Unitil Energy Systems
Utility Scale PV – Facility Design and Installation Request for Information



Issued February 11, 2022



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### 1 <u>INFORMATION ABOUT UNITIL</u>

Unitil Corporation is a public utility holding company with electric and gas utility operations in New Hampshire, Massachusetts and Maine. Unitil Corporation is the parent company of three wholly-owned distribution utilities.

Unitil Energy Systems, Inc. provides electric service in the southeast seacoast and state capital regions of New Hampshire, including the capital city of Concord, New Hampshire.

Fitchburg Gas and Electric Light Company provides both electric and natural gas service in the greater Fitchburg area of north central Massachusetts; and,

Northern Utilities, Inc. provides natural gas service in southeastern New Hampshire, and parts of southern and central Maine, including the city of Portland, which is the largest city in Northern New England.

Together, these three distribution utilities serve approximately 102,700 electric customers and 77,900 natural gas customers in their service areas.

### 2 PURPOSE/ QUESTIONS TO BIDDERS

Unitil views renewable energy as a valuable resource that provides benefits to the grid and the environment. Unitil is exploring the possibility of constructing utility scale photovoltaic generating (PV) facilities within its electric service territory.

Unitil is in the process of developing a qualified bidders list for the installation of a PV facility on a 'pad-ready site'.

The following questions will be evaluated by Unitil to create a qualified bidders list as well as to develop assumptions that will be used by Unitil in the site assessment and financial analysis to assess the viability of constructing a Unitil owned PV facility. The answers to the pricing and land requirement questions below will only be used by Unitil to develop assumptions and not to determine the qualifications of the bidders. However the bidder's ability to answer these question may be used in the determination of their qualifications. Please feel free to provide any additional information you feel would assist Unitil in evaluating responses and developing a qualified bidders list.

### 2.1 Experience

- Describe at least five (5) examples of previous projects installing "utility scale" PV facilities ranging from 2 MW to 15MW in size. Your response should include your responsibilities as well as the responsibilities of others.
- Describe examples of previous projects that included the installation of Energy Storage Systems (ESS) in conjunction with PV infrastructure.
- Describe your experience installing facilities on remediated brownfield sites and/or capped landfills.
- Provide example one-lines and site layouts of PV only installations as well and combined PV/ESS installations.
- Provide an example layout, design and construction package for a 2MW or more facility installed on vacant land has had all site work (tree clearing, grading, drainage installation, etc.) complete.
- Please provide the number of facilities of the following size ranges that you have installed in the past five (5) years. Indicate the number of PV only and PV/ESS combined facilities in each range.
  - o 0.5MW to 2.0MW
  - o 2.1MW to 5MW
  - o 5.1MW to 10MW
  - o 10.1MW and above
- Please provide the ESS size that is typically paired with a 2MW, 5MW and 10MW PV facility.

#### 2.2 Services

- Please describe all services your company offers in relation to the installation PV/ESS facilities, such as:
  - Site assessment (surveying, wetlands delineation, geotechnical evaluation, etc.)
  - Land acquisition
  - o Site design and construction (grading, drainage, etc.)
  - Structural design of foundations and other support structures to support PV/ESS infrastructure
  - o Construction permitting
  - o Facility layout design

- Electrical design of PV/ESS facility up to the PCC including the step-up transformer, equipment/facility grounding, PV/ESS side SCADA integration, etc.
- o Procurement and installation

### 2.3 Site Requirements

- Please provide the typical site requirements (cleared area, slope, compass facing direction, etc.) for 2MW, 5MW and 10MW PV facilities.
- Please provide the typical distance from the tree line to the first PV panel in each compass direction.
- Please provide additional site requirements for the incorporation of an ESS in conjunction with the PV.
- Please describe the site information required to complete the PV/ESS facility design.

### 2.4 Project Responsibilities and Schedule

- Based on your past experience is land assessment, site planning, construction permitting and site construction (tree clearing, grading, drainage installation, etc.) typically performed by others?
- Please provide a typical schedule including PV facility installation and commissioning assuming site work is complete and the site is ready for the installation of the PV infrastructure.
- Please describe what is required and who is typically responsible for the design and installation of structural foundations to support the PV/ESS infrastructure.

### 2.5 <u>Typical Costs</u>

- Assuming a cleared, graded and accessible site that has a slight grade please provide the typical cost (or cost range) for the design, procurement, installation and commissioning of a 2MW, 5MW and 10MW PV facility. A listing of the components and services included in each cost provided shall be included with your response.
- Please provide any additional costs and describe the necessary work to install a PV facility that is ESS ready, such that the installation is designed and constructed in a manner that energy storage can be easily added without the need to install additional infrastructure with the exception of the ESS (battery systems, connection to the DC system, etc.) specific equipment.

### 2.6 <u>Life Cycle and Maintenance</u>

- Provide the typical annual output per MW of a PV facility of 2MW or more located in Northern Massachusetts and Southern New Hampshire.
- Provide the anticipated useful life of components for a PV/ESS facility.
- Provide the annual efficiency degradation factor of the PV panels along with any other degradation factors associated with of the PV facility components.
- Provide typical ESS minimum acceptable depletion levels, ESS discharge efficiency factors and any other degradation factors associated with ESS components.
- Provide typical maintenance requirements of the facility components.
- Please provide a list of recommended spare components that should be kept on hand for both PV and ESS facilities.

### 2.7 References

- Provide a listing of at least five (5) clients that have engaged your organization in projects associated with the installation of PV facilities of 1MW or more on vacant land to be used as references. Please include company, name, address, phone number and contact person, along with a description of the projects completed and your company's role. It is preferred that the contacts be people who worked closely with your company on a daily basis.

### 3 SCHEDULE

The following lists the activities relevant to the RFI process. Unitil reserves the right to change these dates and will notify Vendors in such a case.

Key Dates			
Release of RFI	3:00 PM	02/11/2022	
Deadline for Questions	5:00 PM	02/21/2022	
Responses to Questions	5:00 PM	02/23/2022	
Submission Due Date	5:00 PM	03/04/2022	

Submit questions in writing via the Bonfire portal no later than Monday, February 21<sup>st</sup> by 5PM EST. Bidders should refer to the specific RFI paragraph number and page and should quote the passage being questioned. Unitil will respond to questions as per the schedule above and will send answers to Bidders as a group.

Submissions are due Friday, March 4<sup>th</sup> via the Bonfire portal no later than 5:00 PM EST.

### Utility Scale PV Siting, Site Evaluation & Permitting

**Request for Proposal** 





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### 1 Project Description

Unitil views renewable energy as a valuable resource that provides benefits to the grid and the environment. Unitil is exploring the possibility of constructing utility scale photovoltaic generating (PV) facilities within its electric service territory in New Hampshire.

To assist in this effort, Unitil is seeking a qualified firm to identify and assess potential locations to site PV facilities (and if necessary provide the realty service to acquire the desired parcel), develop the final site design and permitting package for the selected location(s) and to provide construction and permit compliance oversight of the site construction.

Each proposal should be prepared simply and economically, providing a straightforward, concise description of the Bidder's ability to meet the requirements of this RFP. Emphasis should be on completeness, clarity of content, responsiveness to the requirements, and an understanding of Unitil's needs.

By submitting a proposal, each Bidder certifies that it understands this RFP and has full knowledge of the scope, nature, quality, and quantity of the work to be performed, the detailed requirements of the services to be provided, and the conditions under which the services are to be performed. Each Bidder also certifies that it understands that all costs related to preparing and responding to this RFP, including but not limited to providing additional information or attending an interview will be the sole responsibility of the Bidder.

Should the Company find it necessary, modification to this RFP will be made by addenda.

### 2 Scope of Services

### 2.1 Land Search and Assessment

To accommodate the development/construction of a Unitil owned utility scale PV facility, the Company is looking to identify possible sites of 10 acres or more. The actual size of the lot required will depend on how much of the lot can be utilized to construct the facility. The ideal site should be located at or near our existing sub-transmission infrastructure and/or located on road frontage that has our existing 3-phase backbone infrastructure in place (3-phase power).



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### 2.1.1 Unitil Owned Property

The following two Unitil owned parcels have been identified by the Company as possible sites for PV facilities. These parcels shall have feasibility assessments performed and preliminary layouts developed. These assessments and layouts shall be based on existing conditions plans and information provided by Unitil.

### **Broken Ground**

The Broken Ground site is a 132 acre parcel located between Curtisville Road and Portsmouth Street in Concord, NH. This parcel was acquired by Unitil several years ago for the construction of Broken Ground substation.

In order to construct a PV facility on the Broken Ground parcel the City of Concord would need to modify conservation easements rights on the property.

### **Kensington DOC**

The second location is the parcel (27 acres) of the old Seacoast DOC at 114 Drinkwater Road in Kensington.

### 2.1.2 Private and Municipal Property Search

The selected firm shall perform a review of private and municipally owned property within the Unitil NH electric service territory (see Exhibit A).

Unitil will provide a map and/or list from its GIS that highlights all parcels that are at least ten acres in size and are within one quarter mile of Unitil's sub transmission system and/or are at least 5 acres in size and within one hundred feet of a three-phase 34.5 kV distribution line to assist in identifying locations. (see Exhibits B&C)

Each proposal shall include the bidder's proposed process for identifying locations and determining if a parcel is a potential site.

Potential parcels shall be reviewed and ranked (2.1.3) to determine if detailed assessments should be performed and preliminary layouts developed (see section 2.1.4).

### 2.1.3 Property Ranking

All potential properties shall be ranked based on their ability to support a PV facility. This ranking shall include purchase price, cost to construct (site work – to be estimated by awarded firm and PV installation – to be estimated by Unitil), utility upgrade requirements (to be determined by Unitil) usable land size, constructability and permit ability.

The awarded bidder shall develop the ranking methodology with input from Unitil and will rank the properties per the finalized methodology.

The top parcel(s) shall have a detailed assessment performed and a preliminary layout developed (see section 2.1.4)



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### 2.1.4 Detail Assessment

Upon Unitil's approval and authorization to move forward the top parcel(s) shall have a due-diligence detailed assessment performed to confirm site feasibility. For the purposes of this RFP, assume two (2) top parcels were identified, one 50 acres in size and the other 100 acres in size with both being located in the City of Concord.

This process may also include initial construction permitting discussions with local and state agencies to identify potential permitting challenges associated with each identified location.

A due-diligence detailed assessment shall include the following:

<u>Title Commitment Policy</u> to the extent required to identify items effecting the title that may limit the property for the proposed use.

<u>ALTA Boundary, Topographic and Utility Survey</u> – to the extent required to perform the tasks below and to assess the feasibility of siting a PV facility on the property. Existing plans and other records shall be used when possible to reduce the amount of survey work performed during this stage of the project. ALTA Boundary to be performed with information developed in the Title Commitment Policy.

<u>Wetlands Delineation</u> – to the extent required to perform the tasks below and to assess the feasibility of siting a PV facility on the property. Existing plans and other records shall be used when possible to reduce the amount of field work performed during this stage of the project.

<u>Preliminary Site Layout</u> – a preliminary site layout shall be developed indicating the proposed location of the PV facility. The plan shall be used to develop estimated site construction costs.

<u>Site Construction Cost Estimate</u> – an estimate for the cost to make the site "padready" for the installation of the PV facility shall be developed. This cost estimate shall include all construction costs to make the site ready for the installation of the PV components including, but not limited to the construction of permanent site access, tree removal, grading and the installation of site drainage.

<u>Phase 1A Archeological Sensitivity Assessment</u> – shall be performed. This study shall follow guidelines established for archeological surveys by the NHDHR.

<u>Phase 1 Environmental Site Assessment</u> – shall be performed in accordance with latest ASTM requirements.

### 2.2 Final Site Plan Development and Construction Permitting

Once the final location for the PV facility have been selected and upon Unitil's direction to move forward the selected firm will develop final site plans, assist Unitil in the construction permitting process and provide site construction oversite. For the purpose of



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this RFP assume the final site is a 50 acre parcel located in the City of Concord in which the PV facility is place on a 15 acre portion of the lot.

#### 2.2.1 Final Site Plans

The development of final site plans shall include the following:

<u>Boundary, Topographic and Utility Survey and Wetland Delineation</u> – Full site survey including wetlands delineation for the purposes of permitting and site plan development.

### Site Plans

- Existing Conditions Plan
- Site Preparation Plan
- Site Layout Plan
- Grading and Drainage Plan
- Stormwater Management and Erosion Control Plan
- Utility Plan
- Landscaping Plan
- Site Work Detail Items Necessary for Construction

<u>Site Specific Soil Mapping</u> – a certified soil scientist shall perform soil mapping of the project area in accordance with the Alteration of Terrain program.

Test pits and infiltration testing shall be performed as required for the drainage system design.

A stormwater management report shall be provided that includes an analysis of the proposed stormwater management system and its effects on the surrounding area and existing drainage infrastructure in the area.

All necessary reports, mapping and other surveying to complete site designs and construction permitting efforts.

### 2.2.2 Permit Applications

The awarded bidder shall include the cost associated with preparing the necessary applications, plans, and applicable support materials for the following:

- Local Municipal Permits (assume City of Concord)
  - o Planning Board
    - Site Plan Review
    - Conditional Use Public Utility
    - Conditional Use Wetland Buffer Impacts
  - o Conservation Commission
    - Wetland Dredge and Fill Review



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- Wetland Buffer Impact Review
- State of New Hampshire
  - o NHB
    - Natural Heritage Bureau Data Check
  - NHDES
    - Alteration of Terrain
    - Major Wetlands Dredge and Fill
  - o NHDHR
    - Request for Project Review
- US ACOE
  - o NH Programmatic General Permit (PGP)
- US EPA
  - o NPDES
    - Construction Storm Water Discharge Notice of Intent (NOI)
    - Disturbing Ground Within Wetlands

### 2.2.3 Meetings and Hearing

The awarded bidder shall attend meetings with the Client, Town/State Agencies and Boards for the processing of the permit applications. The awarded bidder shall include an allowance of sixty (60) hours for meetings and hearings.

### 2.3 Realty Services

It is Unitil's expectation that the awarded firm will utilize internal realtor services or partner with an external realtor(s) to assist in the land search efforts. It is Unitil's intent to only review parcels that are vacant lots owned by municipalities we serve or privately owned lots that a realtor feels could be acquired by either purchase or long-term lease agreement for a fair market value.

Additionally, Unitil plans to enlist such realtor(s) to assist in the acquisition of the desired parcel from a private land owner. In the event a Unitil owned parcel or municipal owned property is selected then the realty services for land acquisition may not be required.

### 2.4 Project Management

### 2.4.1 Project Manager

It is Unitil's desire to have one primary point of contact, Project Manager, with the Contractor for the coordination and completion of all tasks described in this RFP. Unitil will require routine updates regarding the progression of the Work to be provided by the Firm's assigned Project Manager. This Project Manager



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should be experienced in Work of this nature and the importance of communicating with customers regarding the project's progress.

### 2.4.2 Company Communication

The Project Manager shall participate in routine project meetings to review the status of the construction project. The frequency of such meetings will be dependent on the on-going tasks being performed. For convenience, remote meeting call-in information will be provided. Proposals shall include the assumed number of hours included for communication with company and the hourly rate in which this will billed.

### 2.5 Site Construction Oversite

After permits are received and upon Unitil's authorization to move forward the selected firm will provide construction support services throughout the duration of the site work.

### 2.5.1 Survey Services

Provide field layout services of the limits of clearing, layout of erosion control measures and construction baselines. Assume three mobilizations.

### 2.5.2 Construction Field Representative

Provide a construction field representative that will serve as the Company's onsite representations throughout the duration of site work. This individual shall have a good understanding of the various aspects of the project and have a broad understanding of current construction practices.

This effort shall include the monitoring of the quality and progress of construction, assisting the construction contractor in understanding the intent of the construction documents, confirming the site is constructed as designed and submitting weekly progress reports to the company. For the purpose of this RFP, assume that site work construction will take approximately six months. Proposals shall include the assumed number of hours included for the construction field services representative's responsibilities and the hourly rate in which this will billed.

### 2.5.3 SWPPP

The awarded bidder shall prepare a SWPPP and NOI for stormwater discharge associated with the construction and provide SWPPP and EMP inspection services. For the purposes of this RFP assume twenty-five (25 inspections).



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### 3 Project Schedule

A preliminary project schedule is included below. These dates will be updated upon the award of the project and as the project progresses and information is obtained regarding land assessment and availability.

Task	Anticipated Date
Project Awarded	3/4/2022
Feasibility Assessments and Preliminary Layouts Completed for the Broken Ground and Kensington DOC Properties	4/8/2022
Property Search and Ranking Complete	6/3/2022
Detailed Assessment(s) Complete	8/12/2022
Construction Site Selected	8/26/2022
Final Site Plans Complete and Permit Applications Submitted	Q1 2023
Begin Site Construction	Q2 2023
Site Construction Complete	Q3 2023

Each proposal shall include comments and any recommended changes to the schedule above, including the information required to be provided by Unitil and date of which the information is needed to meet the proposed milestones.

### 4 Price Proposal

Price proposals shall be based on and will be evaluated on the assumptions provided within this document.

Price proposals shall be broken down based on each subsection of section 2 (2.1.1 through 2.5.3 shall each have its own subtotal) and include descriptions of any assumptions used to developed the cost proposals.

Unitil will provide email authorization prior to commencing work on any of the tasks described in the RFP and prior to commencing with activities described in sections 2.1.4, 2.2 and 2.5. Unitil will request and approve the detailed pricing based on the selected site(s) prior to any work taking place under these sections.

At any point during this project Unitil at its sole discretion may decide to stop work at any time/stage of the project.



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### **5** Questions to Bidders

Each bidder is required to provide complete and detailed responses to all information requested. Responses to the questions below will be used in the evaluation of proposals.

### 5.1 Experience

### **5.1.1** PV Site Plan Development

Briefly describe previous work experience developing "pad-ready" site designs for PV facilities.

### **5.1.2** Construction Permitting

Briefly describe previous work experience permitting construction projects within Unitil's electric service territory in NH. Please include any experience associated with the permitting of PV facilities in your response.

### **5.1.3** Realty

Briefly describe your previous experience working with realtors to evaluate and acquire properties such as what is described in the RFP.

### 5.2 Workforce Configuration

### 5.2.1 Internal Staffing

Briefly describe your staffing plan to provide the necessary workforce to complete the tasks described in the RFP.

#### **5.2.2** Use of Subcontractors

Please indicate where you intend to make use of subcontractors throughout this project. Please identify the subcontractors and define what services these subcontractors will provide. Briefly describe your past experience utilizing each of the proposed subcontractors.

### 5.3 Communication with Company

Briefly describe the assigned project manager's work scope and communication plan with Unitil. Please indicate the number of additional projects the project manager will be supporting, or typically supports, outside of this project.

### 5.4 Additional Information

Based on your experience with work similar in scope to what is described in the RFP, please suggest supplemental or alternative tasks to be undertaken for this project to help Unitil achieve its objective. Your response may include omissions, additions or modifications to tasks outlined in the RFP.



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Any omission, addition or modification to what is outlined in the RFP shall be clearly identified in your proposal, including a detailed explanation of the reason(s) for the proposed change.

### 5.5 Work Planning

Discuss your plan to deliver the work described in the RFP throughout completion. Your description should include details on how you plan to approach the tasks in section 2.1, including your proposed approach to the private and municipal land search, tasks/site information required to adequately develop the ranking of properties, and the work and tasks required to complete the detailed assessments.

### 6 Attachments

- NH Service Territories Map NH electric territory is highlighted in orange or orange/red stripe. Red only shading indicates gas only territory.
- <u>Solar Parcel Suitability Map</u> pdf of a GIS view that show's Unitil's subtransmission lines and three-phase 34.5 kV distribution lines. Areas highlighted in green are any parcel at least 10 acres in size that are within 0.25 miles of a subtransmission line and areas shaded in orange are any parcel 5 acres or more within 100' of a three-phase 34.5 kV distribution line.

### 7 Administrative Information

### 7.1 RFP Schedule

Event	Time	Date
RFP Released		1/28/2022
Intent to Bid Deadline		2/4/2022
RFP Questions Deadline	5:00 PM EST	2/4/2022
RFP Responses to Questions	5:00 PM EST	2/9/2022
Proposal Due	5:00 PM EST	2/25/2022
Bid Awarded		3/4/2022

### 7.1.1 Questions

Submit questions and/or clarification needed via the Bonfire portal. No telephone questions will be accepted or considered. Bidders should refer to the specific RFP paragraph number and page and should quote the passage being questioned. Until will



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respond to questions as per the RFP schedule above and will send answers to Bidders as a group. Unitil will remove bidder names from the text of the questions and answers being sent. The deadline date for submission of questions is Friday, February 4<sup>th</sup> by 5:00PM EST.

#### 7.1.2 Intent to Bid

All interested bidders must submit their 'Intent to Bid' through the Bonfire portal (in the Submissions section) no later than Friday, February 4<sup>th</sup> by 5 PM EST. Submission of this intent constitutes the Bidder's acceptance of the RFP schedule, procedures, evaluation criteria and other administrative requirements. Bidders who do NOT notify us of their intent to bid are automatically blocked from further participation in this RFP.

### 7.1.3 Submission of Proposals

Proposals are due Friday, February 25<sup>th</sup>, no later than 5:00 PM EST. Submission of bids via the Bonfire website is mandatory; no hard copies will be accepted. Bids MUST be received in Bonfire by the due date and time in order to be considered.

\*\* Bonfire will automatically close the RFP at 5:00 PM EST on February 25th – we recommend NOT waiting to the last minute to upload your proposal and accompanying documents.

#### 7.1.4 No Referrals

Bidders may not refer or pass on this RFP to another Bidder without prior approval from Unitil.

#### 7.1.5 Award Notification

After the winning bid is selected, the awarded Bidder will be invited to negotiate a contract with Unitil. The remaining bidders will be notified of their selection status.

### 7.1.6 Rejection of Proposals

This RFP does not commit Unitil to select a Bidder or to award a contract to any Bidder. Unitil reserves the right to accept or reject, in whole or in part, any proposal it receives pursuant to this RFP.



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### 7.1.7 Errors in Proposals

Unitil is not liable for errors in Bidder proposals. A Bidder may correct an error in their proposal with Unitil's approval. Changes after the submission date may be made only to correct an error in an existing part of the proposal. New material may not be submitted.

### 7.1.8 Evaluation Criteria

Bidders will be evaluated on their ability to help Unitil achieve its commitment through their price offering and particular focus will be paid to the following areas of consideration:

- Experience
- Workforce Configuration
- Communication
- Work Planning

Unitil is committed to reducing company-wide direct greenhouse gas emissions from 2019 levels by at least 50 percent by 2030 and to net-zero emissions by 2050. These goals are just part of Unitil's overall commitment to environmental stewardship, sustainability, diverse workforce and corporate responsibility. Our mission is to encourage all of our suppliers and service providers to join us in our efforts.

