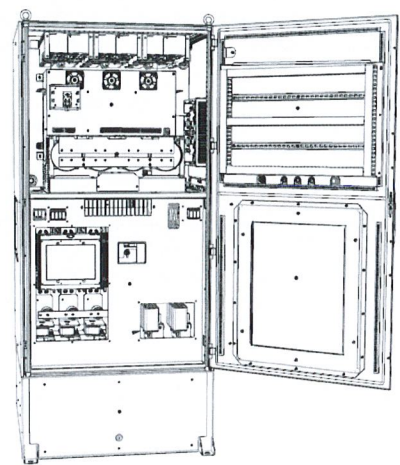
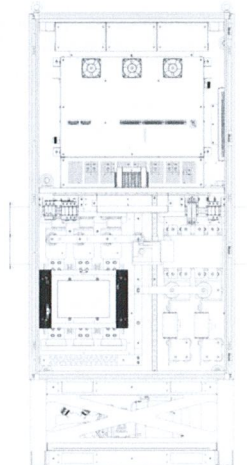
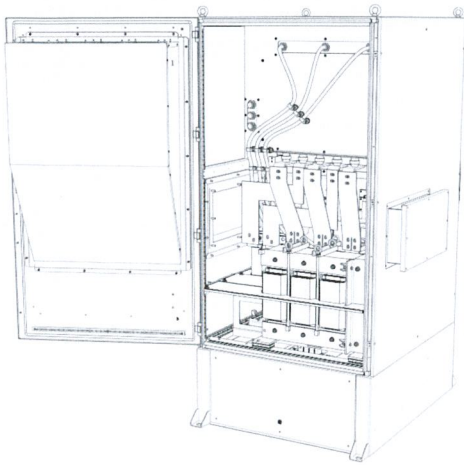
Full-function, independent blocks

Each 1-1.5 MW block is designed to support connections to independent battery banks.

Each CAB1000 contains fully independent AC & DC disconnects, fuses, utility-grade surge suppression, environmental controls, and precharge, enabling an easy installation.

Keep the transformer simple, please

The MV transformer can be obtained from EPC Power or directly from Tier 1 suppliers who have pre-engineered units ready to suit your application's power and voltage needs.



HOUSING

planning for housing

Barre City recognizes that safe, attractive and affordable homes and neighborhoods are a necessary foundation for the health and well-being of residents and neighborhoods. To achieve our vision for a healthy future, Barre City needs to attract and retain residents, particularly households with moderate to higher incomes. The quality, cost and characteristics of homes and neighborhoods are the major factors people consider when choosing where to live. The City has quality housing stock, as evidenced by the beautiful homes throughout the city, and is an asset to our community.

Where we live is at the very core of our daily lives. Shelter is a basic human need without which no one can be healthy, safe or productive. The physical conditions within homes, conditions in the neighborhoods surrounding homes, the affordability of homes are all closely interrelated with the health and well-being of residents and our community as a whole.

The health of our local economy is linked to the availability and affordability of housing in the city. To attract jobs, we need to have places for new workers to live. To revitalize our downtown, we need to attract new residents and expand the base of consumers that will support local businesses. The residential sector also drives demand for city infrastructure and services; the location and design of homes and neighborhoods influence the cost of providing infrastructure and services in the city.

The type of residential development that occurs in a community reflects both local and regional market forces, as well as the influence of government policies and regulations. The city can take an active role in promoting housing that will contribute to making Barre City a healthier place to live. Policies that encourage higher-density housing within urban centers increase residents' ability to walk or bike to work, school, stores and services. Enforcing building codes and inspecting rental housing reduces the number of residents living in unhealthy and unsafe conditions. The City will need to consider increasing the number of enforcement staff with the added responsibilities of ordinances and their requirements.

key points

1. **Changing Demographics.** Demographic trends suggest that there will be increasing numbers of single-person households and households without children in future decades. Many of these households will want a home: in a more urban setting with greater access to employment, services, shopping and social activities; that is smaller, less expensive, easier to maintain and more energy-efficient; and with convenient access to transit. In future years, we will need more housing in Barre City that can meet those housing needs. Many people who grew up in Barre City or lived in the city as young adults moved out to nearby rural communities to raise their families. Now 'empty-nesters', these residents could be attracted back to the city with the right mix of housing in a revitalized downtown setting.
2. **Existing Housing.** Existing housing in the city ranges from single family homes to large apartment buildings, and homes with accessory dwelling units (ADU's). ADU's are often referred to as the "mother-in-law" apartment. ADU's have been allowed for many decades in the City, and

provide an affordable living unit for a renter or family member, and the owner to gain some income. A growing trend is that more “empty-nesters” are choosing to age in place and find that the once-bustling home is quiet and a lot to manage. ADU’s are allowed in the City, and must be located within or associated with an owner-occupied single family dwelling, and be up to 900 square feet in size, or not to exceed 30% of the habitable floor area of the primary dwelling. ADU’s provide a great means of affordable housing as well.

