

## EXHIBIT A STATEMENT OF WORK

### Village of Saranac Lake Thermal Energy Network Detailed Design

Contractor: CHA

Project Number: 215579

#### BACKGROUND/OBJECTIVES

The Village of Saranac Lake previously completed a feasibility study funded by NYSDERDA through PON 4614 that demonstrated a Thermal Energy Network (TEN) is a technically and economically feasible solution to heat and cool up to 70 buildings during the first phase of construction. The Village of Saranac Lake was selected through PON 4614 to perform a site-specific detailed design for the TEN, as defined herein. During the design phase, the Contractor shall further optimize the TEN configuration and design details previously deemed feasible and produce the documentation for a shovel-ready design. During the design phase, the Contractor shall also develop updated project lifecycle costs; a business model that defines the ownership structure for the TEN and cashflows; a financing strategy to construct the TEN; a workforce plan for the construction and operations/maintenance phases; and a preliminary customer protection plan.

#### DEFINITIONS

***Thermal Energy Network (TEN)*** is defined as all real estate, fixtures and personal property operated, owned, used or to be used for or in connection with or to facilitate a utility-scale distribution infrastructure project that supplies thermal energy.

***The Contractor*** is defined as:

Village of Saranac Lake  
Mayor Jimmy Williams  
39 Main Street  
Saranac Lake, New York 12983  
mayorwilliams@saranaclakeny.gov

***The Project Site(s)*** is/are defined as (substitutions may be allowable with the prior written authorization of the NYSDERDA Project Manager):

The project is intended to be executed to support development of construction documents for both Phase 1 and Phase 2 as outlined below. Future phases are shown for informational purposes and are not anticipated to be included in the project engineering scope at this time. Once the design is complete it is expected that the Village of Saranac Lake will resume with construction of the Phase 1 project scope initially and will continue to seek funding support for implementation of the Phase 2 project scope at a later time.

Project locations (red dots) shown on the images below, this area is the Downtown district and is the defined area for this project:

[Insert updated project phasing maps]

**Subcontractor #1** is defined as:

CHA Consulting, Inc.  
3 Winners Circle  
Suite 100  
Albany, NY 12205-0269

#### **TASK 0 - PROJECT MANAGEMENT AND PROGRESS REPORTING**

##### Responsibility

Regardless of subcontracting arrangements, Subcontractor #1 shall be responsible for the timely completion of all the tasks in the Statement of Work per the schedule included herein. Subcontractor #1 shall provide all project management activities necessary for the performance of this Statement of Work, as per attached *milestone schedule/budget*, which shall include the following activities:

- Coordinate the work of the Contractor's employees and those of sub-contractors and equipment vendors that are undertaking tasks described in this Statement of Work;
- Ensure control over the project budget and adherence to the project schedule; and
- Provide all project reporting to NYSERDA as specified in this Statement of Work.

##### Subcontracts

The Contractor shall enter into a Subcontract with CHA Consulting, INC. to perform the services described herein.

At NYSERDA's request, the Contractor shall submit a copy of the above agreements to the NYSERDA Project Manager.

##### Progress Reporting

If during a particular period the Contractor has not delivered any milestones and done the associated milestone reporting, then the Contractor shall submit **periodic** progress reports, no less frequently than quarterly, to NYSERDA's Project Manager no later than the 15th of the month following each reporting period. The Progress Reports shall include information on the following subjects in the order indicated, with appropriate explanation and discussion:

- a. Name of contractor

- b. Title of the project.
- c. Agreement number.
- d. Reporting period.
- e. Project progress including a summary of progress, findings, data, analyses, results and field-test results from all tasks carried out in the covered period.
- f. Planned work for the next reporting period.
- g. Identification of problems.
- h. Planned or proposed solutions to identify problems described in (f) above.
- i. Ability to meet schedule, reasons for slippage in schedule.
- j. Schedule - percentage completed and projected percentage of completion of performance by calendar quarter - may be presented as a bar chart or milestone chart.

Deliverables: Written Periodic Progress Reports.