To that end, Unitil now includes in all procurement sourcing, a Sustainability and Diversity Questionnaire to be completed by each bidder. (See Exhibit E)

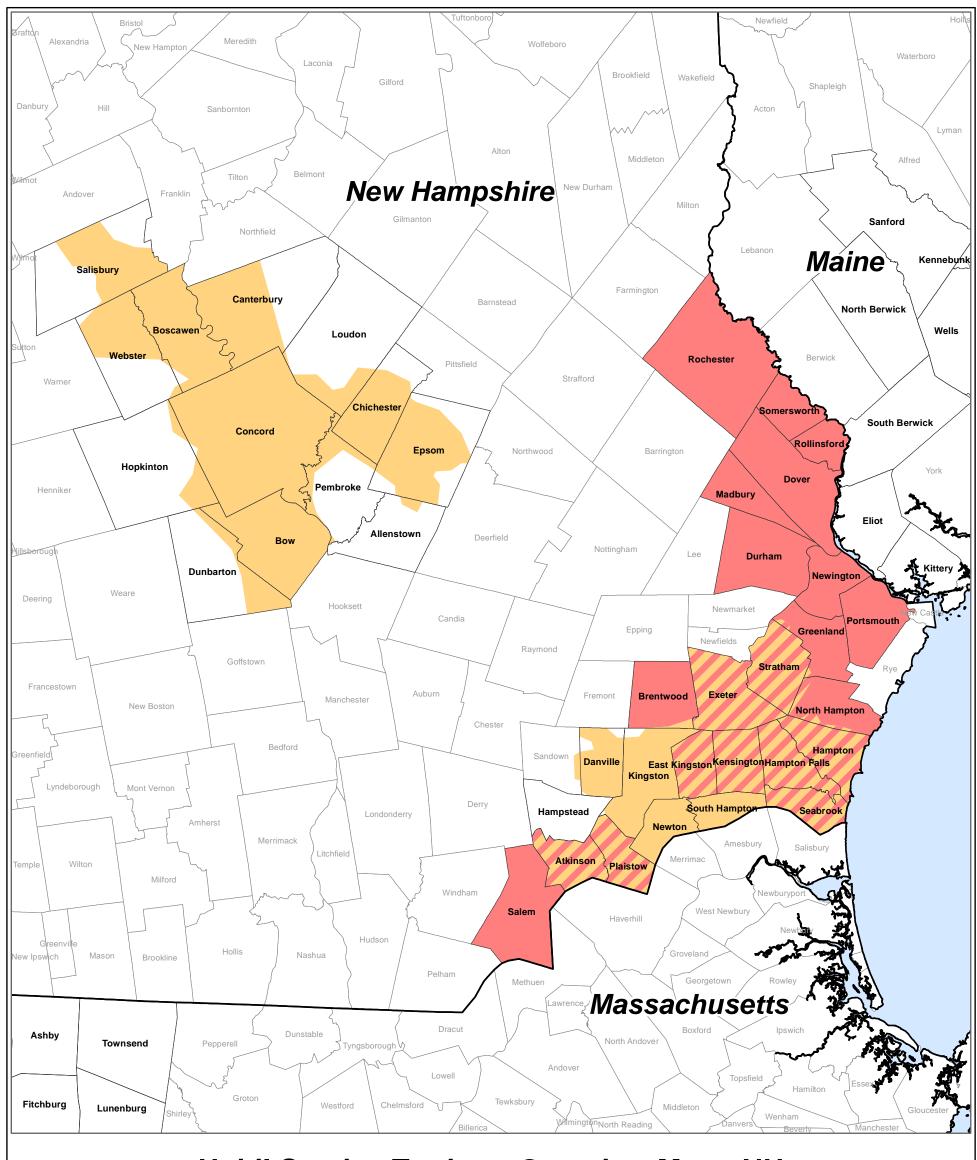
Unitil will utilize a proposal evaluation team for the evaluation of this RFP. The award(s) will be based on the proposals judged to be in the best interest of Unitil and the judgment in this regard shall be considered final.

Unitil reserves the right to invite the apparent top bidders to provide revised pricing which will be accepted and understood as a best and final offer.

### 7.1.9 Contract Terms and Conditions

Contractual terms and conditions will be negotiated with the selected Bidder after initial selection. Bidders should review terms and conditions of our Master Agreement attached as Exhibit D and identify to Unitil in their proposals, any exceptions that will be taken.

Other terms and conditions, may be included, as appropriate.



### **Unitil Service Territory Overview Map - NH**

ELECTRIC GAS

UES Capital	
Allenstown	Dunbarton
Boscawen	Epsom
Bow	Hopkinton
Canterbury	Loudon
Chichester	Pembroke
Concord	Salisbury
	Webster

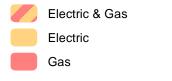
<b>UES Seacoast</b>		
Atkinson	Kensington	
Danville	Kingston	
East Kingston	Newton	
Exeter	Plaistow	
Hampstead	Seabrook	
Hampton	South Hampton	
Hampton Falls	Stratham	

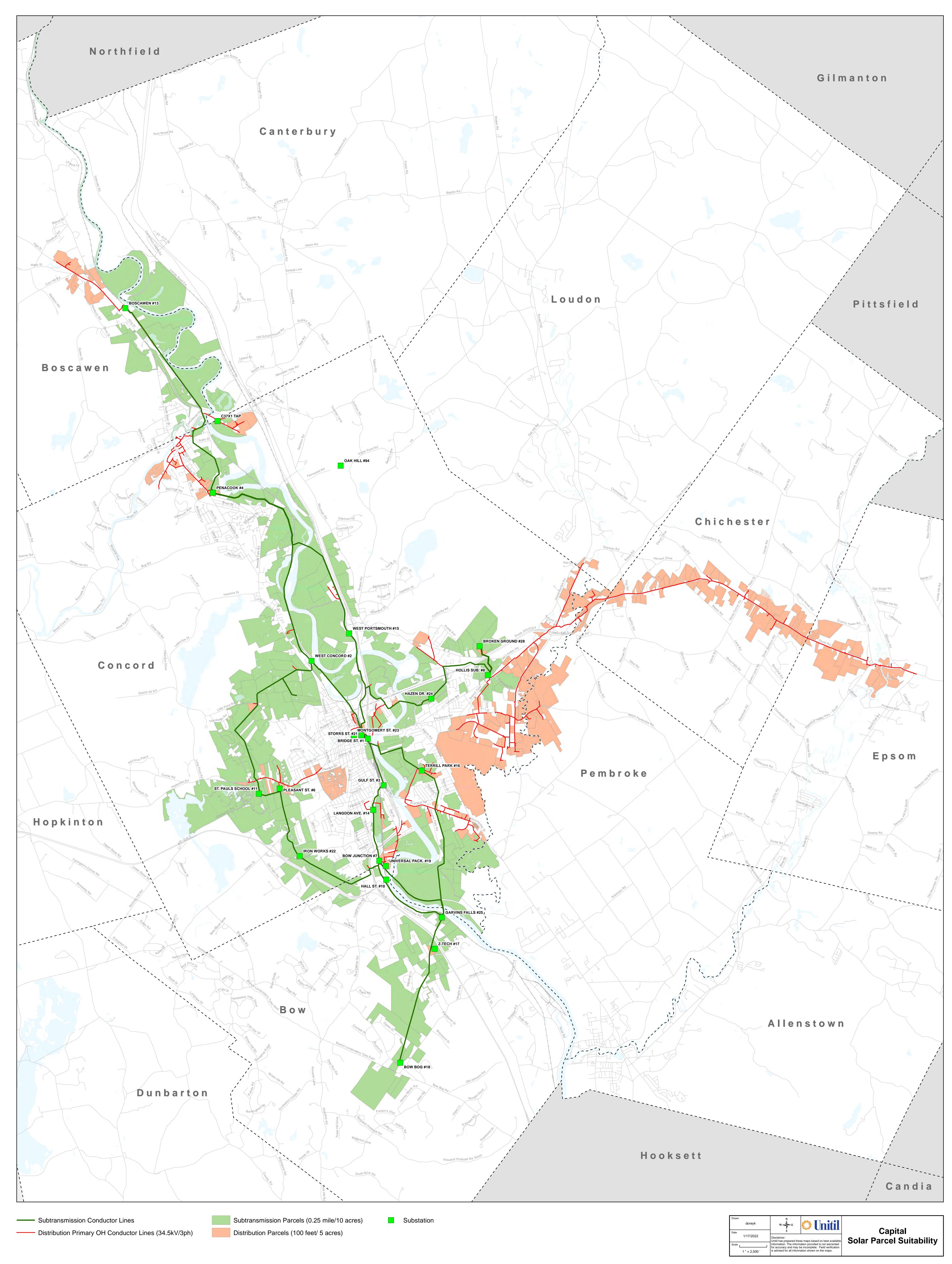
Atkinson	Hampton	Portsmouth
Brentwood	Hampton Falls	Rochester
Dover	Kensington	Rollinsford
Durham	Madbury	Salem
East Kingston	Newington	Seabrook
Exeter	North Hampton	Somersworth
Greenland	Plaistow	Stratham

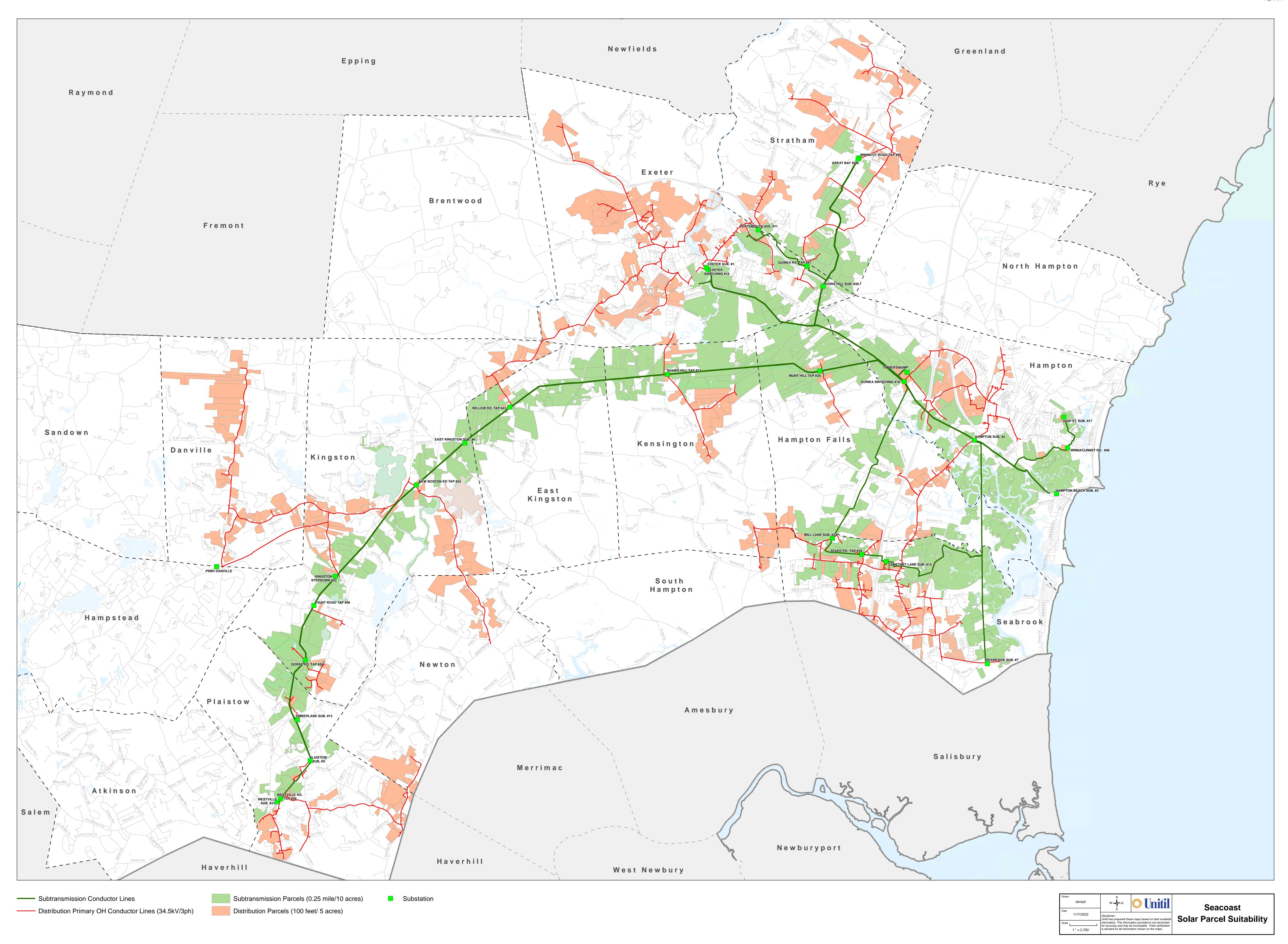
**Northern Utilities NH** 











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### Proposal:

# 2022 Utility Scale PV Siting, Site Evaluation & Permitting

Prepared for





February 25, 2022



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

**TFMoran Inc.** 48 Constitution Drive, Bedford, New Hampshire 03110 ~ Tel: (603) 472-4488 www.tfmoran.com



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Section 1: Reply to Bidder Questions



### **Section 1: Reply to Bidder Questions**

### 5. Questions to Bidders

### **5.1 Experience**

### **5.1.1 PV Site Plan Development**

TFMoran Inc. has had the opportunity to service the Utility industry for over 50 years, most recently having provided services to Unitil, Eversource Energy, New Hampshire Electric Cooperative and Liberty Utilities (formally National Grid). TFMoran has provided a complete relevant project experience list in Appendix A, with a sample of recent projects specific to the proposed RFP as following;

### Industrial Roofing Corporation (IRC), Yankee Solar Array, Dublin, NH

Site Plan and permitting for a 125kW Ground Mounted Solar Array at the Yankee Publishing Facility. Tasks include layout and landscaping improvements. Permits include a NHDOT Driveway Permit and Town of Dublin Site Plan Review, Driveway and Building Permits.

### Unitil, Broken Ground Substation and Eversource Energy, Curtisville Substation, Concord, NH:

Site plan and permitting to construct one (1) transmission and one (1) distribution substations, including structures to house electrical equipment, access, parking, and stormwater management areas. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NHDES AoT and Wetland Permits, Concord Subdivision, Site Plan, Conditional Use Permit, FAA Determination of No Hazard. Daily construction compliance monitoring inspections to ensure compliance with all local, state, and federal permitting associated with the project (City Site Plan, City CUP, City Subdivision, NHDES AoT, NHDES Dredge and Fill, FAA.

### Unitil, Gulf Street Substation Reconstruction, Concord, NH:

Site plan and permitting to reconstruct the existing Unitil Gulf Street Substation and adjacent overhead electric lines. Tasks include layout and access design. Permits include City of Concord Planning Board Site Plan Approval and FAA Determination of No Hazard.

### **Unitil, Kingston Distribution Substation, Kingston, NH:**

Site Plan and permitting for upgrades to existing distribution substation. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, and Municipal Planning Board, Conservation Commission permits. Boundary and Topographic Surveys. Construction Layout.

### Eversource Energy, Shattuck Laydown Area, Newington, NH:

Site Plan and permitting for construction of a 10-acre gravel laydown and staging yard associated with the Eversource Seacoast Reliability Project. Tasks include layout, grading, access, parking, and stormwater management design. Permits include NHDES AoT and Wetland Permit, and Town of Newington Planning Board Site Plan Approval.



### **5.1.2 Construction Permitting**

TFMoran has extensive experience completing site assessment and permit application projects in New Hampshire. Our successful experience with the various levels of permitting is highlighted in the TFM Experience List attached to this proposal. We have maintained key relationships with permitting authorities at the various national, state, and local levels that are necessary to follow through with the permitting process.

### **5.1.3 Realty**

TFMoran regularly works with realty professionals to assist clients in evaluating and obtaining properties for the purposes of land development, including mitigation parcels due to unavoidable wetland impacts. For this project we are proposing to subcontract with a respected regional commercial realtor to assist Until in the land search efforts. Specific project examples can be provided if so requested.

### 5.2 Workforce Configuration

### 5.2.1 Internal Staffing

TFMoran incorporates a tiered workforce configuration to insure appropriate staffing for all of our projects. This system provides a principal to provide upper-level oversight of the project and to confirm appropriate quality control prior to issuance of plans and reports. Underneath the Principal is the Project Manager who is responsible for the day-to-day administration of the project. This individual is the primary point of contact with the Client and corresponds directly with subcontractors, permit agencies and the public in conveying the projects message and design specifications. The Project Manager also oversees the support staff and provides guidance on design related items, engaging in components of the design as warranted. The project support staff typically consists of one to two engineers and an environmental scientist who will prepare the project deliverables. These individuals are in turn assisted by administrative staff that provides clerical support and graphic technicians who provide AutoCAD based drafting or presentation support materials such as renderings or elevations. As part of this workforce configuration each tier is responsible for their component of the project but to also have an understanding of the responsibilities of the next tier. This provides for an appropriate amount of redundancy in staffing such that the project may move on multiple parallel paths while still maintaining the integrity and consistency required to generate a successful project.

TFM also has an experienced survey staff of licensed professionals and experienced field personnel available. We are experienced in all areas outlined, utilize up to date equipment encompassing Total Station, Robotic Total Station, and survey grade GPS technology. We are able to meet the technical specifications outlined in the RFP and are competent in the required deliverable formats.



#### **5.2.2** Use of Subcontractors

TFMoran has formed a strategic partnership with several subcontractors in areas of expertise that TFM does not provide. Relative to the proposed project this would consist of a Realtor and Archaeologist. TFM proposes to team with NAI Norwood as our realtor subcontractor and Monadnock Archaeological Consulting, LLC as our Archaeological subcontractor. We have previously/presently teamed with both firms specifically on similar projects and the familiarity between our firms through past work will continue to generate successful projects.

### 5.3 Communication with Company

A successful project takes teamwork and effective communication. A successful project manager has a communication plan for each project component and communicates pertinent information about project deliverables to the client, project team and public while maintaining an understanding of their audience. At the onset of the project your assigned Project Manager, Nicholas (Nick) Golon, would work with Unitil to devise a communication plan that best fits Unitil's needs and implement this plan through the duration of the project. Likely communication methods would include weekly email updates on work completed to date, work in progress, and upcoming key milestones. These updates would be supplemented by phone calls on time sensitive issues and to confirm levels of responsibilities between TFM and Unitil. Prior to agency or public meetings, a strategy session via teleconference or in person would be held to confirm responsibilities and provide a consistent project message.

As Project Manager, Nick will be responsible for the day-to-day administration of the project and be your one primary point of contact. He will correspond directly with you the Client, subcontractors, permit agencies and the public in conveying the projects message and design specifications in addition to overseeing the support staff, providing guidance on design related items and engaging in components of the design as warranted. Outside of this project Nick oversees our Utility Division and corresponds regularly with numerous clients, agencies, subcontractors and project team members to effectively lead this component of our business.

### **5.4 Additional Information**

TFM would suggest the following additional scope not specifically noted in the RFP, which we have included our proposal.

#### Site Plans:

This Plan Set will include;

- Cover Plan
- Driveway Plan & Profile
- Sight Distance Plan



• Lighting Plan

#### Traffic:

A Trip Generation Memo will be provided to address the anticipated traffic generated by the proposed facility.

#### Renderings:

Due to the visual nature of the proposed project, TFM will develop a 3D rendering of the subject development for use in conveying the project to the anticipated review agencies.

### Agency Comment Allowance:

TFM has included an allowance of 10% of the estimated budget amount for the Site Plans to respond to review comments received by government agencies and their consultants.

### **Permit Applications**

- o NH Fish & Game (NHFG)
  - Wildlife Assessment per Env-Wq 1503.19(h)
- Federal Aviation Administration (FAA)
  - Form 7460-1 Notice of Proposed Construction or Alteration
  - Form 7460-2, Part 2

### 5.5 Work Planning

After consummation of a contract TFMoran would begin the project with a meeting with Unitil to discuss project deliverables, expectations, and responsibilities of each party and a communication plan for the project. With this meeting complete and with Unitil's authorization, TFM would concurrently initiate the Feasibility Assessment and Private and Municipal property search. AS stated in our proposal TFM will team with a respected regional commercial realtor to assist in the land search efforts. It is our understanding that the property search will be conducted based upon specific criteria identified in the Request for Proposal (RFP), supplemented with additional criteria TFM deems appropriate to accurately evaluate the subject parcels. The result of the property search will yield a ranking matrix evaluating pertinent property elements to be utilized in the property ranking. The matrix will be developed using a Microsoft Excel based spreadsheet with dynamic/sortable elements. Our process for identifying and evaluating suitable locations will include but not be limited to utilizing the following web-based services:

- Assessor Data including: Vision Appraisal, Avatar, Warren Group
- Municipal Geographic Information Systems (GIS)
- NH GRANITView (State GIS)
- US Fish & Wildlife Service IPaC
- NH Natural Heritage Bureau DataCheck Tool



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

- Natural Resources Conservation Services Web Soil Survey
- NH Department of Environmental Services Aquatic Resource Mapper, Permit Planning Tool and Wildlife Action Plan
- NH Department of Transportation Project Viewer
- NH Division of Historical Resources Enhanced Mapping & Management Information Tool (EMMIT)
- USGS TopoViewer
- Federal Aviation Administration Notice Criteria Tool
- EPA RE-Powering Mapper
- Zillow, Trulia, LoopNet, NEREN (MLS), New England Commercial Property Exchange Assessor's Databases, and other public records

Using the matrix, TFM and our realtor will rank the subject properties based on the criteria listed in the RFP (purchase price, cost to construct, utility upgrade requirements, usable land size, constructability, and permit availability), with the acknowledgment that several elements of the above are to be determined by Unitil as stated in the RFP. Our expectation for each evaluated parcel will consist of a list of comparable properties and an associated narrative to assist in determining an anticipated market value of the property.

TFM and our commercial realtor will then work with Unitil to select the appropriate property to advance to the detailed assessment stage. Once the subject parcel(s) are selected, TFM would verify permit assumptions and advance our due-diligence, with the first items being the potential presence of endangered species or archaeological resources as these items can present long lead times to resolve, which would impact the overall project schedule. Based on the results of the detailed assessment TFM would offer recommendations as which parcels to proceed with.

Once the subject development site is selected TFM will initial boundary research and commencement of boundary and topographic survey's once the initial research and wetland delineation is complete Once the existing conditions for the site have been completed TFM would further our due-diligence with coordinating the siting of the Utility Scale PV with Unitil. This siting effort would account for the electrical configuration requirements of Unitil, and balancing potential environmental impacts with the construction of the Utility Scale PV. With a conceptual location for the Utility Scale PV and associated site features approved by Until, TFM would proceed through engineering design which would include site plan preparation and stormwater modeling for the intended improvements. The site design would then be refined through coordination with Unitil and varies permit agencies prior to permit submittal. TFM would attend meetings with Unitil for the processing of project permits, performing functions as requested by Unitil to provide a concise project message. With permits successfully obtained TFM would issue a final set of site plans for construction, prepare the Stormwater Pollution Prevention Plan, file the NPDES construction general permit and schedule survey crews to provide field layout of clearing limits and base lines. TFM can also provide construction administration services to Unitil to provide a smooth transition from the design/permit phase of the project into the construction phase of the project.



Section 2: Project Schedule



February 25, 2022

### Unitil Utility Scale PV Concord, NH

### **Anticipated Permits:**

- City of Concord
  - Conservation Commission
    - Wetland Dredge & Fill & Wetlands Buffer Impact Review
  - Planning Board
    - Site Plan Review
    - Conditional Use Public Utility
    - Conditional Use Wetlands Buffer Impacts
- State of New Hampshire
  - o Department of Environmental Services
    - Alteration of Terrain (AoT)
    - Major Wetland Dredge & Fill
  - o NH Natural Heritage Bureau
    - NHB Data-check
  - o NH Division of Historical Resources
    - Request for Project Review

NHDES AoT Submittal NHDHR Submittal

- Federal
  - o US ACOE Section 404
    - New Hampshire Programmatic General Permit (PGP)
  - o US EPA
    - NPDES eNOI
  - o Federal Aviation Administration
    - Form 7460-1 Notice of Proposed Construction or Alteration

### Tentative Submittal/Meeting Schedule\*:

3/4/22	Project Award
4/8/22	Feasibility Assessments and Preliminary Layouts Completed for the Broken
	Ground and Kensington DOC Properties
6/3/22	Property Search and Rankings Complete
8/12/22	Detailed Assessment(s) Complete
8/26/22	Construction Site Selected
9/2/23 - 10/3/23	Conduct Survey and prepare Existing Conditions Plan
10/3/23 - 11/16/22	Site Plan Design & Application Development
11/16/22	City of Concord Conservation Commission Submittal
	City of Concord Planning Board Submittal
	NHDES Wetland Submittal

Unitil Utility Scale PV Concord, NH		February 25, 2022 Page 2 of 2
12/14/22	City of Concord Conservation Commission Meeting (7:00 pm)	
12/21/22	City of Concord Planning Board Meeting (7:00 pm)	
	Anticipated NHDHR Response	
1/14/23	City of Concord Conservation Commission Meeting (7:00 pm)	
1/16/23	Submit FAA Form 7460-1	
1/18/23	City of Concord Planning Board Meeting (7:00 pm)	
2/1/23	Anticipated NHDES Wetland Approval	
3/1/23	Anticipated US ACOE Approval	
	Anticipated FAA Approval	
3/2/23	Submit EPA eNOI	
3/16/23	EPA eNOI Approval	
Q1 2023	Final Site Plans Complete and Permit Applications Approve	ed
Q2 2023	<b>Begin Site Construction</b>	
Q3 2023	Site Construction Complete	

<sup>\*</sup>Schedule subject to modification contingent on Town/State review timelines and agenda availability.