3. **Downtown Housing.** Downtown and near-downtown has a limited amount of housing aside from a few senior and affordable housing facilities. To revitalize our downtown, we need to bring people back to shop, dine, work and live downtown. Adding more housing would increase the income generated by downtown buildings, property values and the city’s tax base. Residents would be ‘anchor consumers’ for downtown businesses and would keep downtown alive after business hours. The Vermont Downtown Program reports that the average downtown resident spends more than twice as much money at downtown businesses than the average person who works, but does not live, downtown. With limited opportunities for new single-family development and infill in established neighborhoods in Barre City, our downtown offers an excellent opportunity for substantial increases in the city’s housing stock.
4. **Affordable and Special Needs Housing.** Barre City’s housing stock includes a large number of modest, single-family homes that continue to offer some of the region’s most affordable opportunities for homeownership. As more affluent residents left for outlying rural communities, our stock of higher-end and larger homes was largely converted to multi-family rentals. The availability of centrally located land with access to public services led to several large subsidized housing developments being built in Barre City during the 1970’s and ‘80’s. As a result of all these factors, we presently provide more than our share of the region’s affordable and special needs housing. Thirty-nine percent of all the subsidized apartments in Washington County are located in Barre City (approximately 514 units) and the subsidized units account for 12% of all housing in the city (the 5th highest percentage of all Vermont municipalities).
5. **Moderate- and Upper-Income Housing.** Barre City has seen the supply of moderate- and upper-income housing decline in recent decades. This widening gap in our housing stock has weakened the city’s property tax base and resulted in a loss to the local economy. The result is reduced resources for city services and infrastructure, including the investments that are needed to make Barre City a desirable place to live. We want our city to remain an affordable and attractive community for those working in the region - a city that is home to a diverse population. In order to achieve this, we need to balance our housing stock by adding middle- and higher-end units and ensuring that the quality of existing homes is maintained or improved.
6. **Housing Quality and Neighborhood Stability.** More than half of Barre City’s homes were built before 1940 and are located in traditional, pre-war neighborhoods. These older homes and neighborhoods need ongoing improvement and maintenance if they are to remain healthy and desirable places to live. The national upheaval in the housing market after 2008 has led to higher rates of foreclosure and distressed residential properties being purchased by investors (often from other parts of the country). While there are many stable neighborhoods in Barre City, there is evidence that some of our neighborhoods are in transition away from homeownership towards rentals, and some are showing signs of decline as a result of that transition. Poor property management leads to the loss of neighborhood stability, which is more likely to occur if landlords with no connection to our community acquire a higher percentage of rental properties. Investment in the city’s homes and neighborhoods will have significant direct and indirect benefits to individual residents and families, and the community as a whole.

issues & challenges

Barre City has identified the following housing challenges and issues that need to be addressed to achieve our vision for a healthy future:

1. **Neighborhood Destabilization.** There is anecdotal evidence that some of Barre City's neighborhoods are experiencing destabilization. Our city's distressed neighborhoods have higher percentage of rental properties owned by absentee landlords, a higher percentage of properties that are neglected or not properly maintained, and a higher rate of tenant turnover. These factors can become self-reinforcing within a neighborhood and can lead to a downward spiral in property values and quality of life. More than half of the homes in the city are rented rather than owned and rental housing is not evenly distributed. There are blocks that are predominately owner-occupied and those that are mostly renter-occupied. The low rate of homeownership and the increasing rate of resident turnover in some neighborhoods is fraying our city's social fabric.
2. **Housing Quality.** The perception that some of Barre City's neighborhoods are in decline is largely driven by the condition and maintenance of homes. The most affordable housing tends to be in the neighborhoods closest to downtown, which are among the oldest in the city. These homes are most likely to need upgrades to make them more energy efficient or to remove hazards like lead-based paint. While buyers may be able to purchase a house in Barre City, they may not have the additional resources necessary to repair or maintain their home, particularly if it is an older structure with a backlog of deferred maintenance. Rents in Barre City are largely driven by the HUD Fair Market rates and many landlords believe that at those rental rates there would not be an adequate return on their investment if they made significant improvements. Additionally, landlords who receive fixed rents through state or federal programs have little incentive to make improvements beyond what is needed to meet minimum standards. Buildings that are allowed to deteriorate decline in value, depress the value of surrounding properties, and generally make a neighborhood less desirable. More than half of the homes in Barre City were built before 1940 and most of the city's housing is located in established neighborhoods that formed 50 or more years ago. Our older housing stock needs regular repair and upgrades to provide residents with a safe and healthy place to live and contribute to neighborhood quality of life.
3. **Demand for City Services.** The amount of rental housing, and housing for very low-income households or populations with special needs in Barre City has increased demand for city services, particularly police and emergency response. The cost of providing these city services is borne primarily by property taxpayers, many of whom perceive that those who pay higher city taxes tend to use less services, while those who pay lower city taxes use more services. A balanced housing stock and a broader distribution of wealth is essential to ensure our tax base is adequate to support the provision of city services necessary to maintain a healthy community with a good quality of life.

strengths & opportunities

Barre City and its partners have already acted to address housing issues, and there remain many strengths and opportunities we can build upon to continue those efforts as we strive to achieve our vision for a healthy future:

1. **Support and Programs.** The city and several partner organizations are available to assist current or potential residents with a variety of housing issues in Barre City. Downstreet Housing and Community Development (Downstreet) operates a NeighborWorks HomeOwnership Center in Barre City and administers a variety of programs for homebuyers from education to grants for income-eligible households. Downstreet also offers assistance with home improvements to income-eligible households. Barre Housing Authority, Washington County Mental Health, Capstone Community Action Council (Capstone), the Good Samaritan Haven, and others also provide housing-related support and programs in the city. (A more complete list of programs and services is included on page 3-8 of this plan.)
2. **Affordable Housing.** Barre City is an affordable community to purchase or rent a home. Much of the city's historic housing stock is composed of modest, single-family homes on small lots – what would now be described as workforce housing – and these homes provide some of the best opportunities for first-time homebuyers and affordable homeownership in the region. The median sale price of a primary home in Barre City has been at least \$40,000 lower than the county average and \$70,000 lower than the state average throughout the past decade. Rents are also affordable at a median average of \$715/month and there is an ample supply of rental housing. Our city is a very affordable place for younger people to get started in and older people to downsize and retire to. This is something that should be marketed to a broader audience.
3. **Rental Registration Inspection Programs.** Barre City has an ordinance that requires annual registration of all rental units and establishes minimum standards for rental housing. Barre City has operated a rental housing inspection program since 2004 to maintain a minimum housing quality level. In 2012, the Barre City Fire Department's Code Enforcement Office took over responsibility for the inspection program from the Building Department in order to increase staff capacity for this program. Rental units are inspected every 4 years presently, and each rental unit has been inspected at least twice now. There are typical issues with landowners making appointments for inspection or for follow-up, but overall the City feels this program is running smoothly.
4. **Taxes.** Barre City has local tax stabilization programs for residential properties being substantially improved by locking-in their lower pre-renovation assessments for up to 10 years. Barre City is the only community in the state with a local tax stabilization program that applies to both the municipal property tax and the education property tax. Additionally, within the state-recognized designated downtown, property owners may be eligible for state income tax credits for building improvements.
5. **Public Infrastructure and Services.** Barre City has public water and sewer infrastructure, and both systems have capacity available. Cell phone service and broadband internet service are both available throughout the city. The city's parking permit system allows for overnight parking for downtown residents in city-owned lots, although the number of spaces designated for overnight or long-term parking may need to be increased as the amount of downtown housing increases. The lack of dedicated parking for some downtown buildings may be a disincentive for increasing the number of upper floor apartments.
6. **Regulations and Permitting.** It is possible to build housing in Barre City at much higher densities than in most Vermont communities and there remains land suitable for new construction and infill development. The city has a zoning administrator available to assist applicants with navigating the regulatory and permitting system. Barre City has increased what

development activities can be reviewed administratively by staff and be approved without requiring a DRB hearing.

goals & strategies

Barre City has established the following housing goals and strategies in order to achieve our vision for a healthy future:

- 1. For Barre City to encourage new residential development as part of an effort to reverse recent declines in the city's population and further the state's planning goal of maintaining the historic settlement pattern of compact village and urban centers separated by rural countryside.**
 - A. Plan to accommodate much of the city's new housing downtown.
 - A-1. Promote new mixed-use development and rehabilitation of existing buildings that includes residences on the upper floors.
 - B. Allow for mixed-use redevelopment of existing commercial and industrial buildings, particularly projects that preserve historic downtown buildings and granite sheds.
 - C. Continue allowing the creation of accessory dwellings within existing homes or outbuildings as required by state law.
 - D. Continue support of Downstreet Housing's endeavors in the city.
- 2. For Barre City to promote investment in new residential construction, and in the maintenance and rehabilitation of the city's existing housing stock.**
 - A. Provide a user-friendly environment that encourages residential developers to invest and construct within the city.
 - A-1. Work in partnership with landowners and developers to overcome hurdles, such as the ownership of 'paper streets' or the need for infrastructure upgrades, that are preventing infill development on vacant lots in the city.
 - B. Encourage the maintenance of the city's existing housing stock and the rehabilitation of deteriorating or substandard housing.
 - B-1. Continue efforts to improve the quality of rental housing in the city and to ensure that residents do not live in substandard, unsafe or unhealthy conditions by maintaining our rental registration and inspection programs, and strengthening our rental housing codes and ordinances.
 - B-2. Continue to offer municipal tax stabilization for major improvements to residential property and increase public awareness of this program.

- B-3. Support efforts and programs to improve the energy efficiency of homes in Barre City, particularly those focused on upgrades to rental and affordable housing.
 - C. Recognize that the city has a finite amount of open land suitable for residential development and encourage well-planned development that makes efficient use of this limited resource.
- 3. For Barre City to stabilize, protect and enhance the character of residential neighborhoods and the quality of life they provide for residents.**
- A. Ensure that infill development within existing neighborhoods will be harmonious with the scale, density and character of nearby homes.
 - B. Manage the conversion of single-family homes to multi-family or non-residential uses in order to minimize impacts on neighborhood character and quality of life.
 - C. Provide opportunities for small-scale, neighborhood-oriented shops and services within walking distance of most of the city's residential areas.
 - D. Maintain and improve playgrounds, greenspace and parks in the smaller neighborhoods.
 - E. Spur private investment in the preservation, renewal and renovation of homes and neighborhoods to avoid potential decline.
 - D-1. Monitor vacancies, rental inspection results and property maintenance/building code enforcement actions to direct revitalization efforts towards struggling neighborhoods.
- 4. For Barre City to have a more balanced and diverse housing stock, while remaining a community where working people can afford to buy or rent a home.**
- A. Maintain Barre City's role as community where residents working in the city and region can afford to buy or rent a home.
 - A-1. Encourage preservation of the city's existing supply of 'starter homes' and new home construction to serve the first-time homebuyer market.
 - A-2. Promote programs and strategies that provide assistance with housing costs for low- and moderate-income households.
 - A-3. Promote programs and strategies that help control rising housing costs.
 - B. Maintain a rate of homeownership in Barre City that results in at least 50% of properties in each neighborhood being owner-occupied.
 - B-1. Promote programs and strategies that provide assistance to current renters who are capable of and interested in buying a home.
 - B-2. Promote programs and strategies to encourage owner-occupied rental properties.
 - C. Promote residential development that responds to the needs of people across all the city's economic and social groups.

- C-1. Expand the housing choices available to buyers in Barre City to include options other than single-family detached homes (townhouses, row houses, condominium units in mixed-use buildings, etc.).
 - C-2. Allow for and encourage development of alternatives to fee-simple home ownership and for-profit rentals such as community land trusts, limited-equity condominiums and cooperatives.
 - C-3. Include housing units at a variety of price points within new residential developments and downtown mixed-use buildings.
 - C-4. Facilitate the integration of households with various incomes into all neighborhoods and the dispersal of affordable housing throughout the city.
- D. Maintain an adequate supply of housing that can provide those with limited means, disabilities or other special needs a safe, stable and healthy place to live.
- D-1. Offer residents an opportunity to live in economically and socially diverse neighborhoods.
 - D-2. Distribute housing targeted to a particular population group (elderly housing, subsidized housing, group homes, etc.) among the city's neighborhoods and avoid clustering such housing within any single neighborhood.
 - D-3. Encourage a more balanced distribution of affordable and special needs housing among Central Vermont municipalities.
 - D-4. Balance any loss of affordable housing due to downtown redevelopment and revitalization projects with creation of equivalent affordable units within new buildings and/or distributed around the city.
-

next steps

Barre City should pursue the following actions in order to achieve our vision for a healthy future:

- 1. Undertake a study to document the occupancy of downtown buildings and recommend strategies to encourage use of upper floors for housing.**

Status: No action taken to date.