Section 3: Pricing Information



February 25, 2022

Unitil Energy Systems 6 Liberty Lane West Hampton, NH 03842

RE: Proposal for Engineering & Survey Services
Utility Scale PV – Siting, Site Evaluation & Permitting
Location to be Determined (NH)

TFMoran, Inc. (TFM) is pleased to provide this proposal to provide Engineering & Survey services for the Siting, Site Evaluation & Permitting for utility scale photovoltaic generating (PV) facilities within Unitil's electric service territory in New Hampshire. We understand our scope to include identifying and assessing potential locations to site PV facilities (and if necessary, provide the realty service to acquire the desired parcel), develop the final site design and permitting package for the selected location(s) and to provide construction and permit compliance oversight of the site construction. Our scope of work is as follows:

#### **Scope of Services:**

#### 2.1 LAND SEARCH AND ASSESSMENT

### 2.1.1 Unitil Owned Property

TFM will prepare feasibility assessments evaluating the Broken Ground Substation site, located on Portsmouth Road in Concord, NH, and the Kensington DOC site, located on Drinkwater Road in Kensington, NH, for the proposed use as requested. The deliverable(s) for the feasibility assessments will be similar to the work previously prepared by TFM during evaluation of the original construction of the Unitil Broken Ground and Eversource Curtisville Substations. We anticipate the Feasibility Assessment will include the following;

- Zoning Due-Diligence to establish likely permitting requirements and limitations on the subject parcels;
- Schematic Site Layout/Site Prep Plan
- Schematic Grading & Drainage Plan
- Details for site work items suitable for construction
- Order of Magnitude Construction Cost Estimate based on Schematic Plans

### 2.1.2 Private and Municipal Property Search

TFM will subcontract with a respected regional commercial realtor to assist in the land search efforts. We will perform a review of private and municipally owned property within the Unitil NH electric service territories as identified on the Capitol Solar Parcel Suitability and Seacoast Solar Parcel Suitability exhibits provided. It is our understanding that the property search will be conducted based upon specific criteria identified in the Request for Proposal (RFP), supplemented with additional criteria TFM deems appropriate to accurately evaluate the subject parcels. The result of the property search will yield a ranking matrix evaluating pertinent property elements to be utilized in Section 2.13 below. The matrix will be developed using a Microsoft Excel based spreadsheet with dynamic/sortable elements. Our process for identifying

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Location to be Determined (NH)

Utility Scale PV – Siting, Site Evaluation & Permitting

and evaluating suitable locations will include but not be limited to utilizing the following webbased services:

- Assessor Data including: Vision Appraisal, Avatar, Warren Group
- Municipal Geographic Information Systems (GIS)
- NH GRANITView (State GIS)
- US Fish & Wildlife Service IPaC
- NH Natural Heritage Bureau DataCheck Tool
- Natural Resources Conservation Services Web Soil Survey
- NH Department of Environmental Services Aquatic Resource Mapper, Permit Planning Tool and Wildlife Action Plan
- NH Department of Transportation Project Viewer
- NH Division of Historical Resources Enhanced Mapping & Management Information Tool (EMMIT)
- USGS TopoViewer
- Federal Aviation Administration Notice Criteria Tool
- EPA RE-Powering Mapper
- Zillow, Trulia, LoopNet, NEREN (MLS), New England Commercial Property Exchange Assessor's Databases, and other public records

#### 2.1.3 Property Ranking

Using the matrix derived under Section 2.1.2, TFM and our commercial realtor will rank the subject properties based on the criteria listed in the RFP (purchase price, cost to construct, utility upgrade requirements, usable land size, constructability, and permit availability), with the acknowledgment that several elements of the above are to be determined by Unitil as stated in the RFP. Our expectation for each evaluated parcel will consist of a list of comparable properties and an associated narrative to assist in determining an anticipated market value of the property.

#### 2.1.4 Detail Assessment

TFM will prepare a due-diligence detailed assessment of the two (2) highest-ranking parcels identified in the Property Ranking task 2.1.3 to evaluate site feasibility. As required by the RFP we have assumed the parcels will be a 50-acre parcel and 100-acre parcel, both being located in the City of Concord.

#### Title Commitment Policy:

TFM will review the Title Commitment to interpret potential development limitations associated with the proposed use. We have carried an allowance of (16) hours total for this task.

Estimate:

#### ALTA Boundary, Topographic and Utility Survey:

TFM proposes use of existing plans of record and City GIS information to fulfill the requirements of this task. No site survey is anticipated to complete this task as described. Anticipated site survey costs, subject to final site selection, are addressed in section 2.2.1.

Estimate:

# Wetland Delineation:

TFM proposes use of the US Fish and Wildlife Service National Wetlands Inventory Mapper to complete this task as described. To verify the anticipated locations a TFM NH Certified Wetland Scientist will conduct a site-walk at the selected locations to confirm their approximate locations. We have carried an allowance of (24) hours total for a wetland scientist relating to this task.

Estimate:

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### Preliminary Site Layout:

TFM will prepare a Preliminary Site Layout Plan showing the layout of the Project on the subject parcels with dimensional information and preliminary grading & drainage design. The plan shall be used to develop estimated site construction costs.

Estimate:



#### **Site Construction Cost Estimate:**

TFM will prepare order of magnitude construction cost estimates based on the preliminary site layout plans prepared.

Estimate:



# Phase IA Archeological Sensitivity Assessment:

TFM will coordinate with an Archeological Consulting firm to provide a Phase IA Archeological Sensitivity Assessment for the subject properties. This study will follow guidelines established for archaeological surveys by the New Hampshire Division of Historic Resources (NHDHR).

Estimate:



#### Phase 1 Environmental Site Assessment:

TFM or their subconsultant will provide a Phase 1 Environmental Site Assessment in accordance with ASTM E 1527-05 for the subject properties.

Estimate:



# 2.2 FINAL SITE PLAN DEVELOPMENT AND CONSTRUCTION PERMITTING

#### 2.2.1 Final Site Plans

As directed in the RFP TFM assumes the final site is a 50-acre parcel located in the City of Concord in which the PV facility is located on a 15-acre portion of the lot.

#### Boundary, Topographic and Utility Survey and Wetland Delineation:

TFM will conduct research at the Town/City and County Registry of Deeds. TFM will conduct an accurate instrument survey of the subject parcel. TFM will process the field survey data to confirm compliance with the NH Board of Land Surveyors Rules & Regulations. TFM will analyze the field and record boundary evidence and determine the parcel boundaries based on our analysis.

TFM will locate physical improvements on the subject tract and the adjacent roadway. TFM will locate the delineated wetlands as described below. TFM will locate the visible, above ground portions of utilities immediately adjacent to the subject tracts. TFM will show underground utilities based on maps provided by utility owners.

TFM will prepare an Existing Conditions Plan for use in Site Plan Engineering for the proposed development.

TFM assumes the parcel will be of average terrain and geometry with readily available access. This estimate is based on the average time and cost for such services and may vary upon the existing field conditions at the time of the field survey and the actual services performed.

Estimate:



A TFM wetland scientist will flag the jurisdictional wetlands on the subject parcels within the area of anticipated work and provide field documentation of wetland boundaries using Corps of Engineers wetland data forms. We have carried an allowance of (3) days for this task.

Estimate:

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#### Site Plans:

TFM will prepare a Site Plan package showing the layout of the Project on the selected parcel with dimensional information, grading and drainage design (including oil containment), erosion control, utility service design, landscape design, lighting, and details of site work items suitable for construction, stamped by a licensed State of New Hampshire Professional Engineer. This Plan Set will include;

- Cover Plan
- **Existing Conditions**
- Site Preparation Plan
- Site Layout Plan
- Grading, Drainage & Utility Plan
- Stormwater Management/Erosion Control Plan
- Driveway Plan & Profile
- Sight Distance Plan
- Landscaping Plan
- Lighting Plan
- Details for site work items suitable for construction

Estimate:

### Site Soils Mapping:

Site-specific soils mapping is required per the NH Department of Environmental Services, Alteration of Terrain permitting program. As part of this proposal, TFM will have a NH Certified Soil Scientist map readily accessible and identifiable surficial soil types at the Project site.

Estimate:

#### Stormwater Management Report:

A stormwater management report will be provided that includes an analysis of the proposed stormwater management system and its effect on the surrounding area and existing drainage infrastructure in accordance with City and State requirements. TFM will perform test pits and infiltration testing as required for the drainage systems (backhoe cost billed as a reimbursable expense).

Estimate:



#### Traffic:

A Trip Generation Memo will be provided to address the anticipated traffic generated by the proposed facility.

Estimate:



#### Renderings:

Due to the visual nature of the proposed project, TFM will develop a 3D rendering of the subject development for use in conveying the project to the anticipated review agencies.

Estimate:



# Agency Comment Allowance:

TFM has included an allowance of 10% of the estimated budget amount for the Site Plans to respond to review comments received by government agencies and their consultants.

Estimate:



#### 2.2.2 **Permit Applications**

TFM will prepare applications, plans, and applicable support materials for the following filings with the City, State and Federal Government.

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# City of Concord

- Planning Board
  - Site Plan Review
  - Conditional Use Public Utility
  - Conditional Use Wetland Buffer Impacts
- Conservation Commission
  - Wetland Dredge and Fill Review
  - Wetland Buffer Impact Review

#### • State of New Hampshire

- O NH Natural Heritage Bureau (NHB)
  - NHB DataCheck
- o NH Fish & Game (NHFG)
  - Wildlife Assessment per Env-Wq 1503.19(h)
- NH Department of Environmental Service (NHDES)
  - Alteration of Terrain (AoT)
  - Major Wetlands Dredge and Fill (including functional assessment)
- NH Division of Historical Resources (NHDHR)
  - Request for Project Review (RPR)

#### Federal

- US Army Corps of Engineers (ACOE)
  - NH Programmatic General Permit (PGP)
- **o** US Environmental Protection Agency (EPA)
  - NPDES
    - Construction Stormwater Discharge Notice of Intent (NOI)
- Federal Aviation Administration (FAA)
  - Form 7460-1 Notice of Proposed Construction or Alteration
  - Form 7460-2, Part 2

#### NH Fish & Game:

TFM will coordinate with NHFG to determine the need for endangered species studies. If studies beyond the wildlife assessment conducted under task 2.1.4. are required, they will be performed as an Additional Service at the Clients direction.

#### NH Division of Historical Resources:

It is assumed that a Phase 1A archaeological sensitivity assessment is performed under task 2.1.4.

# 2.2.3 Meetings & Hearings

TFM will attend meetings with the Client, City/State Agencies and Boards for the processing of the permit applications. TFM has included an allowance of (60) hours. If additional meetings are needed, they will be attended as directed by the Client and billed on a time and materials basis.

# 2.3 REALTY SERVICES

In the event that Realty (Brokerage) services are requested for the buyer side of any parcels, the commercial realtor could be contracted to represent in the negotiations of that project. The brokerage services fee would be 3% of the total transaction, paid only if the property transfers. In

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most cases of listed property this fee is paid by the seller and the broker will endeavor to do so. In the event that it is unlisted, the broker requests that the fee be paid at closing by the Buyer.

# 2.4 PROJECT MANAGEMENT

# 2.4.1 Project Manager

Unitil will have one primary point of contact, Nicholas (Nick) Golon, PE, who serves as a Principal in TFMoran's Corporate office located in Bedford, NH. Nick has served as Project Manager for approximately 25 Unitil projects covering approximately 10-years, dating back to the Kingston Distribution Substation in Kingston, NH (built) and most recently the Gulf Street Substation in Concord, NH (built) and the 3348/3350/3359 Line (permitted) in Hampton, Hampton Halls and Seabrook, NH.

#### 2.4.2 Company Communication

TFM's Project Manager will participate in routine project meetings to review the status of the construction project. It is our understanding the frequency of such meetings will be dependent on the on-going tasks being performed, and that for convenience, remote meeting call-ins will be conducted. TFM has provided an allowance of (26) hours for this task, which assumes weekly status meetings, not to exceed an hour, over the anticipated 6-month duration of design and permitting of the project.

#### 2.5 SITE CONSTRUCTION OVERSITE

# 2.5.1 Survey Services

TFM will provide field layout of the Clear Limits for the proposed PV facility, layout of Silt Fence and Erosion Control Measures, and layout of Construction Baseline including Vertical Control. Three mobilizations have been assumed for this work at a daily rate of staff support time.

#### 2.5.2 Construction Field Representation

TFM will provide a construction field representative to serve as the owner's on-site representation. This individual will have a good understanding of the various aspects of the project's permitting and construction and have a broad general understanding of current construction practices. TFM has assumed a construction schedule of six months, with the construction field representative onsite 5-days a week, with an 8-hour workday, at a rate of hour. This schedule may be modified by Unitil as necessary based on the needs of the project with appropriate notice.

Typical Responsibilities include;

- Develop a thorough familiarity with the purpose of the project, along with the owner's requirements, with the design, and with the contract documents.
- Develop a thorough understanding of the project budget.
- Maintain continuous communication with the owner and contractor.
- Observe the quality and progress of construction to determine, in general, that it is proceeding in accordance with the contract documents and schedule.
- Assist the contractor's superintendent in understanding the intent of the contract documents. In particular, be present and observe and inspect the following procedures to ensure compliance with contract specifications:
  - o Shaping/grading and compaction of slopes;

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Installation of drainage and under-drain(s);

- o Proper depth of pavements, gravel selects; and fills
- o Installation of foundations;
- o Witness field tests and review soil analysis, density, concrete, rebar, reports.
- Work with the owner and contractor to provide speedy resolution of field changes and/or site related items.
- Attend meetings as the owner's representative. Submit written meeting notes to the owner following each meeting.
- Create and submit to owner electronic summary report upon completion of on-site evaluations.
- Meet, verify identification, and accompany inspectors from local, state, and/or federal
  agencies having jurisdiction over the project. Immediately report the results of such
  inspections to the owner, construction manager or general contractor, and the engineer.
  Report on any corrective actions.
- Immediately notify the owner, construction manager or general contractor, of any work which, in the opinion of the evaluator is substandard or otherwise not in accordance with the contract documents.
- Evaluate, log, and make recommendations on requests for change orders.
- Maintain separate files of approved and disapproved change orders.
- Participate in final inspections and review as-built drawings for project turnover.

#### 2.5.3 SWPPP

TFM will prepare a Stormwater Pollution Prevention Plan (SWPPP) and electronic Notice of Intent (eNOI) for stormwater discharges associated with construction activity under a NPDES Construction General Permit (CGP) to be filed with the Environmental Protection Agency (EPA).

Estimate:

TFM will provide SWPPP and Environmental Monitor Report (EMR) inspection services for the subject property and coordinate necessary sediment and erosion control requirements with the Contractor and Owner. An EMR is required for projects requiring an NHDES AoT Permit whereby 5 or more acres will be disturbed. The inspection schedule is dependent on the duration of the project and the amount of precipitation received within a given timeframe (0.50 inch of rainfall) but as directed by the RFP, we have provided budget to cover (25) inspections, noting additional inspections may be required due to rainfall events in excess of (0.50) inches or fewer inspections due to frozen conditions during winter construction. We have assumed a rate of

# Estimate:

#### **Assumptions/Exclusions:**

This proposal is only for work outlined above and is subject to the regulations in place at the time of its preparation. TFM has assumed reasonable recovery and agreement between field monuments and plans and deeds of record with no disputed boundaries. Should we find a significant boundary dispute the Client will be contacted with anticipated costs. The following items have not been included in this proposal but can be performed by our office at the Client's request. TFM will provide a proposal for the Client's authorization prior to beginning such additional work if requested:

- Costs associated with task items 2.1.4, 2.2.1, 2.2.2, have been estimated based on prior project experience consisting of similar scope, and are subject to revision upon final site selection.
- The survey estimate is based on the average time and cost for such services and may vary upon the existing field conditions at the time of the field survey and the actual services performed.

Unitil Energy Systems, Inc. d/b/a Unitil Docket No. DE 22-Exhibit JSD-4(a) Page 20 of 50

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Unitil February 25, 2022 Re: Proposal for Engineering & Survey Services

Location to be Determined (NH)

Significant revisions to the development components/layout requested by Client or Regulatory Agencies after commencement of site design will be additional services.

- TFM assumes no zoning relief is required for the project. We assume this will be evaluated during the detail assessment phase of the project.
- We have excluded Easement Plans, legal descriptions, etc.

Utility Scale PV – Siting, Site Evaluation & Permitting

- We assume that there is adequate capacity in the adjacent utilities to service this project, and that no offsite utility studies or designs will be required.
- We assume the existing adjacent roadways are adequate for access to this project without improvements, so we have not included a formal Traffic Impact and Access Study (TIAS) and we assume that no offsite roadway designs will be required.
- This proposal does not include structural design for any onsite retaining walls, nor any retaining walls or underpinning to support adjacent structures.
- We have not included Geotechnical Studies, Wetlands Studies (other than those identified), Hazardous Waste Studies Fiscal Impact Studies, Noise Studies, Air Quality Studies, Wildlife Studies (other than those identified), Phase 1B Archeological Studies or other technical studies and reports not included above.

#### **Compensation:**

TFM will complete this Scope of Services for the Estimated Sums shown below plus miscellaneous reimbursable expenses.

# **Schedule of Fees:** 2.1.1 **Unitil Owned Property Search** 2.1.2 **Private and Municipal Property Search** 2.1.3 **Property Ranking** 2.1.4 **Detail Assessment** Section 2.1 Subtotal 2.2.1 **Final Site Plans** 2.2.2 **Permit Applications** 2.2.3 **Meetings & Hearings** Section 2.2 Subtotal 2.4.1 **Project Manager** NA 2.4.2 **Company Communication** Section 2.4 Subtotal 2.5.1 **Survey Services** 2.5.2 **Construction Field Representative** 2.5.3 SWPPP (\$250 per inspection) Section 2.5 Subtotal **Total:**

<sup>\*</sup>Section 2.3 – no cost estimate provided as it is assumed Unitil, and the realtor will enter into a separate agreement should they be contracted for the land acquisition.

Unitil Energy Systems, Inc. d/b/a Unitil

Docket No. DE 22
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Unitil

Re: Proposal for Engineering & Survey Services

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Utility Scale BY Siting Site Evaluation & Permitting

Utility Scale PV – Siting, Site Evaluation & Permitting Location to be Determined (NH)

Fees that may be required by City, State, and Federal governments and/or other agencies shall be paid directly by the Client. In general, normal and typical reimbursable expenses for projects of this type and scope run approximately of the estimated budget cost. TFM will bill Client monthly and the bill will reflect work completed at the time of the billing.

We appreciate this opportunity to provide you with a proposal for this project and are available to meet with you at any time to discuss this project, the scope of work or budget.

We look forward to working with you on another successful project!

Sincerely,

**TFMoran Inc.** 

Nicholas Golon, P.E.

Wild Yolon

Principal



#### UNITIL UTILITY SCALE PV FEE SCHEDULE Applicable: March 2022 – December 2023

DEPARTMENT	CLASSIFICATION	RATE
E - Engineering	Expert Witness	Hour
	Chief Engineer	/ Hour
	Chief Structural Engineer	/ Hour
	Project Supervisor	/ Hour
	Senior Project Manager	/ Hour
	Senior Traffic Engineer	/ Hour
	Project Manager	/ Hour
	Traffic Engineer	/ Hour
	Senior Civil Engineer	/ Hour
	Structural Engineer	/ Hour
	Certified Professional in Erosion/Sediment Control	/ Hour
	Engineer	/ Hour
	Engineering Technician	/ Hour
	Construction Inspector	/ Hour
S – Surveying	Expert Witness	/ Hour
	Chief Surveyor	/ Hour
	Project Manager	/ Hour
	Surveyor	/ Hour
	Survey Technician	/ Hour
	Field Operations Manager	/ Hour
	Robotic Field Crew	Hour
	Chief of Party	/ Hour
	Instrument Operator	/ Hour
	Field Technician	/ Hour
W - Environmental	Wetland Scientist	/ Hour
	Subsurface Designer	/ Hour
	Environmental Scientist	/ Hour
D - CADD / GIS	Senior CADD Designer	/ Hour
Total Calabara Discourse	CADD Technician	/ Hour
P – Landscape Architecture	Landscape Architect	/ Hour
	Land Planner / Designer	/ Hour
A – Administration / Support	Support	/ Hour
NA LEGISTRA TO THE STATE OF THE	Project Coordinator	/ Hour

Unitil Energy Systems, Inc. d/b/a Unitil
Docket No. DE 22Exhibit JSD-4(a)
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#### SCHEDULE OF REIMBURSABLE EXPENSES\* TFMoran, Inc. **PRINTS** In-House: Xerox Plan Copier / Square Foot Mylar (Plotter) / Square Foot Bond (Plotter) / Square Foot Color Plot - Bond / Square Foot Color Plot - High Gloss Photo / Square Foot Color Print - 8.5 X 11 / Page Black and White - 8.5 X 11 / Page Color Print - 11 X 17 / Page Black and White - 11 X 17 / Page Framing / Print **RENDERINGS Conceptual Color Presentation Detailed Colored Plan Presentation** Perspective Rendering **REPROGRAPHICS SERVICES Outside Service POSTAGE and HANDLING COURIER SERVICES APPLICATION / SUBMISSION FEES** CONSULTANTS / **SUBCONTRACTORS BACKHOE and OPERATOR** TRAVEL / MILEAGE / Mile TRAFFIC COUNTERS FIELD MONUMENTATION **Granite Bounds** Per Bound Iron Pins Per Pin Wood Stakes Per Stake

**REGISTRY FEES** 

<sup>\*</sup> Reimbursable expenses include but are not limited to the above. Revised: 02/24/2022



Section 4: Project Manager Resume



#### NICHOLAS C. GOLON, PE

Senior Project Manager Principal

#### **EXPERIENCE**

Mr. Golon serves as a Senior Project Manager and a Principal for TFMoran, Inc. He is responsible for the management, engineering design and permitting of land development projects. Mr. Golon has over 20 years of experience in site planning, drainage design, sewer design, and local, state and federal permitting for residential, commercial, industrial, municipal, and energy projects.

#### Selected project experience includes:

- Industrial Roofing Corporation (IRC), Yankee Solar Array, Dublin, NH: Project Manager for Site Plan and permitting for a 125kW Ground Mounted Solar Array at the Yankee Publishing Facility. Tasks include layout and landscaping improvements. Permits include a NHDOT Driveway Permit and Town of Dublin Site Plan Review, Driveway and Building Permits.
- Unitil, Broken Ground Substation and Eversource Energy, Curtisville Substation, Concord, NH: Project Manager for site plan and permitting of one (1) transmission and one (1) distribution substations, including structures to house electrical equipment, access, parking, and stormwater management areas. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NHDES AoT and Wetland Permits, Concord Subdivision, Site Plan, Conditional Use Permit, FAA Determination of No Hazard.
- Unitil, Gulf Street Substation Reconstruction, Concord, NH: Project Manager for Site plan and
  permitting to reconstruct the existing Unitil Gulf Street Substation and adjacent overhead electric
  lines. Tasks include layout and access design. Permits include City of Concord Planning Board Site
  Plan Approval and FAA Determination of No Hazard.
- **PSNH**, **Merrimack Station Clean Air Project**, **Bow**, **NH**: Project Manager for site design and state and local permitting for the Phase I, site preparation stage of this \$400 million project to construct a flue gas desulfurization scrubber on this PSNH coal-fired power plant. Details of Phase I include access and security improvements, creation of parking and lay-down areas, stormwater management, grading design, septic design and creation of an integrated construction Storm Water Pollution Prevention Plan (SWPPP) prior to the Station upgrades proposed in Phase II of the project.
- **GE Aviation Plant Expansion, Hooksett, NH:** Project Manager for site plan and permitting of a 55,000sf plant expansion on Industrial Park Drive. The building expansion was sited over a portion of a Town-owned road, which was discontinued and re-aligned for local traffic.
- **PSNH, Farmwood Road Substation, Concord, NH:** Site Plan, Subdivision Plan and permitting for original construction and expansion of Farmwood Road Substation. Responsible for management and design in overseeing industrial land development project. Design tasks include grading, drainage, Storm Water Pollution Prevention Plan (SWPPP), and local, state and federal permitting.

#### **EDUCATION**

Wentworth Institute of Technology, BS Civil Engineering Technology

#### REGISTRATIONS, CERTIFICATIONS and AFFILIATIONS

Professional Engineer, NH and ME American Society of Civil Engineers, Member American Society of Civil Engineers – NH Section, Board of Directors NHDOT Local Public Agency (LPA) Certification #1386



Appendix A – TFM Relevant Project Experience in NH by Region



# RELEVANT PROJECT EXPERIENCE BY REGION (NH Southern/NH Lakes/NH Northern/NH Seacoast/NH Western, Massachusettes)

#### **NEW HAMPSHIRE – SOUTHERN REGION:**

# PSNH, Pinardville Substation, Goffstown (Pinardville), NH:

- Site Plan and permitting for replacement of existing Pinardville Distribution Substation. Tasks include grading, stormwater management design, landscape architecture, Municipal Planning Board, and ZBA permits. Construction monitoring provided.
- Boundary and Topographic Surveys, wetland mapping, and As-built surveys. Preparation of easement documents and construction layout.

# Eversource Energy, Rimmon Substation, Goffstown, NH:

• Site plan and permitting to replace the existing Rimmon Distribution substation and construct a control house within the new substation yard. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES-AoT, and Goffstown Planning Board permits. Stormwater monitoring provided.

# PSNH, Malvern Street Substation, Manchester, NH:

- Site Plan and permitting for expansion of existing Malvern Street Distribution Substation to convert the Manchester area 4.16 kV system to 12.47kV. Tasks include grading, stormwater management design, landscape architecture, and Municipal Planning Board and ZBA permits.
- Boundary and Topographic Surveys. Construction Layout.

# PSNH, 393 Line Project, Manchester, NH:

- Site plans and permitting for 1.3-mile utility corridor, reliability improvement project. Tasks include NHDES Dredge and Fill Permit, NH Division of Historic Resources Section 106 review, US Army Corps of Engineers permit area determination, and Municipal Conservation Commission permits. Construction monitoring provided. Construction ongoing.
- Corridor Easement Control, Boundary, wetland location Surveys.

#### **PSNH Call Center, Manchester, NH:**

- Site Plan and permitting for the installation of the Call Center and parking garage facility. Permits included discontinuance of historic right-of-ways through the site and Planning Board.
- Boundary, topographic, utility, and layout survey to support site design for a 15,430 sf Call Center building with a 1-level parking garage.

# Eversource Energy, Blaine Street Substation, Manchester, NH:

- Site Plan and permitting for expansion of existing Distribution Substation to convert the Manchester area 4.16 kV system to 12.47kV. Tasks include grading, stormwater management design, landscape architecture, and Municipal Planning Board and ZBA permits.
- Boundary, Topography, and Existing Conditions Plan.

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#### TFMORAN INC.

#### RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

### PSNH, Merrimack Station Clean Air Project, Bow, NH:

- Site design and state and local permitting for the Phase I, site preparation stage of this \$450 million project to construct a flue gas desulfurization scrubber on this PSNH coal-fired power plant.
- Design details of Phase I include access and security improvements, creation of parking and lay-down areas, stormwater management design, grading design and septic design.
- Obtained permits including Municipal Planning Board, Conservation Commission and ZBA, NHDES Alteration of Terrain, NHDES Shoreland, NHDES Dredge and Fill, US Army Corps of Engineers New Hampshire Programmatic General Permit (PGP), NPDES NOI, NHDES Subsurface Systems and FAA for notice of proposed construction or alteration including structures exceeding obstruction standards.
- TFM created both an integrated construction Storm Water Pollution Prevention Plan (SWPPP) prior to the Station upgrades proposed in Phase II as well as an operational SWPPP for the Station once construction is complete.
- TFM provided construction monitoring services for onsite septic installation on behalf of NHDES and serves on project SWPPP Management Team responsible for inspection and coordination of erosion and sedimentation controls for ongoing construction.
- Boundary, Topographic, Utility Surveys, Construction Layout and Supervision and As-built surveys.

#### Eversource Energy, Merrimack Station Subdivision, Bow, NH:

• Site plan and permitting of roadway and drainage associated with a two-lot subdivision, predicated by the required divestiture. Permits include Bow Planning Board Approval.

#### PSNH, Mobile Substation Facility, Bow, NH:

- Site Plan and permitting for proposed mobile substation warehouse buildings and associated site improvements. Tasks include grading, stormwater management, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, Municipal Planning Board and Conservation Commission permits and stormwater monitoring.
- Topographic Survey and Construction Layout.

#### PSNH, Central Warehouse, Bow, NH:

- Site Plan and permitting for the installation of the Central Warehouse facility. Permits included Town Planning Board, NHDES-AoT and NHDES-Septic.
- Boundary, Topographic and Utility Surveys and Construction Layout.

#### PSNH, 32W4 Line Project, Londonderry-Derry, NH:

- Site plans and permitting for 2.5-mile utility corridor, reliability improvement project. Tasks include preparation of NHDES Dredge and Fill Permit, NH Division of Historic Resources Section 106 review, and Municipal Conservation Commission permits.
- Corridor Easement Control, Boundary, wetland location Surveys, Easement Plans.

# PSNH, 32W5 Line Project, Derry, NH:

- Site plans and permitting for 1.2-mile utility corridor, reliability improvement project. Tasks include preparation of Storm Water Pollution Prevention Plan (SWPPP), associated NPDES NOI, NHDES Dredge and Fill Permit and Municipal Conservation Commission permits. Construction monitoring provided.
- Corridor Easement Control, Boundary, wetland location Surveys, Easement Plans.

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TFMORAN INC.

#### RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

# Eversource Energy, Derry Area Work Center Expansion, Derry, NH:

• Site plans for reconstruction of the paved storage yard at the Existing Derry Area Work Center. Tasks include construction specifications and stormwater management improvements.

#### PSNH, Mammoth Road Substation, Londonderry, NH:

- Site Plan and permitting for upgrades to Mammoth Road Substation. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI and Municipal Planning Board, Conservation Commission and ZBA permits. Construction monitoring provided.
- Boundary and Topographic Surveys, wetland mapping, and As-built surveys.

#### PSNH, Scobie Pond Substation, Londonderry-Derry, NH:

- Site Plan and permitting for Scobie Pond 345 kV Substation, 115kV substation and 12.47kV distribution substation. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Alteration of Terrain Permit, NHDES Dredge and Fill Permit, Municipal Planning Board and Conservation Commission permits and stormwater monitoring.
- Boundary, Topographic and Wetland Surveys for Substation expansions.

# PSNH, Construction Test & Maintenance Facility, Hooksett, NH:

- Site design, permitting, structural engineering, traffic engineering, and landscape architecture for new one-story 67,000+sf office and warehouse building to provide a centralized location for PSNH's transmission resources in southern New Hampshire. Tasks include grading, stormwater management design, sewer design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Alteration of Terrain Permit, Municipal Planning Board and Conservation Commission permits. Stormwater monitoring provided.
- Boundary and Topographic Surveys, wetland mapping, and As-built surveys. Preparation of easement documents and construction layout.

#### **Eversource Energy, Legends Drive Pole School, Hooksett, NH:**

• Site plan and permitting of a pole school area to train new employees at the existing Legends Drive Facility. Permits include NHDES AoT Amendment.

#### **Eversource Energy, Legends Drive Parking Expansion, Hooksett, NH:**

• Design and permitting of a paved parking area expansion with associated stormwater management improvements. Permits include NHDES AoT Amendment.

# PSNH, Hooksett Warehouse, Hooksett, NH:

- Site Plan and permitting for proposed warehouse building and associated site improvements. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, Municipal Planning Board and Conservation Commission permits and stormwater monitoring.
- Boundary, Topographic, and Utility Survey, Construction Layout and As-Built Survey, Lot Line Adjustment Plan.

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RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

TFMORAN INC.

# Eversource Energy, Legends Drive Pole Storage Facility, Hooksett, NH:

- Site Plan and permitting to construct an 6-acre paved storage yard with associated access and stormwater management systems. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES-Wetlands Dredge and Fill, NHDES-AoT, Hooksett Planning Board and Conservation Commission permits. Stormwater monitoring provided.
- Boundary, Topographic, and Utility Survey, Construction Layout and As-Built Survey, Lot Line Adjustment Plan.

# PSNH, Bedford Substation, Bedford, NH:

- Site Plan and permitting for the expansion of the Bedford substation. Permits included Historic Commission (archeological study) Bedford Board of Adjustment, Planning Board, Conservation Commission, NHDES-Wetlands Bureau, and NHDES-AoT.
- Boundary, topographic, wetland, and utility surveys to support site design for a substation and transmission lines.

# PSNH, Kundu Property, Bedford, NH:

• ALTA survey and wetlands for substation mitigation.

# Eversource Energy, Bedford Area Work Center, Bedford, NH:

• Site plan and permitting to construct a 5,000 square foot garage, paved storage yard and 1-acre gravel marshalling area, with associated access, parking, and site improvements. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES-AoT, and Bedford Planning Board permits. Stormwater monitoring provided.

#### **PSNH**, Nowell Street Substation, Nashua, NH:

- Site Plan and permitting for conversion of Nowell Street Substation to pad mount transformers. Tasks include grading, stormwater management design, NHDES Shoreland permit, and Municipal Planning Board, Conservation Commission and ZBA permits. Construction monitoring provided.
- Boundary and Topographic Surveys, wetland mapping.

#### **Eversource Energy, Front Street Substation, Nashua, NH:**

• Site plan and permitting to construct a substation yard expansion, replace existing electrical infrastructure and security fencing, and develop a comprehensive landscape plan in conjunction with the City of Nashua Riverwalk. Permits included City Administrative Approval.

#### PSNH, New Boston Pad Mount Transformer, New Boston, NH:

- Site Plan and permitting for New Boston pad mount transformer. Tasks include grading, stormwater management design. Construction monitoring provided.
- Boundary and Topographic Surveys, wetland mapping, easement plan preparation and Construction layout.

RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

#### PSNH, North Merrimack Switching Substation, Merrimack, NH:

- Civil engineering and permitting services for a switching substation with a 61,800-sf yard area. TFM obtained a NHDES Alteration of Terrain permit and filed a USEPA Notice of Intent under the NPDES Stormwater CGP.
- Topographic and Utility survey.

#### Granite Ridge Energy, Londonderry, NH:

- Site Plan and permitting for the installation of the Granite Ridge Energy power plant. Permits included NHDES-Wetlands Bureau, NHDES-AoT, and Town informational hearings.
- ALTA, Boundary, ROW, Topographic, Utility surveys, Utility ROW staking for various consultants for development of the Granite Ridge Power Station and related transmission and utility lines.

#### AES Power, Line ROW from Power Plan to Grid, Londonderry/Litchfield, NH:

• Survey control and wetland location for Power Line Corridor. Preparation of Easement Plans. Construction Layout for Pole and Pole structure contractor.

# Keyspan, Pembroke, NH:

TFMORAN INC.

• Route Survey/Gas line design/Permitting.

#### Loudon Road, Concord, NH:

• Engineering review and field survey services for 3,400 LF +/- of proposed gas main along Loudon Road for KeySpan Energy Delivery.

# Unitil, Broken Ground Substation and Eversource Energy, Curtisville Substation, Concord, NH:

- Site plan and permitting to construct one (1) transmission and one (1) distribution substations, including structures to house electrical equipment, access, parking, and stormwater management areas. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NHDES AoT and Wetland Permits, Concord Subdivision, Site Plan, Conditional Use Permit, FAA Determination of No Hazard.
- Unitil Energy, Broken Ground Substation and Eversource Energy, Curtisville Substation Compliance Monitoring, Concord, NH: Weekly construction compliance monitoring inspections to ensure compliance with all local, state, and federal permitting associated with the project (City Site Plan, City CUP, City Subdivision, NHDES AoT, NHDES Dredge and Fill, FAA

# Eversource Energy, Farmwood Substation, Concord, NH

• Site plan and permitting to construct a 40,000 square feet substation yard expansion, and a 6,800 square foot structure to house two synchronous condensers. Tasks include layout, grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES-AoT Amendment, and Concord Planning Board permits. Stormwater monitoring provided.

#### City of Manchester, NH: Survey for Cohas Brook Interceptor Project for HTA Companies:

• Survey of over 2 miles of control, cross country survey, and easement and construction stakeout for the Phase 2 Interceptor project.

Page 6 of 13 Relevant Project Experience in New Hampshire by Region

TFMORAN INC.

#### City of Manchester West Side CSO, Manchester, NH:

• Topographic, route and existing conditions survey for CDM, Inc., HTA Companies, and M&E. Over 15 miles combined survey, control, and easement plan work.

#### Eversource Energy, Eddy Street Substation, Manchester, NH:

• Site plan and permitting to construct a substation yard expansion, replace existing electrical infrastructure and security fencing to meet current Eversource standards, and construct an approximately 600 square foot control house within the substation yard. Tasks include layout, grading, stormwater management design, NHDES-Shoreland and Manchester Planning Board permits and ZBA Special Exception. Construction monitoring provided.

# Eversource Energy, Merrimack Station Parking Expansion, Bow, NH:

• Site plan and permitting to reconstruct a 37-space paved parking area with associated stormwater management improvements. Tasks include layout, grading, stormwater management design, and NHDES AoT Permit Amendment.

# **Eversource Energy, Mobile Substation Facility, Bow, NH:**

• Site plan and permitting to construct a one (1) bay addition at the existing Eversource Facility. Tasks include layout, grading, access, parking, stormwater management improvements, and wastewater holding tank design, a Town of Bow Site Plan Amendment and Conditional Use Permit.

#### **Eversource Energy, Mobile Substation Facility, Bow, NH:**

• Site plan and permitting to construct a 2,400 square foot addition at the existing Eversource Facility. Tasks include layout, grading, access, parking, stormwater management improvements and a Town of Bow Site Plan Amendment.

#### Eversource Energy, 1250 Hooksett Road Site Improvements, Hooksett, NH:

• Site plan and permitting to construct a parking lot expansion at the existing Eversource 1250 Hooksett Road Facility. Tasks include layout, grading, access, parking, stormwater management improvements. Permits include a Town of Hooksett Site Plan Amendment.

# Eversource Energy, Construction, Test & Maintenance (CT&M) Parking, Hooksett, NH:

• Site plan and permitting to construct a paved parking lot expansion with associated stormwater management improvements. Tasks include layout, grading, stormwater management design. Permits include a NHDES AoT Permit Amendment and Hooksett Site Plan Amendment.

# Eversource Energy, Greggs Substation, Goffstown, NH:

• Site plan and permitting to construct a 750 square foot control building expansion at the existing Eversource Greggs Substation. Tasks include layout, grading, access, parking, and stormwater management improvements. Permits include a Town of Goffstown Site Plan Approval.

# Eversource Energy, Greggs Substation Rebuild, Goffstown, NH:

• Site plan and permitting to reconstruct the existing Eversource Greggs Substation and adjacent overhead electric lines. Tasks include layout, grading, access, parking, and stormwater management design. Permits include NHDES AoT, Shoreland, Subsurface

#### TFMORAN INC.

#### RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

Effluent Disposal Permits, NHDOT Driveway Amendment Permit, Town of Goffstown ZBA Variances and Special Exception, Planning Board Site Plan Approval and Conditional Use Permit, Grasmere Water Precinct Service Connection Permit and FAA Determination of No Hazard.

#### Eversource Energy, Millyard Substation Relocation, Nashua, NH:

• Site plan and permitting to relocate the existing Eversource Millyard Substation as part of a Land Swap with the City of Nashua. Tasks include layout, grading, access, parking, and stormwater management design. Permits include City of Nashua Planning Board Lot Line Adjustment (LLA) and Site Plan Approval, and FAA Determination of No Hazard.

# Eversource Energy, 3891 Line, Nashua, NH:

• Permitting to replace the existing Eversource 3891 Line in association with the reconstruction of the Eversource Millyard Substation. Tasks include layout and permitting development for NHDES Shoreland and Wetland Permits, and Nashua ZBA Special Exception.

#### **Eversource Energy, W157 Line, Litchfield, NH:**

• Site plan and permitting to install electrical upgrades along the existing Eversource W157 Line. Tasks include layout, grading, and access design. Permits include NHDES Wetland Permit, NHDOT Temporary and Permanent Driveway Permits, Town of Litchfield ZBA Special Exception, and FAA Determination of No Hazard.

# Eversource Energy, Nashua Area Work Center, Nashua, NH:

• Site Plan and permitting for construction of a 14,500 square foot garage and office addition at the existing Eversource Nashua Area Work Center (AWC). Tasks include layout, grading, access, parking, utilities, and stormwater management improvement design. Permits include a NHDES AoT Permit, City of Nashua Planning Board Site Plan Approval, and FAA Determination of No Hazard.

# **Eversource Energy, Boulder Cove Wire Crossing, Atkinson, NH:**

• Surveying and permitting services to reconstruct the existing 3818 4.16 kV Line water crossing across Boulder Cove. Tasks included permitting development for a NH Public Utilities Commission (PUC) Line Crossing.

#### **Eversource Energy, Amherst Substation Expansion, Amherst, NH:**

• Site Plan and permitting for proposed electrical upgrades at the existing Eversource North Keene Substation including construction of a 3,080 square foot electrical enclosure to house proposed synchronous condensers. Tasks include layout, grading, stormwater management improvements and site access driveway design. Permits include a NHDES AoT Permit, Town of Amherst Planning Board Lot Line Adjustment (LLA), Site Plan Approval, and Stormwater Permit, and FAA Determination of No Hazard.

#### **Eversource Energy, 314 Line, Milford, NH:**

• Site plan and permitting to reconstruct the existing Eversource 314 Line. Tasks include layout and access design. Permits include a NHDES Wetland Permit.

#### Unitil, Gulf Street Substation Reconstruction, Concord, NH:

#### TFMORAN INC.

#### RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

• Site plan and permitting to reconstruct the existing Unitil Gulf Street Substation and adjacent overhead electric lines. Tasks include layout and access design. Permits include City of Concord Planning Board Site Plan Approval and FAA Determination of No Hazard.

#### Unitil, 374 Line, Concord, NH:

• Site plan and permitting to reconstruct the existing Unitil 374 Line from Theater Street to Gulf Street in coordination with the Gulf Street Substation Reconstruction. Tasks include layout and access design. Permits include NHDES Wetland Permit, City of Concord Planning Board Conditional Use Permits, and FAA Determination of No Hazard.

#### Unitil, 37 Line Rebuild, Concord, NH:

• Site plan and permitting to reconstruct the existing Unitil 37 Line from MacCoy Street to Village Street. Tasks include layout and access design. Permits include NHDES Wetland Permit, City of Concord Planning Board Conditional Use Permits, and FAA Determination of No Hazard.

# **Eversource Energy, Warner Line Crossing, Warner, NH:**

• Surveying and permitting services to reconstruct the existing 3410/317 Line water crossing across the Warner River. Tasks included permitting development for a NH Public Utilities Commission (PUC) Line Crossing.

# Unitil, 38 Line, Concord, NH:

• Surveying services to reconstruct a portion of the existing Until 38 Line in Concord, NH.

TFM also has extensive survey experience in the surrounding communities of Hooksett, Goffstown, Amherst, Milford, and Auburn.

# **NEW HAMPSHIRE - LAKES REGION:**

# PSNH, 3166 Line Removal Project, Franklin, Hill & New Hampton, NH:

- Site plans and permitting for 11-mile utility corridor, pole, and line removal project. Tasks include preparation of NHDES Dredge and Fill Permit, NH Division of Historic Resources Section 106 review, and Municipal Conservation Commission permits. Construction monitoring provided.
- Corridor Easement Control, Boundary, wetland location Surveys.

#### **PSNH**, Eastman Falls Plant, Franklin, NH:

• ALTA Survey/ Easement Plans for divestiture.

### PSNH, Messer Street/Former MGP Site, Laconia, NH:

• Boundary survey and subsequent Topographic and Hydrographic Surveys for Haley & Aldrich Site Remediation Plan. Layout and volumetric surveys and As-builts for Maxymillian Company for the Site Restoration.

#### **Eversource Energy, Messer Street Substation, Laconia, NH:**

• Site plan and permitting to construct an 800 square foot control house, replace the existing transformers, electrical equipment and fencing to meet current Eversource standards. Tasks include layout, grading, stormwater management design, NHDES-Shoreland and Manchester Planning Board permits and ZBA Special Exception. Construction monitoring provided.

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TFMORAN INC.

RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

# New Hampshire Electric Cooperative, Moultonborough Neck Substation, Moultonborough, NH:

• Construction Plans/Specifications for a new 34.5kV-12.47/7.2kV Substation. Permits included NPDES NOI and preparation of a Storm Water Pollution Prevention Plan (SWPPP).

#### **Keyspan Energy, Laconia, NH:**

• Easement Plan & Boundary Research Fairmont Street.

#### Keyspan Energy, Tilton, NH:

• Topographic and Route Surveys Rte 3, Rte 140, and East Main Street for utility expansion.

### Eversource Energy, Pemi Substation, New Hampton, NH:

• Construction and permitting compliance monitoring for reconstruction of the existing Eversource Energy Pemi-Substation.

# Eversource Energy, Ossipee Line Crossing, Ossipee, NH:

 Surveying and permitting services to reconstruct the existing 3116X Line water crossing across the Bearcamp and Lovell Rivers. Tasks included permitting development for a NH Public Utilities Commission (PUC) Line Crossings.

#### Eversource Energy, Tilton Area Work Center, Tilton, NH:

• Site Plan and permitting for a proposed 2,600 square foot prefabricated fleet vehicle storage enclosure at the existing Eversource Tilton AWC. Tasks include layout and City of Tilton Building Permit.

TFM's experience also covers many other Lakes Region Communities.

# NEW HAMPSHIRE – NORTHERN REGION:

# PSNH, Saco Valley Substation, Conway NH:

- Site Plan and permitting for upgrades to Saco Valley Substation. Tasks include grading, stormwater management, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Dredge and Fill Permit, NH Division of Historic Resources Section 106 review and Municipal Planning Board and Conservation Commission permits.
- Boundary and Topographic Survey.

#### New Hampshire Electric Cooperative Intervale Substation, Conway/Bartlett, NH:

• Coordinate design work with Substation Design Firm. Coordinate geotechnical work.

#### North Conway Water Precinct/CDM Inc., North Conway, NH:

• Several miles of Street/Route Surveys for Water, Sewer, and Drainage Improvements.

# Windfarm Project, Groton, NH:

• GPS Horizontal and Vertical Control for Project Aerial Mapping by Minuteman Mapping, project consultant.