Timing: 2022

Partners: Barre Partnership, City Assessment Department, City Planner, Planning Commission, Downstreet Housing

Notes: This study should include an inventory and assessment of the condition, use and occupancy of the upper floors of buildings in the downtown business district. Based on the

findings, recommendations should be developed to increase the utilization of upper floor space for housing.

2. Implement a pilot program that would assist with the purchase and management of owner-occupied rental properties in the city.

Status: No action taken to date.

Timing: 2023

Partners: Downstreet Housing; Capstone Community Action Council

Notes: Downstreet has indicated an interest in partnering with the city on a program that would help buyers purchase and manage owner-occupied rental properties. A new source of funding would need to be found to support the program as it would not be eligible under Downstreet's current funding streams.

3. Amend the city's Minimum Housing Code to incorporate stronger and more effective standards.

Status: No action taken to date.

Timing: 2023

Partners: City Planner, City Fire Department, Vermont Department of Health, Downstreet Housing, City Attorney, City Council

Notes: Barre City has a Minimum Housing Ordinance that could be further amended to strengthen the city's minimum housing standards. The current code is based on the HUD minimum standards. Consideration should be given to incorporating additional standards related to energy-efficiency and healthy living conditions. The Vermont Healthy Homes Program has produced a rating tool and reference manual that could be consulted, and Burlington's housing code could be used as a model.

4. Encourage home-sharing as a means of keeping larger single-family homes intact.

Status: No action to date.

Timing: 2021

Partners: City Planner, Downstreet Housing and Community Development; HomeShare Now

Notes: Encouraging home-sharing is one way to avoid conversion of larger homes to rental or multi-family units and would provide additional benefit of helping residents afford and invest in the older housing stock that was at one time prime single-family housing. Rental units within the neighborhoods have begun to depreciate neighboring homes and neighborhoods making them less desirable.

5. Consider implementing a Housing Preservation Loan Program to help with the repairs needed to homes in the City.

Status: No action to date.

Timing: 2020-2021

Partners: City Council, City Clerk/Treasurer, City Finance Director, City Planner

Notes: Montpelier's Housing Preservation Loan Program could serve as a model guide to implementing something similar for Barre City.

benchmarks

Barre City should measure progress towards achieving our vision for a healthy future against the following benchmarks:

- 1. Percentage of Barre City households spending more than 30% of their income on housing.** Households that spend too much of their income on housing often find themselves unable to afford other necessities such as food, health care, transportation, child care, and clothing. The generally accepted rule of thumb is that housing expenses (including utilities and taxes) should constitute no more than 30% of household income. *Source: Vermont Housing Finance Agency's Housing Data*

In 2010: 44%
In 2017: 48%
Target for 2025: 35%

- 2. Home ownership rate in Barre City.** Home ownership provides many benefits including tax benefits, collateral for financial emergencies, and opportunities for wealth creation. Home ownership is associated with increased residential stability and creates incentives for personal investment in home maintenance, neighborhood improvement, and community involvement. *Source: US Census Bureau, Decennial Census*

In 2010: 43%
In 2017: 48%
Target for 2024: 50%

- 3. Percentage of rental housing in Barre City that is owner-occupied.** Owner-occupied rental properties are less likely to have tenants that are disruptive to the neighborhood (noisy, disorderly conduct, criminal activity, trash accumulation) because the landlord lives nearby and will likely not want to live next to a bad neighbor. Owner-occupied rental properties can make home ownership more affordable both through the direct rental income and through various tax benefits. *Source: Barre City Grand List*

In 2010: 20%
In 2019: 23%
Target for 2025: 25%

- 4. Percentage of rental units in Barre City inspected and brought up to code each year.** Homes that are poorly designed, constructed or maintained can make residents sick. Homes with inadequate heating or ventilation can lead to the growth of mold and dust mites, resulting in asthma and respiratory allergies. Older homes may have lead-based paint that can cause lead poisoning, particularly in young children. The likelihood of physical hazards in a home is related to housing affordability. *Source: Barre City Fire Department*

In 2010: unknown
In 2018: 46%
Target for 2024: 75%