#### **Eversource Energy, White Lake Substation, Tamworth, NH:**

The existing White Lake Substation was subdivided, as part of the required divestiture, to
provide clear separation between generation and transmission/distribution for the future
owner of the generation assets. NHDES and local Subdivision approval were obtained as
part of the project.

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TFMORAN INC.

RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

#### **Eversource Energy, Lancaster Area Work Center, Lancaster, NH:**

 Site plan and permitting of a 1,575 square foot garage addition and paved parking and drive improvements with associated stormwater management systems at the existing Eversource Energy Lancaster Area Work Center (AWC). Tasks include layout, grading, stormwater management improvements and NHDOT Driveway permit.

#### Eversource Energy, Gorham Hydro Substation, Gorham, NH:

• Site plan and permitting for the reconstruction of the existing Eversource Gorham Hydro Substation. Tasks include layout and access. Permits include NHDES Shoreland and Wetland Permits.

#### **NEW HAMPSHIRE - SEACOAST REGION:**

# PSNH, Eastport Substation, Rochester, NH:

- Site Plan and permitting for proposed Eastport Substation. Tasks include grading and stormwater management design, preparation of Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Alteration of Terrain Permit, NHDES Wetland Dredge and Fill Permit, NH Division of Historic Resources Section 106 review and Municipal Planning Board and Conservation Commission permits.
- Boundary and Topography Surveys, wetland location for substation expansion. Construction layout.

#### Unitil, Kingston Distribution Substation, Kingston, NH:

- Site Plan and permitting for upgrades to existing distribution substation. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, and Municipal Planning Board, Conservation Commission permits.
- Boundary and Topographic Surveys. Construction Layout.

# PSNH, Peaslee Transmission Substation, Kingston, NH:

- Site Plan and permitting for proposed switching station. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Wetland Dredge and Fill Permit, NH Division of Historic Resources Section 106 review and Municipal Planning Board, Conservation Commission and ZBA permits.
- Boundary and Topographic Surveys. Construction Layout.

#### Unitil, Circuit/Route 111, Kingston and Danville, NH:

• Design and permitting for construction of the 5-mile distribution line along the 22X1 Circuit in the Towns of Kingston and Danville, NH. Permits include NHDES Wetland Minimum Impact, NHDOT TCP, Danville Planning Board permits.

#### PSNH, 3111- & 3171-Line Project, Portsmouth/Greenland, NH:

- Site plans and permitting for 1.2-mile utility corridor, reliability improvement project. Tasks include NHDES Dredge and Fill Permit, NH Division of Historic Resources Section 106 review, US Army Corps of Engineers approval, and Municipal Planning Board and Conservation Commission permits.
- Corridor Easement Control, Boundary, wetland location Surveys.

#### PSNH, Brentwood Substation Site, Exeter, NH:

• Boundary and Topography Surveys, Wetland location.

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RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

TFMORAN INC.

#### Eversource Energy, Shattuck Laydown Area, Newington, NH:

• Site Plan and permitting for construction of a 10-acre gravel laydown and staging yard associated with the Eversource Seacoast Reliability Project. Tasks include layout, grading, access, parking, and stormwater management design. Permits include NHDES AoT and Wetland Permit, and Town of Newington Planning Board Site Plan Approval.

### Unitil, 3348/3350 Line, Hampton/Seabrook/North Hampton, NH:

• Permitting to inspect wood pole structures along the existing Unitil 3348/3350 from Hampton to Seabrook Substations. Permits include NHDES Wetland Permit.

#### Unitil, 3346 Line, Hampton, NH:

• Traffic Control Plan and permitting to reconstruct the existing Unitil 3346 Line crossing NH Route 101. Permits include a NHDOT Temporary Driveway Permit.

#### Unitil, 3348/3350 Line Emergency Permitting, Hampton/Seabrook/North Hampton, NH:

• Permitting to inspect approximately 110 wood pole structures along the existing Unitil 3348/3350 from Hampton to Seabrook Substations. Tasks include layout and access design. Permits include NHDES Wetland Emergency Authorization.

#### Unitil, 3348/3350/3359 Line Rebuild, Hampton/Seabrook/North Hampton, NH:

• Site plan and permitting to reconstruct 4.6-miles of the existing Unitil 3348/3350 Line, from Hampton to Seabrook Substations and 1.0-mile of the 3359 Line from the Seabrook Power Plant to the 3348/3350 Line. Tasks include layout and access design. Permits include NHDES Wetland and Shoreland Permits, NHDOT Temporary Driveway Permits, NH Department of Energy (DOE) Line Crossing Permits, Town of Hampton Wetlands Permit, and Town of Hampton Falls Special Use Permit.

#### Eversource Energy, Rochester Area Work Center, Rochester, NH:

• Site Plan and permitting for a proposed 2,600 square foot prefabricated fleet vehicle storage enclosure at the existing Eversource Rochester AWC. Tasks include layout and City of Rochester ZBA Variance, and Planning Board Site Plan Approval.

TFM has also done extensive survey and civil engineering/permit design work in the communities of Dover, Barrington, and Newington.

#### **NEW HAMPSHIRE – WESTERN REGION:**

# Eversource Energy, Jackman Hydro Facility, Hillsborough, NH:

- Site Plan and permitting for upgrades to Jackman Hydro Facility including construction of a 1,300 square foot control enclosure and 1,000 square foot substation yard expansion. Tasks include grading, stormwater management design, Storm Water Pollution Prevention Plan (SWPPP), NPDES NOI, NHDES Wetland Dredge and Fill Permit, NHDES Shoreland and Municipal Planning Board, Conservation Commission and ZBA permits.
- ALTA and easement surveys for PSNH at the hydro facility at the Jackman Station facility at the Gregg Lake Dam. Survey and Civil Site Design and Permitting- Hillsborough Substation.

#### Eversource Energy, Hillsborough Pad Mount Transformer, Hillsborough, NH:

• Site Plan and permitting for removal of existing distribution substation and installation of pad mount transformer. Tasks include grading, stormwater management design, NHDES

#### TFMORAN INC.

#### RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

Dredge and Fill Permit, NH Division of Historic Resources Section 106 review and local approvals. Construction monitoring provided.

• Boundary and Topographic Surveys, wetland mapping, easement plan preparation and Construction layout.

# **Eversource Energy, North Road Substation, Sunapee, NH:**

• Permitting associated with the installation of new utility poles and removal of existing utility poles. Permits include a NHDES Wetlands Minimum Impact Permit. Construction monitoring provided.

# PSNH, Emerald Street/MGP Facility, Keene, NH:

• Boundary, Topographic, Hydrographic surveys for Weston & Sampson downstream remediation project.

# Windfarm Project, Lempster, NH:

• GPS Horizontal and Vertical Control for Project Aerial Mapping by Minuteman Mapping, project consultant.

# Eversource Energy Newport Area of Work Center Expansion, Newport, NH

• Site Plan and permitting for a 2,560 square foot garage addition at the existing Newport Area Work Center (AWC). Tasks include layout, grading, stormwater management improvements and sewer extension. Permits include NHDES Shoreland and Newport Planning Board permits.

# Industrial Roofing Corporation (IRC), Yankee Solar Array, Dublin, NH

• Site Plan and permitting for a 125kW Ground Mounted Solar Array at the Yankee Publishing Facility. Tasks include layout and landscaping improvements. Permits include a NHDOT Driveway Permit and Town of Dublin Site Plan Review, Driveway and Building Permits.

#### **Eversource Energy, North Keene Substation, Keene, NH:**

• Site Plan and permitting for proposed electrical upgrades at the existing Eversource North Keene Substation including construction of a 3,080 square foot electrical enclosure to house proposed synchronous condensers. Tasks include layout, grading, stormwater management improvements and site access driveway design. Permits include a NHDES AoT Permit, NHDOT Temporary Driveway Permit, City of Keene Variances, Site Plan Approval, Conditional Use Permit and FAA Determination of No Hazard.

# Eversource Energy, Keene Area Work Center, Keene, NH:

• Site Plan and permitting for a proposed 2,600 square foot prefabricated fleet vehicle storage enclosure at the existing Eversource Keene AWC. Tasks include layout and City of Keene Site Plan Approval.

#### **Eversource Energy, Lafayette Substation, Claremont, NH:**

• Site Plan and permitting for proposed electrical upgrades at the existing Eversource Lafayette Substation. Tasks include layout, grading, stormwater management improvements and site access driveway design. Permits include a NHDES Shoreland Permit, City of Claremont ZBA Variance and Special Exception, Site Plan Approval, and FAA Determination of No Hazard.

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RELEVANT PROJECT EXPERIENCE IN NEW HAMPSHIRE BY REGION

TFMORAN INC.

# **NEW HAMPSHIRE – STATEWIDE:**

# Eversource Energy, Long-term Maintenance Inspections, Various Sites in NH, and ME:

• Bi-annual stormwater maintenance systems inspection and maintenance monitoring per approved permits (NHDES AoT). Locations include the Bedford Area Work Center (Bedford, NH), Curtisville Substation (Concord, NH), Daniel Substation (Franklin, NH), Eagle Substation (Merrimack, NH), Eastport Substation (Rochester, NH), Eliot Substation (Eliot, ME), Farmwood Substation (Concord, NH), Huckins Hill Substation (Holderness, NH), Legends Drive Facility (Hooksett, NH), North Keene Substation (Keene, NH), Peaslee Substation (Kingston, NH), Pulpit Rock Substation (Chester, NH), Rimmon Substation (Goffstown, NH), Saco Valley Substation (North Conway, NH), Scobie Pond Substation (Londonderry/Derry, NH), Tasker Farm Substation (Milton, NH). and Thorton Substation (Merrimack, NH).

#### **MASSACHUSETTS:**

# National Grid Energy, Site Locations in Western and Central Massachusetts\*:

• Wire crossing permit surveys along highways and waterways utilizing GPS and Remote elevation/reflectorless total station surveying. TFM performed 113 crossing surveys at approximately 56 locations in 33 Cities/Towns in Massachusetts.

#### National Grid Energy, Numerous Boundary, Right of Way, Utility and Construction Surveys\*:

• Survey of Substation Facilities, Transmission Corridors, Underground Conduits and Route Surveys and Related Utility Construction Layout within 18 cities/towns in Massachusetts, 5 cities/towns in New Hampshire and 4 cities/towns in Vermont.

# Springfield Gas Works Facility, Springfield, MA:

• Boundary, Topography, Monitor Well surveys for AMEC Inc.

#### Unitil, Townsend Substation, Townsend, MA:

• Site Plan and permitting for construction of an Energy Storage Unit (ESU) at the existing Unitil Townsend Substation. Tasks include layout, grading, stormwater management and site access improvements. Permits include a MassDOT Driveway Permit.

# Unitil, 1341 Line Rebuild, Fitchburg, MA:

 Surveying and permitting services to reconstruct the existing 1341 Line. Tasks included layout and access. Permitting to be determined upon completion of existing conditions survey.

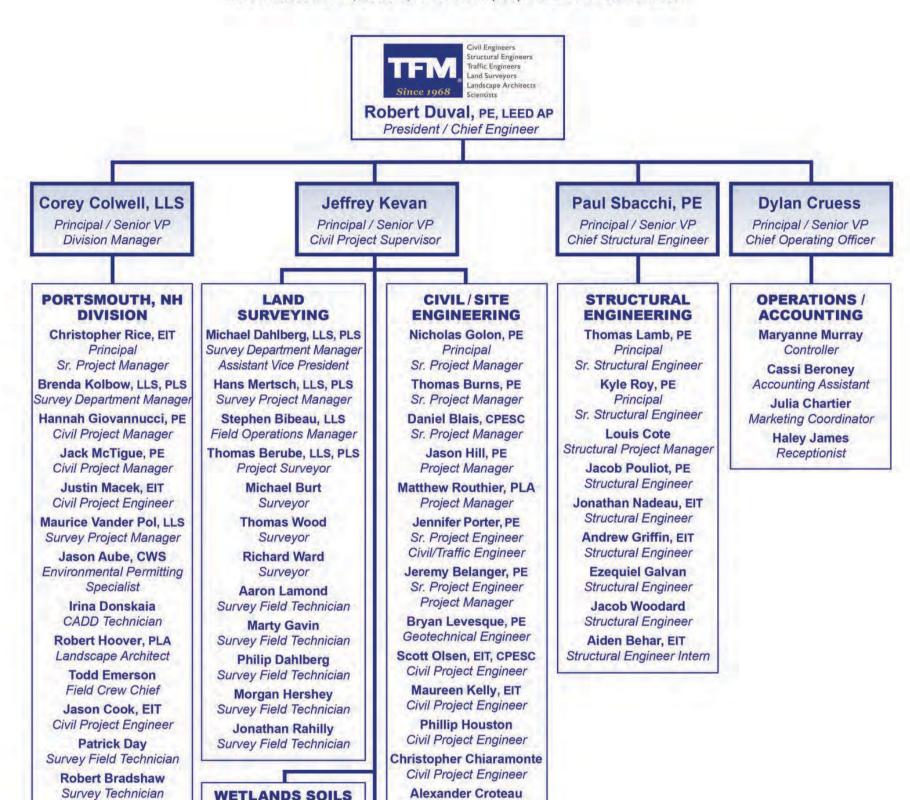
<sup>\*</sup>Due to confidentiality provisions with this client, more specific project information cannot be provided.



Appendix B – Additional Key Staff Resumes

# TFMoran, Inc. **2022 Corporate Structure**

48 Constitution Drive, Bedford, NH 03110 T: (603) 472-4488 www.tfmoran.com



Civil Project Engineer

Jonathan Devine, EIT

Civil Project Engineer

**Stephen Perley** CADD Technician

**Jeffrey Tate** CADD Technician

# **WETLANDS SOILS AND MAPPING**

Paul O'Hanlon Environmental Permitting Specialist

Updated February 18, 2022

Martha Klein Office Manager

Susan Ramsdell

Receptionist

# LANDSCAPE ARCHITECTURE

Michael Krzeminski, PLA Landscape Architect

Sophie Haddock Assistant Land Planner Landscape Designer



# TFM

Civil Engineers
Traffic Engineers
Structural Engineers
Land Surveyors
Landscape Architects
Scientists

(603) 472-4488



**Shopping Centers** 



**Educational Institutions** 



Manufacturing/Industri-



D str b ti n C ter

# TFMoran Company Profile

TFMoran, Inc. (TFM) is a regionally recognized civil, structural and traffic engineering, land surveying, and landscape architectural firm with over fifty years of continuous service to private and public clients. We are actively involved in many of the largest development initiatives now underway inside and outside of New Hampshire. The company has a staff of over 60 professionals, with office locations in Bedford and Portsmouth, New Hampshire.

**LEED Accredited** TFMoran offers the first **LEED Accredited Professional structural and civil engineering staff** in the state of New Hampshire, and is committed to responsible, sustainable development. The Company is in the forefront of developing and introducing cost-effective low-impact development techniques into all of the professional services we offer.

**Certified Erosion Control Specialists** TFMoran professional staff includes Certified Professionals in Sediment and Erosion Control (CPESC) and Certified Erosion Sediment and Storm Water Inspectors (CESSWI). These certifications are required for many environmentally sensitive projects.

# **Professional Services**

Civil, Structural & Traffic Engineering TFMoran is a full-service engineering firm offering civil, structural and traffic engineering services. We handle all aspects of permitting, local through federal. Our engineers and CADD technicians utilize state-of-the-art industry software, including Autodesk, REVIT® Structure and ArcView<sup>TM</sup> GIS.

#### Services Include:

- Site Planning & Design
- Subdivision Design
- Structural Design
- Traffic Impact Analyses
- Septic System Design
- Drainage Analysis & Design
- Construction Administration
- Environmental Permitting
- Water Supply Systems
- SWPPP Reports
- Stormwater Inspections
- Marine Engineering

**Land Planning** TFMoran's Land Planning services include studies and analysis associated with developing the highest and best use of property under a variety of zoning and site development regulations.

#### Services Include:

- Site Analysis Plans
- Land Use Studies
- Zoning Analysis
- Conceptual Site Plans
- Conceptual Cost Estimates
- Fiscal Impact Studies
- Master Planning
- Graphic Representation

www.tfmoran.com

#### Civil Engineers | Structural Engineers | Traffic Engineers | Land Surveyors | Landscape Architects | Scientists

Professional Services (continued)



Supermarkets



Banks



**Health Care Facilities** 



Multi-Family Residential



**Municipal Facilities** 



**Energy / Utilities** 



Roads / Construction Support

#### Contact:

Robert Duval. PE. LEED AP - President **Dylan Cruess - Chief Operating Officer** Paul Sbacchi, PE - Chief Structural Engineer

Land Surveying Our surveyors use the latest technology for field data collection including Global Navigation Satellite System (GNSS) which allows data to be collected in the field while being received in the office for greater quality control and a new level of productivity. Robotic Total Station has become an integral member of the team obtaining vital survey data more efficiently, saving the client time and money. We have now combined the two technologies with our purchase of a Topcon Robotic Hybrid Positioning System which utilizes the Robotic Total Station and

allows for a swift transition to GPS Hybrid Positioning. This allows our team to be more efficient at every phase of a project.

#### Services Include:

- Site Analysis Plans
- ALTA Surveys
- Boundary Surveys
- Topographic Surveys
- HazMat Surveys
- Conceptual Site Plans
- Route Surveys
- Subdivisions
- Title Surveys
- Marine Surveys
- Master Planning
- Easements
- ROW Surveys
- Construction Layout
- Control Surveys

Soils/Wetlands Mapping TFMoran provides these services in accordance with local, state and federal regulatory agency requirements.

#### Services Include:

Percolation Tests

- High Intensity Soil Survey
   Environmental Site Assessments
   Test Pits

  - Wetland Function & Value
- Wetland Mapping

Landscape Architecture The role of the Landscape Architect is critical to the design of successful developments. Our experienced staff provides master plans and detailed designs for parks, campuses, mixed-use developments, downtown revitalization, and maintaining and improving the character of our communities.

#### Services Include:

- Walkable Communities
- Park Design
- Planting Selection & Design
   Exterior Lighting Design
- Walks, Curbs & Pavements
   Campus Planning
- Streetscape Improvements
   Athletic Fields/Complexes

- Signs & Fences



Civil Engineers Structural Engineers Traffic Engineers Land Surveyors Landscape Architects Scientists





Voted BEST NH **Engineering Firm** 10 Years Running!

# LEED Accredited Professionals

#### TFMoran, Inc.

48 Constitution Drive, Bedford, NH 03110 (603) 472-4488 170 Commerce Way, Suite 102, Portsmouth, NH 03801 (603) 421-2222

www.tfmoran.com

Jeffrey Kevan - Civil Project Supervisor Corey Colwell, LLs - Division Manager

Michael Krzeminski, PLA - Landscape Architect Dan Blais, cpesc, cesswi - Sr. Project Manager Michael Dahlberg, LLS, PLS - Survey Dept. Manager



#### ROBERT E. DUVAL, PE, LEED AP

President Chief Engineer

#### **EXPERIENCE**

Mr. Duval serves as President and Chief Engineer for TFMoran Inc. and is responsible for technical oversight of all TFMoran projects. Mr. Duval has over 30 years experience in the engineering and construction industry. His multi-disciplinary background enables him to handle complex projects including civil, structural, and traffic engineering challenges. His project experience includes civil and structural design of public buildings, public parks and athletic facilities, schools, courthouses, fire stations, and public utility structures; marine engineering projects, traffic engineering and design of local, state, and federal highway projects.

#### Selected project experience includes:

- Army Aviation Support Facility, Bangor, ME: Principal-in-charge of over 80,000sf of new structural design and renovations to the helicopter support and maintenance facilities for the Maine Army National Guard in Bangor. The project cost exceeded \$20M in two phases, to allow ongoing Guard operation while providing new and completely renovated facilities over a three-year time frame.
- NH Port Authority Port Expansion, Portsmouth, NH: Project Manager for final design of this \$30+M expansion to the NH State Pier along the Piscataqua River. The project included a \$5M Barge Wharf and several hundred feet of new pier, hardstand, and containment structures for dredge spoils. Design of on-site truck circulation and material stockpiles were major project design considerations.
- Tweed New Haven ARFF Fire/Rescue Facility, East New Haven, CT: Principal-in-charge of structural design of a new Aircraft Rescue and Fire Fighting facility at the Tweed New Haven Airport. The facility was designed to FAA Index A standards.
- Pierre Bouchard Public Works Facility, Dover, NH: Principal-in-charge of civil and structural design of new \$6M public works facility. Special environmental precautions were incorporated into the design because the site was located in an active gravel pit inside the wellhead protection zones of two Class AA drinking water supply wells. The project featured one of the first salt storage facilities in the state where all loading was performed indoors. The site also included several thousand feet of water and sewer main extensions, and master planning of the adjacent recycling and transfer station.
- NHDOT New Public Works Maintenance Facility, Concord, NH: Principal-in-charge of this new 30,000sf maintenance garage for the NHDOT Bureau of Public Works. This is the first public works maintenance facility to be delivered on a fast-track design-build basis. The facility provides for storage and maintenance of public works vehicles, hazardous materials, and incidental office uses.
- Acton Public Safety Facility, Acton, ME: Principal-in-charge for design of this new Public Safety Facility housing the town's Police and Fire Departments. The facility was designed on two levels to take advantage of the natural terrain in this steep, rocky, donated site. Although a completely modern facility, the building was designed to blend in with the agricultural landscape of this picturesque section of Maine.

#### **EDUCATION**

McGill University, Montreal, Canada, BSc 1978 - Meteorology University of New Orleans, Louisiana, Graduate Studies 1980-81 - Structural Engineering

#### REGISTRATIONS, CERTIFICATIONS and AFFILIATIONS

Professional Engineer: (Structural, Civil, Highway) in NH, ME, MA, CT and VT LEED (Leadership in Energy and Environmental Design) Accredited Professional Charter Member, Steel Structures Painting Council Member, Institute of Transportation Engineers (Pedestrian/Bicycle Council) Member, National Fire Protection Association (Aviation Section) Chair, New Hampshire DES Air Resources Council Board of Directors, Greater Manchester Chamber of Commerce



#### MICHAEL R. DAHLBERG, LLS, RPLS, PLS

Assistant Vice President Survey Department Manager

#### **EXPERIENCE**

Mr. Dahlberg is a licensed land surveyor with nearly 40 years of experience in New Hampshire, Massachusetts, Maine, and Vermont. His passion is historical research, boundary determination and resolution. He has a wide variety of experience in ALTA Surveys, Utility and Roadway Route Surveys, Construction Layout, As-Built Surveys, Boundary Surveys, Conservation Easements, etc. He has been an Expert Witness for boundary and right-of-way disputes in Northern Middlesex County, MA, Hillsborough, Merrimack, and Belknap Counties in NH. Mr. Dahlberg is responsible for the daily survey operations for TFMoran's Bedford, New Hampshire office.

#### Selected project experience includes:

- Liberty Utilities & Eversource, Golden Rock Substation, Methuen, MA & Salem, NH: Lead Surveyor/Project Manager for the re-establishment of 2.2 miles of utility easement for future expansion of utility service for the Tuscan Village Development in Salem, NH. The project required detailed research and field survey of all encroachments within the corridor. Mr. Dahlberg was responsible for deeds and document research and survey calculations and determination of existing easement locations as well as the preparation of final plans for use by Liberty Utilities & Eversource.
- Route 102 Natural Gas Line Upgrade, Liberty Utilities, Londonderry, NH: Lead Surveyor and Project Manager for the survey of 3 miles of NH Route 102 in Londonderry for the expansion and extension of Natural Gas Service for the towns of Londonderry and Hudson, NH. The project required detailed research and field survey information for the establishment of the Route 102 right-of-way and survey location of existing improvements within and adjacent to the proposed gas line expansion. Mr. Dahlberg was responsible for deeds and document research and survey calculations and determination of existing right-of-way limits for use by Liberty Utilities in the design and construction of the proposed gas line expansion.
- Route 3 Natural Gas Line Upgrade, Liberty Utilities, Tilton & Belmont, NH: Lead Surveyor and Project Manager for the survey of 4.5 miles of NH Route 3 Tilton and Belmont for the expansion and extension of Natural Gas Service for the towns of Tilton, Belmont, Sanbornton and Laconia, NH. The project included the establishment of the Interstate 93 Right-Of-Way and a detailed survey of the Route 3 Overpass of Interstate 93 in Tilton, NH.
- Souhegan River Crossing, Liberty Utilities, Merrimack, NH: Lead Surveyor/Project Manager for the survey of .30 miles of U.S. Route 3 in Merrimack, NH and the village bridge over the Souhegan River for a gasline crossing under the Souhegan River. The project included extensive deeds research to establish the right-of-way limits of what is now U.S. Route 3, a pre-colonial era road circa 1640-1650.

#### **EDUCATION**

New Hampshire Vocational Technical College, Berlin, New Hampshire, AS 1982 – Natural Resources Management with specialization in Surveying and Soils.

#### REGISTRATIONS, CERTIFICATIONS and AFFILIATIONS

Licensed Land Surveyor in New Hampshire, Maine, Massachusetts, and Vermont Member, State of New Hampshire Board of Licensure for Land Surveyors



**JASON "JAY" AUBE, CWS** Environmental Permitting Specialist

#### **EXPERIENCE**

Mr. Aube serves as an Environmental Permitting Specialist and a Certified Wetland Scientist (CWS) for TFMoran with over 20 years of experience. His responsibilities include performing wetland delineations, conducting assessments of wetland functions and values, and preparing wetland and shoreland permit applications for approval at the federal, state, and local levels.

Prior to joining TFMoran, Mr. Aube worked in the public sector for twelve years as an employee of the New Hampshire Department of Environmental Services (NHDES) where he was responsible for Shoreland Program and Wetlands Bureau outreach, wetlands and shoreland permitting, and compliance.

#### Selected project experience includes:

- NHDES Wetlands and Shoreland Outreach: Continually prepared and provided engaging presentations and annual updates to a diverse group of stakeholders relative to the periodic amendments to the NH Wetlands Law, the NH Shoreland Water Quality Protection Act (SWQPA) and the associated NHDES Administrative Rules.
- NHDES Wetlands and Shoreland Permitting: Reviewed Wetlands and Shoreland Permit Applications and determined if applicant's project proposals met the minimum standards of the relevant NHDES laws and Administrative Rules. Worked with applicants and provided guidance on how to best meet the standards of the applicable laws and rules.
- NHDES Land Resources Management Compliance: Triaged and responded to formal complaints alleging violations of NH Wetlands Law, the NH Shoreland Water Quality Protection Act (SWQPA) and NH Alteration of Terrain Law. Working collaboratively with all parties to find practicable solutions to complex sites that required wetlands and shoreland restoration. Reviewed and approved formal Wetlands and Shoreland Restoration plans. When required, provided testimony at legal hearings.
- Wetlands Crossing, North Hampton, NH: Prepared NHDES Wetlands Permit Application for a 50-foot wetland crossing to the buildable portions of a single residential lot. Performed wetlands delineation, conducted a functions and values assessment of the wetland, and developed a project proposal that clearly offered the least impacting alternative to wetland resources. Received approvals in a timely and efficient manner.
- Wetlands Restoration, Rye, NH: Prepared NHDES Wetlands Permit Application for the restoration of a Palustrine Forested Wetland that was impacted by unauthorized fill and overrun with invasive species. Generated a systematic construction sequence to ensure the fill was removed to original grade, all invasive species were removed, and the wetland's functions and values were returned by replanting with site specific native wetland vegetation. Received approvals in a timely and efficient manner.
- Wetlands and Shoreland Permitting, Barrington, NH: Prepared and submitted NHDES Wetlands and Shoreland Permit Applications for the development of a residential lot on a public waterbody. Proposed impacts were within the Protected Shoreland and the shoreline, an area jurisdictional under NH Wetlands Law. Received each approval in a timely and efficient manner.

#### **EDUCATION**

Plymouth State University, Plymouth, NH, BS, Environmental Biology, Minor in Chemistry, 1999

#### REGISTRATIONS, CERTIFICATIONS and AFFILIATIONS

Certified Wetland Scientist, New Hampshire CWS #00313 City of Dover Conservation Commission, Member Cocheco River Local Advisory Committee, Vice Chair New Hampshire Association of Natural Resources Scientists, Member New Hampshire Beekeepers Association, Member



#### JEREMY C. BELANGER, PE Senior Project Engineer

#### **EXPERIENCE**

Mr. Belanger serves as a Senior Project Engineer for TFMoran, Inc. and is responsible for the engineering design and permitting of land development projects. He has experience in site planning, drainage design, sewer design, and local, state and federal permitting for residential, commercial, industrial, municipal and energy projects.

#### Selected project experience includes:

- Murphy's Taproom and Carriage House, Bedford, NH: Site plan development and permitting associated with a 22,265sf restaurant and banquet facility, with associated access, parking and site improvements.
- Chuckster's Mini-Golf Course, Hooksett, NH: Site plan development and permitting associated with a 36-hole miniature-golf course and clubhouse.
- Granite State Solar Warehouse Facility, Bow, NH: Site plan development and permitting associated with a 9,000sf warehouse facility with associated access, parking, and site improvements.
- Eversource Energy, Bedford Area Work Center, Bedford, NH: A 5,000sf garage, paved storage yard and 1-acre gravel marshalling area, with associated access, parking and site improvements was constructed in at the Eversource Bedford Area Work Center (AWC).
- Eversource Energy, Blaine Street Substation, Manchester, NH: Design included grading and drainage design associated with the increase in impervious area and construction of the control enclosure.
- **Bow Auto Parts, Bow, NH:** Site design and permitting associated with a 4,000sf office, 10,000sf warehouse expansion with associated access, parking and site improvements.
- Eversource Energy, Messer Street Substation, Laconia, NH: Design included siting for the proposed reconstruction including layout, grading and drainage and temporary staging areas to be utilized during construction.
- Eversource Energy, Eddy Street Substation, Manchester, NH: Design included siting for the proposed substation upgrade including layout of proposed electrical components, fencing, grading and drainage.
- Eversource Energy, Farmwood Substation, Concord, NH: Design included siting for the proposed reconstruction including layout, grading and drainage and temporary staging areas to be utilized during construction.
- Eversource Energy, Legends Drive Pole Storage Facility: Design included siting for the proposed storage yard, fencing, grading and drainage and utilities.

#### **EDUCATION**

University of New Hampshire, BS Civil Engineering University of New Hampshire, MS Civil Engineering

#### REGISTRATIONS, CERTIFICATIONS AND AFFILIATIONS

Professional Engineer, NH
Named New Hampshire Young Engineer of the Year, 2020
OSHA 10 Certified
NFPA 70E Certified
2020 Member, American Society of Civil Engineers
Member, Manchester Young Professionals Network
Volunteer, UpReach Therapeutic Equestrian Center, Inc.



Appendix C – TFMoran Insurance Certificate

Exhibit JSD-4(a) Page 49 of 50

ACORD

THOMFMO-01

**PSPENCER** 

DATE (MM/DD/YYYY) 10/29/2021

# **CERTIFICATE OF LIABILITY INSURANCE**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMI	POF	RTANT: If the certificate holder	r is a	n AD	DITIONAL INSURED, the	policy(	(ies) must ha	ave ADDITIO	NAL INSURED pro	vision	s or b	e endorsed.
If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on								tatement on				
		rtificate does not confer rights to	o the	certi	ficate holder in lieu of su	ch end	lorsement(s)	j.	•			
PRODUCER License # AGR8150				CONTACT								
Clark Insurance One Sundial Ave Suite 302N			PHONE (A/C, No, Ext) (603) 622-2855 FAX (A/C, No) (603)					622-2854				
Manchester, NH 03103				E-MAIL ADDRESS info@clarkinsurance.com								
					INSURER(S) AFFORDING COVERAGE						NAIC #	
						INSURER A Acadia						31325
INSURED				INSURER B								
Thomas F Moran, Inc. dba TFMoran, Inc.			INSURER C									
48 Constitution Drive Bedford, NH 03110				INSURER D								
				INSURER E								
					INSURER F							
COVERAGES CERTIFICATE NUMBER:							REVISION NUMBER:					
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS												
CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES, LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.												
INSR LTR		TYPE OF INSURANCE	ADDL	SUBR			POLICY EFF (MM/DD/YYYY)	POLICY EXP		LIMITS	8	
	X	COMMERCIAL GENERAL LIABILITY							EACH OCCURRENCE		\$	1,000,000
		CLAIMS-MADE X OCCUR	X		CPA5498924-10		10/31/2021	10/31/2022	DAMAGE TO RENTED PREMISES (Ea occurre	nce)	\$	500,000
	_			I			I	I		,		

INSR LTR		TYPE OF INSURANCE	ADDL INSD	SUBR	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	s		
Α	X	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	\$	1,000,000	
		CLAIMS-MADE X OCCUR	Х		CPA5498924-10	10/31/2021	10/31/2022	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	500,000	
								MED EXP (Any one person)	\$	10,000	
								PERSONAL & ADV INJURY	\$	1,000,000	
	GEN	N'L AGGREGATE L MIT APPL ES PER:						GENERAL AGGREGATE	\$	2,000,000	
		POLICY X PRO- X LOC						PRODUCTS - COMP/OP AGG	\$	2,000,000	
		OTHER:							\$		
Α	AU1	OMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	\$	1,000,000	
	X	ANY AUTO			CAA5498925-10	10/31/2021	10/31/2022	BODILY INJURY (Per person)	\$		
		OWNED SCHEDULED AUTOS ONLY						BODILY INJURY (Per accident)	\$		
		HIRED AUTOS ONLY NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$		
									\$		
Α	X	UMBRELLA LIAB X OCCUR							EACH OCCURRENCE	\$	5,000,000
		EXCESS LIAB CLAIMS-MADE			CUA5498926-10	10/31/2021	10/31/2022	AGGREGATE	\$	5,000,000	
		DED RETENTION \$							\$		
Α	WOF	RKERS COMPENSATION EMPLOYERS' LIABILITY							X PER OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		N / A	WCA5498927-10		10/31/2021 10/31/2022	E.L. EACH ACC DENT	\$	1,000,000		
			N/A					E.L. DISEASE - EA EMPLOYEE	\$	1,000,000	
	If yes	s, describe under CR PTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$	1,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Unitil Corporation and its subsidiaries are each designated as additional insureds as respect to the general liability coverage when required by written contract with the named insured.

CERTIFICATE HOLDER	CANCELLATION
Unitil Corporation and its subsidiaries 6 Liberty Lane West Hampton, NH 03842	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
Trainpton, 1411 000-12	AUTHORIZED REPRESENTATIVE
	Sean Parnell

ACORD 25 (2016/03)

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## MORAN-1

OP ID: BC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 02/24/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED

REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s). CONTACT Thomas J. Mullen PHONE (A/C, No, Ext) 781-245-5400 PRODUCER Poole Professional B&B of MA 107 Audubon Rd, #2, Ste 305 Wakefield, MA 01880 Thomas J. Mullen 781-245-5400 FAX (A/C, No) 781-245-5463 ADDRESS INSURER(S) AFFORDING COVERAGE NAIC# INSURER A XL Specialty Insurance Company INSURER B TEMORAN, INC. 48 Constitution Dri Bedford, NH 03110 INSURER C INSURER D INSURER E INSURER F COVERAGES CERTIFICATE NUMBER: REVISION NUMBER: THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. ADDL SUBR INSD WVD POLICY EFF POLICY EXP (MM/DD/YYYY) INSR LTR TYPE OF INSURANCE POLICY NUMBER LIMITS COMMERCIAL GENERAL LIABILITY EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurre CLAIMS-MADE OCCUR 5 MED EXP (Any one person) 5 PERSONAL & ADV INJURY 5 GEN'L AGGREGATE L MIT APPL ES PER: GENERAL AGGREGATE 5 POLICY JECT PRODUCTS - COMP/OP AGG | \$ OTHER: COMBINED SINGLE LIMIT (Ea accident) AUTOMOBILE LIABILITY 5 ANY AUTO BODILY INJURY (Per person) \$ SCHEDULED AUTOS OWNED AUTOS ONLY BODILY INJURY (Per accident)
PROPERTY DAMAGE
(Per accident) \$ AUTOS ONLY NON-OWNED AUTOS ONEY UMBRELLA LIAB OCCUR EACH OCCURRENCE 5 **EXCESS LIAB** CLAIMS-MADE AGGREGATE 5 DED RETENTION \$ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY PER STATUTE Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) E.L. EACH ACC DENT E.L. DISEASE - EA EMPLOYEE \$ If yes, describe under DESCR PTION OF OPERATIONS below E.L. DISEASE - POLICY LIMIT | \$ Arch/Engrs DPR9985962 11/10/2021 11/10/2022 Per Claim 5,000,000 **Prof Liability** Aggregate 5,000,000 DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) CERTIFICATE HOLDER CANCELLATION UNITI74 SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. **Unitil Corporation** & its Subsidiaries 6 Liberty Lane West Hampton, NH 03842-1720 which ATEL

ACORD 25 (2016/03)

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August 24, 2022

Mr. Jacob Dusling, P.E. Unitil 30 Energy Way Exeter, NH 03833

RE: Proposal for Engineering & Survey Services Proposed Kingston Utility Scale PV Facility 2 Mill Road and 24 Towle Road Lot R11-9 and R12-26

Dear Jake:

TFMoran, Inc. (TFM) is pleased to provide this proposal to provide Engineering & Survey services for the Siting, Site Evaluation & Permitting for a proposed utility scale photovoltaic generating (PV) facilities to be located at the above noted properties. We understand the below scope of work is to support the construction of a 5 MW facility as well as provide a conceptual master plan for the siting of a future 5 MW facility on adjacent land. Our scope of work is as follows:

#### **Scope of Work:**

#### Task 1 Wetland Delineation

TFM will delineate wetlands on lot R-11 and R12-26, comprised of approximately 96-acres. Wetland flags will be located during the wetlands survey defined in task 2. We have carried an allowance of (6) days for this task.

#### Task 2 Survey Services

Boundary & Topographic Survey

TFM will conduct research at the Town of Kingston, the Rockingham County Registry of Deeds and the State of New Hampshire Archives. TFM will conduct an accurate instrument of the subject parcels. TFM will process the field survey data to confirm compliance with the NH Board of Land Surveyors Rules & Regulations. TFM will locate physical improvements on the subject tract and the adjacent roadway. TFM will locate the visible, above ground portions of utilities immediately adjacent to the subject tracts. TFM will obtain LIDAR data from NHGRANIT and perform a ground verification. TFM will survey the location of the delineated wetlands. TFM will analyze the field and record evidence. TFM will determine the parcel boundaries based on our analysis. TFM will prepare an Existing Conditions Plan that demonstrates the results of our survey efforts.

ALTA Survey

TFM will prepare a 2021 ALTA/NSPS Land Title Survey, including ALTA Table "A" items 1 (State Requirement), 2, 3, 4, 6(b), 7(a), 7(b1), 7(c), 8, 9, 13 and 14. Client will provide a current Title Commitment and exception documents. Final product will be a 2021 ALTA/NSPS Land Title Survey certified to parties, as specified by the Client.

48 Constitution Drive Bedford, NH 03110 Phone (603) 472-4488 Fax (603) 472-9747 www.tfmoran.com

REDACTED
Unitil Energy Systems, Inc. d/b/a Unitil
Docket No. DE 22Exhibit JSD-4(b)
Page 2 of 5

Mr. Jacob Dusling Re: Proposal for Engineering & Survey Services 2 Mill Road & 24 Towle Road, Kingston, NH August 25, 2022 Page 2 of 5

#### **Monuments**

Missing corners can be installed at the completion of the survey for per monument. We have carried an allowance of (25) monuments.

### Task 3 Site Plan Package

TFM will prepare a Site Plan package showing the layout of the Project on the selected parcel with dimensional information, grading and drainage design (including oil containment), erosion control, utility service design, landscape design, lighting, and details of site work items suitable for construction, stamped by a licensed State of New Hampshire Professional Engineer. This Plan Set will include:

- Cover Plan
- Existing Conditions (see task 2)
- Conceptual Master Plan (future 5 MW facility to be shown)
- Lot Line Adjustment Plan
- Site Preparation Plan
- Site Layout Plan
- Grading, Drainage & Utility Plan
- Stormwater Management/Erosion Control Plan
- Driveway Plan & Profile
- Sight Distance Plan & Profile
- Landscaping Plan
- Lighting Plan
- Details for site work items suitable for construction

#### Preliminary Site Layout:

TFM will prepare a Preliminary Site Layout Plan showing the layout of the Project on the subject parcels with dimensional information and preliminary grading & drainage design. The plan shall be used to develop estimated site construction costs.

### **Site Construction Cost Estimate:**

TFM will prepare order of magnitude construction cost estimates based on the preliminary site layout plans prepared.

#### Site Soils Mapping:

Site-specific soils mapping is required per the NH Department of Environmental Services, Alteration of Terrain permitting program. As part of this proposal, TFM will have a NH Certified Soil Scientist map readily accessible and identifiable surficial soil types at the Project site.

#### Stormwater Management Report:

A stormwater management report will be provided that includes an analysis of the proposed stormwater management system and its effect on the surrounding area and existing drainage infrastructure in accordance with City and State requirements. TFM will perform test pits and infiltration testing as required for the drainage systems (backhoe cost billed as a reimbursable expense).

#### Traffic:

A Trip Generation Memo will be provided to address the anticipated traffic generated by the proposed facility.

REDACTED Unitil Energy Systems, Inc. d/b/a Unitil Docket No. DE 22-\_\_\_\_ Exhibit JSD-4(b) Page 3 of 5

Mr. Jacob Dusling
Re: Proposal for Engineering & Survey Services

2 Mill Road & 24 Towle Road, Kingston, NH

August 25, 2022 Page 3 of 5

## Renderings:

Due to the visual nature of the proposed project, TFM will develop a 3D rendering of the subject development for use in conveying the project to the anticipated review agencies.

### **Agency Comment Allowance:**

TFM has included an allowance of of the estimated budget amount for the Site Plans to respond to review comments received by government agencies and their consultants.

## Task 4 Preparing Applications

TFM will prepare applications, plans, and applicable support materials for the following filings with the City, State and Federal Government.

- Town of Kingston
  - Zoning Board
    - Use Variance
  - Planning Board
    - Site Plan Review
  - Conservation Commission
    - Wetland Dredge and Fill Review
    - Wetland Buffer Impact Review
- State of New Hampshire
  - O NH Natural Heritage Bureau (NHB)
    - NHB DataCheck
  - o NH Fish & Game (NHFG)
    - Wildlife Assessment per Env-Wq 1503.19(h)
  - NH Department of Environmental Service (NHDES)
    - Alteration of Terrain (AoT)
    - Major Wetlands Dredge and Fill (including functional assessment)
  - NH Division of Historical Resources (NHDHR)
    - Request for Project Review (RPR)
- Federal
  - US Army Corps of Engineers (ACOE)
    - NH Programmatic General Permit (PGP)
  - US Environmental Protection Agency (EPA)
    - NPDES
      - Construction Stormwater Discharge Notice of Intent (NOI)

## Phase IA Archeological Sensitivity Assessment:

TFM will coordinate with an Archeological Consulting firm to provide a Phase IA Archeological Sensitivity Assessment for the subject properties. This study will follow guidelines established for archaeological surveys by the New Hampshire Division of Historic Resources (NHDHR).

### Phase 1 Environmental Site Assessment:

TFM or their subconsultant will provide a Phase 1 Environmental Site Assessment in accordance with ASTM E 1527-05 for the subject properties.

Mr. Jacob Dusling
Re: Proposal for Engineering & Survey Services
August 25, 2022
Page 4 of 5

2 Mill Road & 24 Towle Road, Kingston, NH

#### NH Fish & Game:

TFM will coordinate with NHFG to determine the need for endangered species studies. TFM has included an allowance of (12) hours. If studies beyond the wildlife habitat assessment are required, they will be performed as an Additional Service at the Clients direction.

## Task 5 Meetings & Coordination

TFM will attend meetings with the Client, Town Agencies and Boards for the processing of the permit applications and for coordination of the project's activities including but not limited to scheduling and project status reports. TFM has included an allowance of (60) hours. If additional meetings are needed, they will be attended as directed by the Client and billed on a time and materials basis.

### Task 6 Geotechnical Services

Typical Subsurface Investigation, Geotechnical Report & Sampling

TFM will subcontract with a geotechnical/boring company to perform test pits appropriately spaced for the anticipated development area, assumed to be 25 to 35-acres for the proposed 5MW facility.

### Task 7 Permit Fees

TFM has estimated this value based on similar project experience. Permit fees will be confirmed once applications have been prepared. This estimate does not include fees associated with mitigation for wetland impacts.

#### Task 8 Reimbursable Expenses

TFM has estimated this value based on similar project experience which assumes of the budget cost.

#### **Assumptions/Exclusions:**

This proposal is only for the services outlined above and is applicable the regulations in place at the time of this proposal. TFM has assumed reasonable recovery and agreement between field monuments and plans and deeds of record with no disputed boundaries. Should we find a significant boundary dispute the Client will be contacted with anticipated costs. The following items have not been included in this proposal but can be performed by our office at the Client's request. TFM will provide an estimate for the Client's authorization prior to beginning such additional work if requested:

- Unitil or their vendor will provide the General Arrangement for the PV facility including accessory outbuildings. TFM will work with Unitil and their vendor on the siting of these elements on the subject parcels.
- Significant revisions to the development components/layout requested by Client or Regulatory Agencies after commencement of site design will be additional services.
- We have excluded Easement Plans, legal descriptions, etc.
- We assume the existing adjacent roadways are adequate for access to this project without improvements, so we
  have not included a formal Traffic Impact and Access Study (TIAS) and we assume that no offsite roadway
  design will be required.
- We assume that there is adequate capacity in the adjacent utilities to service this project, and that no offsite utility studies or designs will be required.
- Significant revisions to the development components/layout requested by Client or Regulatory Agencies after commencement of site design will be additional services.
- This proposal does not include structural design for any onsite retaining walls over four feet.

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Unitil Energy Systems, Inc. d/b/a Unitil
Docket No. DE 22Exhibit JSD-4(b)
Page 5 of 5

Mr. Jacob Dusling
Re: Proposal for Engineering & Survey Services
Page 5 of 5
2 Mill Road & 24 Towle Road, Kingston, NH

• We have not included, Wetlands Studies (other than delineation), Hazardous Waste Studies, Fiscal Impact Studies, Noise Studies, Air Quality Studies (including generators), Wildlife Studies (other than those identified), Phase 1B Archeological Studies or other technical studies and reports not included above.

#### **Compensation:**

TFM will complete this Scope of Services for the Estimated Sums shown below plus miscellaneous reimbursable expenses.

#### **Schedule of Fees:**

Task 1:	Wetland Delineation	
Task 2:	Survey Services	
Task 3:	Site Plan Package	
Task 4:	<b>Preparing Applications</b>	
Task 5:	<b>Meetings &amp; Coordination</b>	
Task 6:	Geotechnical Services	
Task 7:	Permit Fees	(assumed)
Task 8:	Reimbursable Expenses	(8% of budget)
Total:		

Fees that may be required by the City, State or Federal government and/or other agencies, have been estimated and will be confirmed prior to permit submittal. Fees will be paid by TFM and billed to the client under the specified task. Typical reimbursable expenses run approximately of the budget cost and have been estimated at for this project. TFM will bill on a monthly basis and the bill will reflect work completed to date.

We appreciate this opportunity to provide you with a proposal for this project and are available to meet with you at any time to discuss this project, the scope of work or budget.

We look forward to working with you on another successful project!

Sincerely,

**TFMoran Inc.** 

Nicholas Golon, PE

Principal

**REDACTED** 

("EFFECTIVE DATE")

Unitil Energy Systems. Inc. d/b/a Unitil Docket No. DE 22-

Exhibit JSD-5 Page 1 of 6

dotloop signature verification: dtlp.us/qlAT-7wBv-auub

at Realty, 215 S Broadway, Stc. 191 Salem, NH 03079

Mark Diekey

## PURCHASE AND SALES AGREEMENT New Hampshire Association of REALTORS® Standard Form

08/25/2022



EFFECTIVE DATE is defined in Section 21 of this Agreement. 1. THIS AGREEMENT made this day of between Two Mill Road Realty Trust and 24 Towle Road Realty Trust ("SELLER") of 18 Old Mill Road City/Town Kingston State 03848 and Unitil Realty Corp. ("BUYER") of 6 Liberty Lane West Hampton , State Zip 2. WITNESSETH: That SELLER agrees to sell and convey, and BUYER agrees to buy certain real estate situated in City/Town located at Two vacant land parcels: 2 Mill Rd (63 Acres) Bk/pg 2893/2178 and 24 Towle Rd (33 Acres) Bk/pg 2893/2190 County Rockingham Book see above Page see above Date 08/03/1991 3. The SELLING PRICE is Dollars A DEPOSIT in the form of Check , is to be held in an escrow account by Keller Williams Coastal and Lakes & Mountains ("ESCROW AGENT"). BUYER has delivered, or X will deliver to the ESCROW AGENT'S FIRM within 10 days of the EFFECTIVE DATE, a deposit of earnest money in the amount of BUYER agrees that an additional deposit of carnest money in the amount of \$ will be delivered on or before . If BUYER fails to deliver the initial or additional deposit in compliance with the above terms, SELLER may terminate this Agreement. The remainder of the purchase price shall be paid by wire, certified, cashler's or trust account check, in the amount of 4. DEED: Marketable title shall be conveyed by a Warranty deed, and shall be free and clear of all encumbrances except usual public utilities serving the PROPERTY. 5. TRANSFER OF TITLE: On or before \*See Section 19 at Mutually accepted location or some other place of mutual consent as agreed to in writing. 6. POSSESSION: Full possession and occupancy of the premises with all keys shall be given upon the transfer of title free of all tenants and occupant's personal property and encumbrances except as herein stated. Said premises to be then in the same condition in which they now are, reasonable wear and tear excepted. SELLER agrees that the premises will be delivered to BUYER free of all debris and in "broom slean" condition. Exceptions: None Buyer reserves the right to conduct a walk through inspection upon reasonable notice to SELLER's real estate FIRM within 96 hours prior to time of closing to ensure compliance with the terms of this Agreement. 7. REPRESENTATION: The undersigned SELLER(S) and BUYER(S) acknowledge the roles of the agents as follows: Chantal O'Hara Keller Williams Coastal and Lakes & Mountains of is a X seller agent buyer agent facilitator disclosed dual agent Mark Dickey / Chris Norwood of **NAI Norwood Group** is a ∑seller agent ∑buyer agent ∑facilitator ∑disclosed dual agent\*
\*If agent(s) are asting as disclosed dual agents, SELLER and BUYER acknowledge prior receipt and signing of a Dual Agency Informed Consent Agreement. NOTICE OF DESIGNATED AGENCY: If checked, notice is hereby given that BUYER is represented by a designated buyer's agent and SELLER is represented by a designated seller's agent in the same firm. 8. INSURANCE: The buildings on said premises shall, until full performance of this Agreement, be kept insured against fire, and other extended casualty risk by SELLER. In case of loss, all sums recoverable from said insurance shall be paid or assigned. on transfer of title, to BUYER, unless the premises shall previously have been restored to their fermer condition by SELLER; er, at the option of BUYER, this Agreement may be reseinded and the DEPOSIT refunded if any such less exceeds SELLER(S) INITIALS BUYER(S) INITIALS © 2014 NEW HAMPSHIRE ASSOCIATION OF REALTORSO, INC. ALL RIGHTS RESERVED. FOR USE BY NHAR REALTORS MEMBERS ONLY, ALL OTHER USE PROHIBITED 7.2021 PAGE 1 OF 5

Phone: (603)668-7800

Produced with Lone Wolf Transactions (zipForm Edition) 717 N Harwood St, Suite 2200, Dallas, TX 75201 www.lerolf.com

Unitil Kingste

Exhibit JSD-5 Page 2 of 6

dotloop signature verification: dtlp.us/qlAT-7wBv-auub

# PURCHASE AND SALES AGREEMENT New Hampshire Association of REALTORSe Standard Form



9. TITLE: If upon examination of title it is found that the title is not marketable, SELLER shall have a reasonable time, not to exceed thirty (30) days from the date of notification of defect (unless otherwise agreed to in writing), to remedy such defect. Should SELLER be unable to provide marketable title within said thirty (30) days, BUYER may rescind this Agreement at BUYER'S sole option, with full deposit being refunded to BUYER and all parties being released from any further obligations hereunder. SELLER hereby agrees to make a good faith effort to correct the title defect within the thirty (30) day period above prescribed once notification of such defect is received. The cost of examination of the title shall be pome by BUYER.

	PRORATIONS: Taxes, ecclosing, Buyer chall pay for with lender requirements company that last delivered	or all fuel , if any.	-The	laining in tar	nk(o) calculate	d as of the closing date o	r-such-	earlies	date es re	puired to comply
11. 1	PROPERTY INCLUDED	: All Fixt	lures	Vacant L	and					
12. 1	n compliance with the req	uirement	ts of	RSA 477:4-	a, the following	g information is provided t	BUYE	R reli	ative to Rad	lon Gas, Arsenic
	RADON: Radon, the produ pass into a structure throug and testing of the water by water.	gh the gro	ound	or through v	vater from a de	en well. Testing of the air	by a pr	nfaggi	onal certifier	d in radon teeting
	Arsenic: Arsenic is a community the state. Tests are available the buyer is encouraged (www.des.nh.gov) to ensure	to consu	ermin	e whether a	rsenic is preser oshire departm	nt at unsafe levels, and equent of environmental servi	Ipment	s ava	deble to rem	ove it from water
	LEAD: Before 1978, paint co paint or lead paint dust from painting practices, or from so women. Lead may also be p whether lead is present in Disclosure Required	friction su oils in clos present in int or drink	urface se pro drink	es, or from the oximity to the king water as water.	e disturbance of building, can p	fintact surfaces containing to resent a serious health haza	ead pain	throu	gh unsafe re	novation, repair or
3.	BUYER ACKNOWLEDG	SES PRI	OR		F SELLER'S	PROPERTY DISCLOS	URE F	ORM	AND SIGN	IFIES
14.	A South	YER is business	enc s reg e co	couraged to	seek inform specific issue	ation from licensed hon of concern, SELLER'S or value of the SELLE	ne insp real es	ector	s and other	er professionals
14.	BUYER ACKNOWLEDGE BY INITIALING HERE: INSPECTIONS: The BU normally engaged in the incomplete or representations regard	JYER is business rding the upon the	ences reg	couraged to arding any endition, per	seek inform specific issue emitted use ections, with re	ation from licensed hon of concern, SELLER'S or value of the SELLE esults being satisfactory	ne insp real es R'S re to the l	ector tate i al or BUYE	s and other IRM make personal IR:	er professionals is no warranties property. This
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#### **PURCHASE AND SALES AGREEMENT** New Hampshire Association of REALTORS® Standard Form



- 2) If SELLER elects not to repair or remedy the unsatisfactory conditions(s) the BUYER may release the home inspection contingency and accept the property as is; or
- 3) If SELLER and BUYER cannot reach agreement in writing with respect to the method of repair and remedy of the unsatisfactory condition(s), then this Agreement is terminated and all deposits shall be returned to BUYER in accordance with NH RSA 331-A:13.

Notification in writing of SELLER'S intent to repair or remedy or not to repair or remedy pursuant to Section (b) above, shall be delivered to BUYER or their licensee within five (5) days of receipt by SELLER of notification of unsatisfactory condition(s). BUYER shall respond in writing to SELLER'S notification within five (5) days. If BUYER does not respond within five (5) days, SELLER may elect to terminate this Agreement and all deposits shall be returned to BUYER in accordance with NH RSA 331-A:13.

5. DUE DILIGENCE: This /	Agreement is conting	gent upon BUY	ER'S satisfact	ory review of the following:		
a. Restrictive Covenants of     b. Easements of Record/De     c. Park Rules and Regulation	eed X		e. Co-op/PUD f. Availability	orn documentation per N.H. RSA 356-B:58 /Association Documents of Property/Casualty Insurance and cost of Flood Insurance	1	NO X
If such review is unsatist Agreement failing which BUYER in accordance w	such contingency s	hall lapse. If B	ER in writing w UYER so notif	ithin <u>90</u> days from the effective es SELLER, then all deposits shall be	date o	f the
the deposit may, at the event of any dispute rel-	option of SELLER, ative to the deposit	become the monies held in	property of SE n escrow, the	LLER as reasonable liquidated dama	scretion,	the
said deposit monies into notice thereof at the add as recited therein and ea Both parties hereto agre deposit monies held in ea	o the Clerk of Cour dress recited herein, ach party to this Agree that the ESCRO' scrow prior to the for	and thereupo eement shall I W AGENT ma warding of sai	isdiction in an in the ESCRON hereafter hold by deduct the come to the Clerk	Action of Interpleader, providing each AGENT shall be discharged from it the ESCROW AGENT harmless in such sost of bringing such Interpleader act of such court.	s obligation capa ion from	with tions acity the
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# PURCHASE AND SALES AGREEMENT New Hampshire Association of REALTORS® Standard Form



The existence of conditions in the lean commitment will not extend either the Financing Deadline described below or the closing date.

BUYER hereby authorizes, directs and instructs its lender to communicate the status of BUYER'S financing and the satisfaction of lender's specified conditions to SELLER and SELLER'S/BUYER'S real estate FIRM.

TIME IS OF THE ESSENCE in the observance of all deadlines set forth within this financing contingency.

If BUYER provides written evidence of inability to obtain financing to SELLER by Deadline"), then:

("Financing

- (a) This Agreement shall be null and void; and
- (b) All deposits will be returned to BUYER in accordance with the procedures required by the New Hampshire Real Estate Practice Act (N.H. RSA 331 A:13) ("the Deposit Procedures"); and
- (e) The premises may be returned to the market.

BUYER may choose to waive this financing contingency by notifying SELLER in writing by the Financing Deadline and this Agreement shall no longer be subject to financing.

#### If however.

- (a) BUYER does not make application within the number of days specified above; or
- (b) BUYER fails to provide written financing commitment or written evidence of inability to obtain financing to SELLER by the Financing Deadline,

### Then SELLER shall have the option of either.

- (a) Declaring BUYER in default of this Agreement; or
- (b) Treating the financing contingency as having been waived by BUYER.

If SELLER declares SUYER in default, in addition to the other remedies afforded under this Agreement:

- (a) SELLER will be entitled to all deposits in accordance with the Deposit Procedures; and
- (b) This Agreement will be terminated; and
- (e) The premises may be returned to the market for sale.

If SELLER opts to treat the financing contingency as waived or relies on a conditional lean commitment and BUYER subsequently does not close in a timely manner, SELLER can then declare BUYER in default. SELLER then, in addition to the other remedies afforded under this Agreement.

- (a) Will be entitled to all deposits in accordance with the Deposit Procedures; and
- (b) This Agreement will be terminated; and
- (e) The premises may be returned to the market for sale.

BUYER shall be solely responsible to provide SELLER in a timely manner with written evidence of financing or lack of financing as described above.

WIRE FRAUD ALERT. Sophisticated criminals are targeting the email accounts of real estate agents, title companies, settlement attorneys and others to generate fake wire transfer instructions designed to divert closing funds to the criminals. The emails are professionally created and look real. Buyer and Seller should not send personal information such as social security numbers, bank account numbers or credit card numbers except through secure email or personal delivery of the information. Buyer and Seller are advised not to wire any funds without personal delivery of the information. Buyer and Seller are eaking wit model recipient of the wire to confirm the routing number and the account number. Seller

SELLER(S) INITIALS

OB/25/22

OB

Produced with Lone Wolf Transactions (zipForm Edition) 717 N Harwood St, Suite 2200, Dallas, TX 75201 www.lwolf.com

Unitil Kingston

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### **PURCHASE AND SALES AGREEMENT** New Hampshire Association of REALTORS® Standard Form



1) Seller shall have no tree or mineral harvesting, as property seen today (effective date). 2) Added to the Inspection Period of this agreement will be inserted into Section 14(i) will be 180 days for each of the following to the Buyer's sole and absolute discretion and satisfaction: a) Subject to the buyer obtaining an appraisal with a value of the offer price or greater. b) The Buyer obtaining all State and Town required approvals. c) Environmental and Geotechnical review. 3) Buyer shall have the right to extend the Inspection Period outlined in Section 14 for an additional 60 days by Continued See Addendum Additional Provisions 1  20. ADDENDA ATTACHED:   Yes   No Addendum    21. EFFECTIVE DATE/NOTICE: Any notice, communication or document delivery requirements in this agreement may be satisfied by providing the required notice, communication or documentation to the party or their licensee. All notices and communications must be in writing to be binding except for withdrawals of offers or counteroffers. This Agreement is a binding contract when signed and all changes initiated by both BUYER and SELLER and when that fact has been communicated in writing which shall be the EFFECTIVE DATE. Licensee is authorized to fill in the EFFECTIVE DATE on Page 1 hereof. The use of days is intended to mean calendar days from the EFFECTIVE DATE of this Agreement. Deadlines in this Agreement, including all addenda, expressed as a within x days' shall be counted from the EFFECTIVE DATE, or such other established starting date is expressly set forth, beginning with the first day after the EFFECTIVE DATE, or such other established starting date; and ending at 12:00 midnight Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda, expressed as a specific date shall end at 12:00 midnight Eastern Time on the last day counted. Unless expressly stated to the contrary, deadlines in this Agreement, including all addenda expressed as a specific date shall end	19. ADDITIONAL					
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## **ADDENDUM**

) Seller will provide all relevant reports, data a	90 days after the effective date of this agreement. and testing results pertinent to both sites.
Transfer of Title to take place on or before 30 hereof as outlined Section 14.	O days after the Inspection Period or any extension
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## <u>Preliminary Request for Proposal – Scope of Services</u>

September  $1\overline{2}$ ,  $20\overline{22}$ 

# 1 Project Description

Unitil views renewable energy as a valuable resource that provides benefits to the electric grid and the environment. Unitil is under agreement to purchase the property of 2 Mill Road in Kingston, NH and is currently performing due diligence exploration on the parcel. It is Unitil's intent to install a utility scale photovoltaic generating (PV) facility on the property.

To assist in this effort Unitil is issuing this "Preliminary" Request for Proposal (P-RFP) for the design, procurement and construction of the PV facility. The purpose of this P-RFP is to obtain detailed pricing information for various facility options that will be utilized by Unitil in regulatory filings and for the development of a "Final" RFP for the project.

All references to professional engineering review and final designs in this P-RFP are to inform the vendors of the level of final design that is expected when the project is awarded after the "Final" RFP process is complete. Until is not intending for any Vendors to complete final stamped designs as part of this P-RFP process. It is the Company's expectation that preliminary designs, layouts, equipment specifications, schedules and costs be included in response to this P-RFP.

## 2 Property Description

Mill Road, Kingston, NH is a 63 acre vacant parcel that has two 34.5kV "subtransmission" lines running through it and is adjacent to a Unitil 115kV to 34.5kV substation.

Information of record reviews indicate that the parcel is relatively flat with limited wetlands. Unitil's subcontractor is in the process of surveying the parcel, formally identifying wetlands and performing other due diligence activities.

It is Unitil's intent to perform all construction permitting and "pad-ready" construction (access road, drainage facilities, and final site grading) utilizing its typical, local site engineering firms and construction contractors. The scope of this work is outside the scope of this P-RFP. However, Unitil will coordinate with the site construction contractor to have below grade conduit, cable trench, transformer pads and inverter pads installed as part of the site construction. The specification, procurement and cost of this equipment shall be included in the proposals to the P-RFP.

For the purposes of the P-RFP assume the "pad-ready" site will have a 5% north-to-south slope.

## 3 Design Requirements

All components of the PV Facility up to the Point of Interconnection (POI), including PV modules, inverters, step-up transformers, equipment racking and foundations, facility fence, etc., shall be considered in scope and included in responses to this P-RFP.

For the purposes of this P-RFP the POI shall be considered the utility side of the step-up transformer(s).

## **Preliminary Request for Proposal – Scope of Services**

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## 3.1 Ratings:

Nameplate Capacity: 4.9MW AC (facility AC rating shall be less than 5MW)

Utility System Voltage at POI: 34,500GRD Y/19,920 V

Utility System Insulation Level at POI: 200kV BIL

## **3.2** General Design Requirements

- The facility and all its components shall be designed and installed in accordance with the latest versions of the 2023 National Electric Safety Code (NESC), 2023 National Electric Code (NEC), UL-1741, IEEE 1547, and all other applicable local and state codes and standards.
- The selected vendor shall have a professional engineering firm that is licensed to practice engineering in the state of New Hampshire sign off on the final design and must certify that the system is designed and built in accordance with the NESC, NEC, and all local, state and federal codes.

## 3.3 Conduit and Junction Box Requirements

- o Conduit shall be rigid (hot-dipped) galvanized steel (RGS) for all above-grade installations and transitions (e.g., 90-degree sweeps from below-grade to above-grade).
- o Gray electrical grade Schedule 40 or 80 PVC conduit shall be utilized for all below-grade installations unless otherwise approved.
- o Conduit fasteners and hardware throughout the system shall be stainless steel or materials of equivalent corrosion resistance
- Outdoor electrical equipment and enclosures, including but not limited to, disconnects and combiners shall have NEMA Type 3R or NEMA Type 4 ratings and be UL Listed. All other equipment enclosures shall be suitable for outdoor installation in New England, subject to sun, rain, wind, snow, etc.

## 3.4 Electrical Design Requirements

- o Electrical engineering and design shall meet industry standards such as the NESC, NEC, UL-1741, IEEE 1547, and all other applicable local and state codes and standards.
- o All equipment and enclosures, including but not limited to, disconnects and combiners shall String combiner boxes must be bonded and grounded as required by the NESC and NEC.
- o String combiner boxes shall include properly-sized fusing.
- o All protection equipment throughout the system shall be sized and specified to reduce damage on all components and the interconnection point in case of electrical failure.
- o The design shall include the appropriate sizing of all cabling (above and below ground) that will connect the PV modules, arrays, inverters, transformer and switchgear to the POI. Wire sizing and layout should result in no more than 1.0% drop in the AC voltage between the inverter and the point of interconnection.

# **Preliminary Request for Proposal – Scope of Services**

September  $1\overline{2}$ ,  $\overline{2022}$ 

- The electrical systems, wiring, conduits, cables shall be neatly routed to facilitate access, troubleshooting, maintenance, etc.
- o The electrical design shall include the design of equipment grounding, and lightning/surge protection for the entire PV installation up to the point of connection.
- o PV Facility site shall be affectively grounded.
- o A convenience outlet at 120v/20 amp to provide power for test equipment and other diagnostic equipment shall be installed within fifteen feet of each inverter.

## 3.5 Structural Design Requirements

- O Structural analysis and design of the photovoltaic arrays, mounting systems, foundations and/or piers shall be based upon the requirements of the applicable codes and standards as well as the data supplied by the PV module, inverter, switchgear and mounting suppliers. At a minimum all equipment shall be suitable to withstand 110MPH winds and up to 1" of ice accretion. The Vender shall provide a professional engineer's stamped report describing and confirming that the final design meets the requirements of the applicable codes and standards.
- o All fasteners and hardware throughout the system shall be stainless steel or materials of equivalent corrosion resistance
- o All non-metallic exposed materials shall be sunlight and UV resistant (30 year life expectancy)

## 3.6 Facility Fencing

The entirety of the PV facility shall be fenced per NESC section 110 and grounded per NESC section 9. The cost associated with the grounding design and installation of the fence and its grounding system shall be included in proposals to this P-RPF. The PV facility fence shall meet or exceed the following requirements.

- o Fabric shall be #9 (minimum) steel wire gauge and 2" (maximum) diamond mesh chain link, 7' in width.
- o Fabric shall be attached to posts and rails by means of #9 gauge galvanized steel 'Easy Twist Ties'
- o All corner posts and gate posts shall be 4" allied tube SS40 pipe and shall be installed in 18" diameter sonotubes to a depth of 5'-0" (minimum) below finished grade.
- o Line posts shall be a minimum 2'-1/2" allied tube SS40 pipe and shall be installed in 8" diameter sonotubes to a depth of 5'-0" (minimum) below finished grade.
- o Rivets shall be stainless steel.
- o All other steel parts shall be hot-dipped galvanized after fabrication with the exception of the fence fabric which shall be aluminized.
- Outside diameter of top rails, bottom rails, and bracing rails shall be a minimum of 1-5/8".
- o Assume two (2) 30' vehicle gates and two (2) 4' personnel gates.

# **Preliminary Request for Proposal – Scope of Services**

September 12, 2022

- o All gates shall match the height of the main fence and barb wire.
- o Gates shall be provided with fork and turn latches that have provisions for padlocking.
- o Gate rests shall be castings and shall not be pipe.
- o All gates shall swing in both directions.
- o Maximum spacing of posts shall be 10', except where wider gate openings are required.
- o Top of fence shall be a minimum of 7' above final grade.
- o Gaps of no more than 2" between the bottom rail and final grade shall be allowed.

## 3.7 Other Design Requirements

- o All fasteners and hardware throughout the system shall be stainless steel or materials of equivalent corrosion resistance
- o All non-metallic exposed materials shall be sunlight and UV resistant (30 year life expectancy)

## 4 Equipment Requirements

The Company prefers equipment from PV module and inverter manufacturers as well as transformer manufacturers that are located in the United States and have at least ten (10) years of experience manufacturing the selected components of the type and size proposed, for this applications.

All solar PV system equipment shall be newly manufactured (not refurbished or reconditioned) from a reputable manufacturer, experienced in providing equipment for the application and site conditions.

### 4.1 Inverters

- o Inverters shall be compliant with current versions of UL 1741, IEEE 1547 and all other applicable codes and standards.
- o Inverters must carry a UL 1741 or equivalent certification.
- It is Unitil's intent to integrate the inverters with its SCADA system via DNP communications for remote monitoring (status, error/diagnostics codes, instantaneous AC and DC voltage and current, instantaneous AC power, daily cumulative kWh, etc.) and control (voltage control power factor management, etc.).
- o On-site commissioning of the inverters as well as their SCADA functionality shall be included in the proposals.
- The inverter units should have built-in tolerance to variation in grid voltages. The inverter shall be capable of riding through voltage sags. Tolerance set points should be configurable to +/- 10% minimum.
- o The three phase output voltages and currents shall be sinusoidal with low total harmonic distortion (THD) to meet IEEE 519 harmonic requirements. Harmonic filters shall be provided if required.
- o The proposed systems it will have a CEC weighted efficiency of 97.5 % or higher.

# Preliminary Request for Proposal – Scope of Services

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- o All inverters shall be warrantied for a minimum of twelve (12) years, fifteen (15) years or more is preferred, after energization.
- o Inverter Configuration
  - Include integral AC and DC disconnects.
  - Provide galvanic isolation between AC and DC system conductors.
  - The cumulative inverter AC nameplate rating shall be less than 5MW.
  - The inverters must have ground fault detection (GFDI) system on the DC side to protect the system from a PV ground-fault. The inverter must be able to detect, notify (store and show fault codes), and interrupt PV ground-faults.

### 4.2 Solar Modules/Panels

- o Modules should be compliant with current versions of UL 1703, ISO9001, IEC 61215, IEC 61730 and all other applicable codes and standards.
- o PV modules should be installed in a single contiguous area, with no more than 2% DC loss from the array to inverter equipment.
- The expected rating of the modules shall not fall below the cumulative rating of the inverter(s) throughout the expected life of the facility.
- o Power loss due to module power mismatch is to be less than 2%. The Vendor is to provide Unitil with a strategy for achieving this. The modules shall be selected to eliminate output reduction by voltage mismatch within a string.
- o The following details shall be provided:
  - Snow weight resistance provide the maximum weight that the solar panels/frames/fixings can withstand before breaking or bending.
  - Wind resistance provide the maximum wind speed that the panels/frames/fixings can withstand before breakage. Wind impacting on the upper and lower surfaces should be considered.
- All solar modules shall be warrantied for a minimum of twenty-five (25) years, thirty (30) years or more is preferred, after energization.

## 4.3 Racking Requirements

- All structural materials shall have adequate corrosion and grounding protection for the soils (if ground mounted) and environment in which it is placed.
- o Racking components shall be anodized aluminum, hot-dipped galvanized steel, or material of equivalent corrosion resistance throughout the thirty (30) year project life taking into consideration the environmental conditions
- O All structural and nonstructural components will be designed to resist the effects of gravity, seismic, wind, weather and other applicable loads (including snow and ice) in accordance with the requirements of the ASCE Standard for Minimum Design Loads for Building and Other Structures and all other applicable codes and standards.

## **Preliminary Request for Proposal – Scope of Services**

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o All final structural drawings associated with the project must be stamped by a Professional Structural Engineer registered within the State of New Hampshire.

## 4.4 Step-Up Transformer

The step-up transformer shall be padmounted with the following requirements:

o Rating Information:

High-Voltage: 34.5/19.92 kV

High-Voltage BIL: 200kV (deadfront bushings may be 150 kV BIL)

Neutral H<sub>0</sub> BIL: 200 kV (if applicable)

- o Transformer shall be oil filled, Class ONAN, 60 cycle, 65°C rise at rated kVA.
- o Transformer shall be filled with highly refined mineral oil suitable for electric insulation. The oil shall meet or exceed the requirements of ANSI/ASTM D3487 for Inhibited Type II.
- o The transformer oil shall be certified "Non-PCB" in accordance with current EPA regulations and shall contain PCB levels which are considered non-detectable. The transformer nameplates shall be permanently engraved with a statement that the transformer oil contained less than 1 ppm PCB's at the time of manufacture.
- o The color of the unit shall be Munsell green or equivalent.
- o Transformer shall be equipped with a standard dial type liquid level indicator located in the high voltage compartment. The indicator shall have the 25°C level permanently marked on the gauge and have a range of at least 100°C.
- o Transformer shall be equipped with a standard dial type liquid temperature indicator located in the primary voltage compartment. The indicator shall be factory calibrated to indicate the top liquid temperature in degrees Celsius up to at least 120°C and shall include a maximum reading pointer with an external reset.
- o A combination drain and lower filter valve shall be provided for complete drainage of the oil to within one inch of the bottom of the tank. The drain valve shall be a 2" ball-type valve with NPT threads and a pipe plug in the open end. The valve shall be equipped with a built-in 3/8" sampling device located in the side of the valve between the main valve seat and the pipe plug. This valve shall be located in the high-voltage compartment and should be placed so as not to interfere with the training of cables to the bushings.
- o An upper filter valve located below the 25°C liquid level shall also be located in the high voltage compartment. This filter valve shall be a 1" ball-type valve, suitable for the return of filtered oil, with NPT threads and a pipe plug in the open end.
- o Unit shall be supplied with an automatic, self-resealing, pressure relief system to prevent tank failure.
- o The high-voltage terminals shall be of loop-feed design. The primary phase terminals shall be one piece, bolted-on, dead-front, load-break bushings three-phase rated (21.1/36.6) conforming to ANSI/IEEE 386 for 35kV class large interface load-break bushings (plum nose piece) and configured as per ANSI C57.12.34, Figure 18.
- o The step-up transformer winding configuration should comply with the following table.

## **Preliminary Request for Proposal – Scope of Services**

September 12, 2022

Utility Side	Generator Side	Added Requirements
Wye-Grounded	Delta	NGR (if necessary)
Wye-Grounded	Wye-Grounded	Effectively Grounded DER Source
Wye-Grounded	Wye-Grounded	Secondary Grounding Transformer

Table 1

Permitted Transformer Winding Configurations for Multi-Grounded Circuits

## **5** Facility Options

Unitil is interested in exploring alternates to optimize/improve "generation factor" to increase energy export, especially during peak load hours. The following options are being considered by Unitil and this P-RFP process will assist the Company in determining the requirements of a future "Final" RFP. For all options below include alternatives for both fixed PV modules and multi-axis tracking modules.

The various alternatives will be evaluated by Unitil to determine the most cost effective option.

## 5.1 AC and DC "Matched" Capacity

PV facility in which the estimated DC peak capacity is matched to the 4.9MW AC capacity of the invertors. This is the base option in which the other options described below will be compared to.

## 5.2 Larger DC Capacity

PV facility in which the DC capacity is greater than the AC capacity to improve "generation factor" during off-peak generation times. It is understood that during peak generation times of year, inverter clipping will occur reducing AC output to the rating of the invertors.

Vendors shall propose a reasonable DC rating based on their past experience.

## **5.3** Paired Energy Storage System

Energy Storage System (ESS) installed in conjunction with the PV system on the DC side of the facility. The ESS shall only be capable of being charged from the solar modules/DC side of the PV facility. In this option the purpose of the ESS is to improve "generation factor" during the following between the hours of 15:00-20:00.

Vendors shall propose a reasonable ESS size and charge/discharge schedule rating based on their past experiences for both the AC and DC "Match" Capacity PV Facility (5.1 above) and the Larger DC Capacity PV Facility (5.2 above).

# 6 Project Manager

It is Unitil's desire to have one primary point of contact, Project Manager, for the coordination and completion of all tasks described in this P-RFP. Unitil will require routine updates regarding the progression of the Work to be provided by the Vendor's assigned Project Manager. This Project Manager should be experienced in Work of this nature and the importance of communicating with customers regarding the project's progress.

# **Preliminary Request for Proposal – Scope of Services**

September 12, 2022

The Project Manager shall participate in routine project meetings to review the status of the construction project. The frequency of such meetings will be dependent on the on-going tasks being performed. For convenience remote meeting call-in information will be provided. Proposals shall include the assumed number of hours included for communication with the Company and the hourly rate in which this will billed.

## 7 Construction Field Representative

Vendor shall provide a construction field representative that will serve as the Company's on-site representation throughout the duration of construction of the facility. This individual shall have a good understanding of the various aspects of the project and have a broad understanding of current construction practices.

This effort shall include the monitoring of the quality and progress of construction, assisting the construction contractor(s) in understanding the intent of the construction documents, confirming the site is constructed as designed and submitting weekly progress reports to the Company. Proposals shall include the assumed number of hours included for the construction field services representative's responsibilities and the hourly rate in which this will billed.

## **8 Proposal Requirements**

Each proposal shall include the following as well as any additional information vendors would like to provide.

## 8.1 Vender Information

- o Form of legal entity and year entity was established
- o Location
- o Describe any changes in ownership over past 10 years
- Outstanding Lawsuits and Disputes
- o Describe general reputation and performance capabilities of firm.
- o Number of year's Vendor has been engaged in providing services
- Number of full-time employees and full-time local (New Hampshire and New England) employees
- o Accreditations or qualifications for work of those to be involved in the proposed project

## 8.2 Construction, Commissioning and Maintenance

- o For each of the options described in section 5.
  - Detailed description of the proposed PV system proposed technology, scope of work, features, installed capacity, equipment (inverters, transformer, PV modules, etc.) foundations/mounting details, and "cut-sheets" of major equipment (e.g., inverters, modules, transformer, etc.) to be installed.
  - Preliminary layout and one-line of the proposed facility.

# **Preliminary Request for Proposal – Scope of Services**

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- List and location of below-grade equipment proposed to be installed by Unitil's site contractor.
- Environmental loading facility is designed for.
- Description of below grade equipment to be installed by Unitil's site contractor.
- Estimated clear area in acres required for the proposed facility.
- Expected life of the facility in years and anticipated inverter, PV module and ESS (if applicable) component replacements over the expected life of the facility.
- Estimated annual energy production and method utilized to perform the calculation for each year of the next 30 years.
- Estimated hourly energy production and method utilized to perform the calculation for each month of the year for the following hours:

15:00-16:00 16:00-17:00 17:00-18:00 18:00-19:00 19:00-20:00

- List of recommended spare equipment.
- Recommended annual maintenance requirements.
- o Sample testing and commissioning plan
- o Country of manufacture of all major equipment (e.g., inverters, modules, transformer, etc.)
- o Detailed schedule for engineering, procurement and construction
- o Describe capability to provide 5 years of PV and ESS system operation and maintenance
- o Listing of all applicable statutes, ordinances, codes, standards, and/or regulations facility is designed to comply with.

## **8.3 Pricing Proposals**

Price proposals shall be based on and will be evaluated on the assumptions provided within this document. All pricing proposals shall be completed in the excel document entitled "2020 PV Facility Design and Installation P-RPP – Pricing Response".

## 8.4 Lead Time

Provide current lead time for all major equipment (PV modules, inverters, step-up transformer, ESS, etc.) and anticipated construction timeline.

# <u>Preliminary Request for Proposal – Scope of Services</u>

September 12, 2022

## 8.5 Exceptions

Any and all exceptions to this specification shall be clearly noted, including the reasoning for the exception.

Please indicate any requirements of this specification that are atypical for a facility of this type and size and indicate the typical alternative.

## **8.6 Questions to Vendors**

Each vendor is required to provide complete and detailed responses to all information requested, including responses to the questions below.

## 8.6.1 Inverter Type

Briefly describe the advantages and disadvantages of a central inverter design and a string inverter design for a facility such as this.

## 8.6.2 Supply Chain

Indicate supply chain trends, including product pricing and lead times, of major equipment (PV modules, inverters, step-up transformer, ESS, etc.) over the past twelve months. Provide any insight on those trends continuing, stabilizing or improving over the next twelve months.

#### **8.6.3** Geotechnical Information

Describe what geotechnical information is require to complete the detailed PV facility design.

#### 8.6.4 **NESC**

With this being a utility owned facility it is Unitil's understanding that it will need to comply with all applicable portions of the NESC. Describe your experience designing and constructing facilities that comply with the NESC.

Provide any additional details regarding the grounding of equipment and fencing to comply with the NESC.

### 8.6.5 Local Businesses

Briefly describe if/how you plan to involve local businesses and/or local labor in the design and/or construction of the facility.

### 8.6.6 Investment Tax Credit

Briefly describe any known requirements for Unitil to achieve the maximum federal Investment Tax Credit (ITC) and other tax incentives for this project and how your proposal assists in meeting those requirements.

# Preliminary Request for Proposal – Scope of Services

September 12, 2022

#### 8.6.7 Other Benefits of PV/ESS

Briefly describe any quantitative (other than reduction of load and renewable energy credits) and qualitative benefits of PV and ESS. For any quantitative benefits please provide the benefit the proposed facility is expected to provide and the method in which the benefit was calculated.

#### 8.6.8 Additional Information

Based on your experience with work similar in scope to what is described in the P-RFP, please suggest supplemental or alternative tasks to be undertaken for this project to help Unitil achieve its objective. Your response may include omissions, additions or modifications to tasks outlined in the P-RFP.

Any omission, addition or modification to what is outlined in the P-RFP shall be clearly identified in your proposal, including a detailed explanation of the reason(s) for the proposed change.

## 8.6.9 Work Planning

Discuss your plan to deliver the work described in the P-RFP throughout completion.

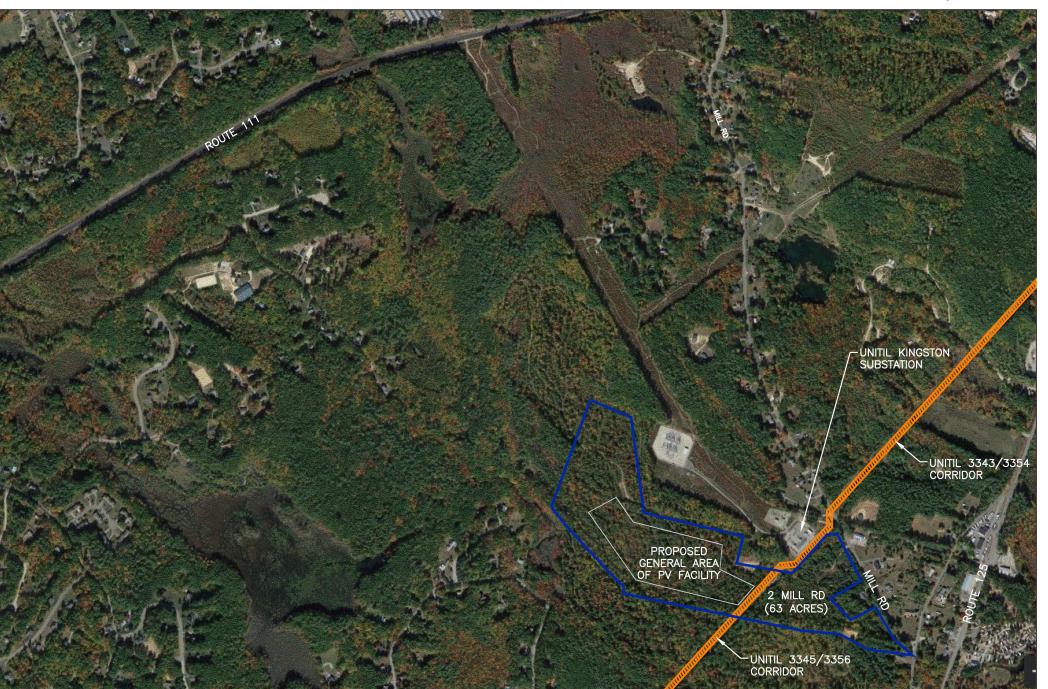
#### 8.6.10 "Final" RFP

Provide a list of additional information that you would like to have included in a future "Final" RFP to assist you in providing a final proposal.

Indicate the typical validity period of final proposal.

## 9 Attachments

- <u>2 Mill Road Overview</u> Overview of 2 Mill Road with surrounding electric infrastructure highlighted. The proposed general area of the PV facility shown on this print may change as more information becomes available through the site due diligence process. This document is not to scale.
- <u>2 Mill Rd Aerial</u> Overview of 2 Mill Road without surrounding electric infrastructure highlighted. This document is to scale.
- <u>2020 PV Facility Design and Installation P-RPP Pricing Response</u> pricing response spreadsheet that shall be completed by all participating vendors. If electing to not quote specific options please provide an explanation in the spreadsheet.





## Option 5.3B - Paired ESS - Multi-Axis Track Panel Design **General Information AC Nameplate Capacity** kWh **Total Nameplate Capacity of PV Modules** kWh Nameplate Capacity of ESS kWh kW Estimated Required Clear Space Acres **Estimated Energy Production** Estimated Annual Energy Generated - Year 1 kWh % Reduction from Year 1 to Year 2 Annual % Reduction Year 2 to the End of Life of the Facility Aug Feb Mar May Jul Oct Nov Dec Apr Jun Sep Estimated Hourly Energy Produced 15:00-16:00 kWh Estimated Hourly Energy Produced 16:00-17:00 kWh Estimated Hourly Energy Produced 17:00-18:00 kWh Estimated Hourly Energy Produced 18:00-19:00 kWh Estimated Hourly Energy Produced 19:00-20:00 kWh **Pricing Information: Inverters and Associated Material** PV Modules and Associated Material Step-up Transformer and Associated Material All Other Material (excluding ESS and fence) Labor to Install Facility (excluding ESS and fence) **ESS Material** Labor to Install ESS Fence Material Labor to Install Fence 5 Year Maintenance Plan \$/hr Hours **Project Management** Construction Field Representative One (1) Spare Step-Up Transformer One (1) Spare Inverter Five (5) Spare PV Modules Other Recommended Spare Equipment Charge/ **Proposed Charge Schedule of ESS** Charge/ Discharge Discharge kWh kWh 00:00-1:00 12:00-13:00 1:00-2:00 13:00-14:00 2:00-3:00 14:00-15:00 3:00-4:00 15:00-16:00 4:00-5:00 16:00-17:00 5:00-6:00 17:00-18:00 6:00-7:00 18:00-19:00 7:00-8:00 19:00-20:00 20:00-21:00 8:00-9:00 9:00-10:00 21:00-22:00 10:00-11:00 22:00-23:00 11:00-12:00 23:00-00:00 **Notes and Comments**

Option 5.1A - AC and DC "Matched" Capacity - Fixed Panel	<u>Design</u>											
General Information												
AC Nameplate Capacity Total Nameplate Capacity of PV Modules		kWh kWh										
Estimated Required Clear Space		Acres										
Estimated Energy Production												
Estimated Annual Energy Generated - Year 1 % Reduction from Year 1 to Year 2 Annual % Reduction Year 2 to the End of Life of the Facility		kWh % %										
Estimated Hourly Energy Produced 15:00-16:00 Estimated Hourly Energy Produced 16:00-17:00 Estimated Hourly Energy Produced 17:00-18:00 Estimated Hourly Energy Produced 18:00-19:00 Estimated Hourly Energy Produced 19:00-20:00		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	kWh kWh kWh kWh kWh
Inverters and Associated Material PV Modules and Associated Material Step-up Transformer and Associated Material All Other Material (excluding fence) Labor to Install Facility (excluding fence) Fence Material												
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Project Management Construction Field Representative		\$/hr										
One (1) Spare Step-Up Transformer One (1) Spare Inverter Five (5) Spare PV Modules Other Recommended Spare Equipment												
Notes and Comments												ı

Option 5.1B - AC and DC "Matched" Capacity - Multi-Axis T	rack Panel	Design											
General Information													
AC Nameplate Capacity Total Nameplate Capacity of PV Modules		kWh kWh											
Estimated Required Clear Space		Acres											
Estimated Energy Production													
Estimated Annual Energy Generated - Year 1 % Reduction from Year 1 to Year 2 Annual % Reduction Year 2 to the End of Life of the Facility		kWh % %											
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Option 5.2A - Larger DC Capacity - Fixed Panel Design													
General Information													
AC Nameplate Capacity	/	kWh											
Total Nameplate Capacity of PV Modules	S	kWh											
Estimated Required Clear Space	2	Acres											
Estimated Energy Production													
Estimated Annual Energy Generated - Year 1	L	kWh											
% Reduction from Year 1 to Year 2		%											
Annual % Reduction Year 2 to the End of Life of the Facility	/	%											
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PV Modules and Associated Materia													
Step-up Transformer and Associated Materia													
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5 Year Maintenance Plan	1												
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Construction Field Representative													
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One (1) Spare Step-Up Transformer													
One (1) Spare Inverter													
Five (5) Spare PV Modules													
Other Recommended Spare Equipment	t												
Notes and Comments													

Option 5.2B - Larger DC Capacity - Multi-Axis Track Panel Design	<u>n</u>											
General Information												
AC Nameplate Capacity Total Nameplate Capacity of PV Modules		Wh Wh										
Estimated Required Clear Space	A	cres										
Estimated Energy Production												
Estimated Annual Energy Generated - Year 1 % Reduction from Year 1 to Year 2 Annual % Reduction Year 2 to the End of Life of the Facility	k' %											
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PV Modules and Associated Material Step-up Transformer and Associated Material												
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Labor to Install Facility (excluding fence)												
Fence Material												
Labor to Install Fence												
5 Year Maintenance Plan												
Но	urs \$	/hr										
Project Management												
Construction Field Representative												
One (1) Spare Step-Up Transformer												
One (1) Spare Inverter												
Five (5) Spare PV Modules  Other Recommended Spare Equipment												
Other Recommended Spare Equipment												
Notes and Comments												

## Option 5.3A - Paired ESS - Fixed Panel Design **General Information AC Nameplate Capacity** kWh **Total Nameplate Capacity of PV Modules** kWh Nameplate Capacity of ESS kWh kW Estimated Required Clear Space Acres **Estimated Energy Production** Estimated Annual Energy Generated - Year 1 kWh % Reduction from Year 1 to Year 2 Annual % Reduction Year 2 to the End of Life of the Facility Aug Feb Mar May Jul Oct Nov Dec Apr Jun Sep Estimated Hourly Energy Produced 15:00-16:00 kWh Estimated Hourly Energy Produced 16:00-17:00 kWh Estimated Hourly Energy Produced 17:00-18:00 kWh Estimated Hourly Energy Produced 18:00-19:00 kWh Estimated Hourly Energy Produced 19:00-20:00 kWh **Pricing Information: Inverters and Associated Material** PV Modules and Associated Material Step-up Transformer and Associated Material All Other Material (excluding ESS and fence) Labor to Install Facility (excluding ESS and fence) **ESS Material** Labor to Install ESS Fence Material Labor to Install Fence 5 Year Maintenance Plan \$/hr Hours **Project Management** Construction Field Representative One (1) Spare Step-Up Transformer One (1) Spare Inverter Five (5) Spare PV Modules Other Recommended Spare Equipment Charge/ **Proposed Charge Schedule of ESS** Charge/ Discharge Discharge kWh kWh 00:00-1:00 12:00-13:00 1:00-2:00 13:00-14:00 2:00-3:00 14:00-15:00 3:00-4:00 15:00-16:00 4:00-5:00 16:00-17:00 5:00-6:00 17:00-18:00 6:00-7:00 18:00-19:00 7:00-8:00 19:00-20:00 20:00-21:00 8:00-9:00 9:00-10:00 21:00-22:00 10:00-11:00 22:00-23:00 11:00-12:00 23:00-00:00 **Notes and Comments**

REDACTED
Unitil Energy Systems, Inc. d/b/a Unitil
Docket No. DE 22-\_\_\_\_
Exhibit JSD-7
Page 1 of 1

## Capital Appraisal Associates, Inc. Real Estate Appraisers and Consultants

128 South Fruit Street, Concord, New Hampshire 03301-4845 (603) 228-9040 FAX (603) 228-2072

## AGREEMENT FOR APPRAISAL SERVICES

This Agreement made on the 24th day of August, 2022 by and between

## Jacob Dusling Unitil 30 Energy Way, Exeter, NH 03833

hereinafter called the "Client", and Capital Appraisal Associates, Inc. of Concord, NH, a New Hampshire Business, hereinafter called the "Appraiser".

Whereas, the Client desires to employ the Appraiser to furnish appraising services to establish market value for negotiating purposes in connection with properties owned by Richard W. Senter Trust and located as follows:

(1)	2 Mill Road, Kingston, NH - Land - 63.0 Acres
(2)	24 Towle Road, Kingston, NH - Land - 33.0 Acres
	Total Fee:

Therefore, it is hereby agreed that the Appraiser shall furnish the requisite Appraisal Services based on our Professional Services Fee (and direct costs, if applicable) of. The Client shall make payment for the Services as follows: total fee due at time of delivery of the reports. The appraisal reports are to be delivered no later than November 30, 2022. No work by the Appraiser shall commence without a signed contract. The Client may interrupt or terminate the services with two (2) days notice, in writing, compensating the Appraiser for all costs incurred to expiration of the notice period.

It is further agreed that the maximum liability of the Appraiser for services performed under this Agreement shall be limited to the total fee paid to the Appraiser under this Agreement.

Client agrees to pay all reasonable costs of collection, and all interest charges at the rate of month of the unpaid balance after 15 days.

In Witness Whereof, the parties hereunto have caused these presents to be executed the day and year first above written.

Attest: (lug. 30, 2022

Capital Appraisal Associates, Inc

August 29, 2022

Date

Jacob Dusling