#### Project Kick-off Meeting

The Contractor shall hold a project kick-off meeting within thirty days from the contract execution date. The Contractor shall coordinate with NYSERDA's Project Manager to arrange the meeting at a mutually convenient time and place. The Contractor is encouraged to invite representatives of sub-contractors and equipment vendors. The purpose of this meeting shall be to finalize the strategies for accomplishing the objectives of this work. In a timely manner, the Contractor shall submit to NYSERDA's Project Manager a brief report summarizing the issues discussed and decisions made, if any, during this meeting.

Deliverable: A brief report regarding the project kickoff meeting.

#### Project Completion Meeting

The Contractor shall conduct a project completion meeting, it shall occur within time period covering 15 days prior to and 15 days following the submission of the draft Final Report. The Contractor shall coordinate with NYSERDA's Project Manager to arrange the meeting at a mutually convenient time and place.

Deliverable: A brief report regarding the project completion meeting.

Security. Contractor shall comply with New York State Enterprise Information Security Office (EISO), Cyber Security Policy P03-002, NYSERDA's Information Security Policy, and other New York State policies/procedures including but not limited to prevent unauthorized access to restricted areas of the Web Site and any databases or other sensitive material generated from or used in conjunction with the Web Site; and Contractor shall notify NYSERDA's Information Security Office as soon as possible of any known security breaches or holes. Questions concerning this policy may be directed to the EISO (518) 474-0865, attn: Director. Or visit EISO at <https://www.its.ny.gov/eiso>.

Accessibility. Any network-based information and applications development, or programming delivered to or by the State pursuant to this contract or procurement, will comply with Section 508 of the Rehabilitation Act of 1973, as amended, and be consistent with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Information Communication Technology, as such policy may be amended, modified or superseded (the “Accessibility Policy”). The Accessibility Policy requires that State Entity Information Communication Technology shall be accessible to persons with disabilities as determined by accessibility compliance testing. Such accessibility compliance testing will be conducted by NYSERDA and any report on the results of such testing must be satisfactory to NYSERDA.

### **Task 1. Characterize the Existing Site Conditions and Update TEN Model**

#### *Thermal Resource Characterization*

The Contractor shall, in coordination with the Site Owner, collect data on the thermal resources that were studied at the feasibility phase and selected for the TEN design. Thermal resources may include but are not limited to geothermal borefield(s), surface water, wastewater, and waste heat.

The Contractor shall, in coordination with the Site Owner, furnish data from previously completed test borehole(s) at the proposed borefield site.

The Contractor shall prepare a report describing the existing conditions of all thermal resources to be included in the TEN design and submit the report to NYSERDA. The report shall describe the thermal capacity of each thermal resource, including the maximum thermal output (kW) available and annual thermal supply (kWh) available from each resource. The report shall include a determination of whether the existing conditions are favorable to support the heating and cooling loads for the project site.

#### *Define Pre-Design Analysis Methodology*

The Contractor shall define the methodology for the pre-design analysis in a report and submit the report to NYSERDA. The pre-design analysis methodology shall define how the thermal resource data will be incorporated into the TEN model previously developed during the feasibility phase. The methodology shall also define other updates to the TEN model, including but not limited to updated data for building thermal loads, building HVAC distribution system configurations, and other characteristics that affect the TEN design. The Contractor shall define any building efficiency measures completed or planned. The report shall document the analytical methods and software tools used in the pre-design analysis.

### *Perform Pre-Design Analysis*

The Contractor shall use the defined methodology and updated thermal resource data, building data, and other relevant data to analyze the TEN configuration and submit the report to NYSERDA. The report shall include revised thermal and electric energy profiles for each building and the aggregated 8760 energy profiles for the TEN. The report shall document any recommended changes in the TEN configuration resulting from the revised modeling. The report shall include a summary of any technical, economic, or regulatory and permitting challenges, that would affect the feasibility of the preferred TEN design. The Contractor shall also document project logistics and challenges including but not limited to mobilization of geothermal drilling rigs and site constraints that would affect the construction of the selected TEN configuration

#### Deliverables:

- Thermal resource characterization report
- Pre-design analysis methodology report
- Pre-design analysis report

#### Go/No-Go Decision Point:

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

### **Task 2. Develop System Schematic Design and Specifications (Project Phase 1)**

The Contractor shall define the size, quantity, and locations of each TEN component, including but not limited to the geothermal borefield, piping, water storage, distribution pumps, heat pumps, heat exchangers, metering equipment, and geothermal water supply and distribution. The Contractor shall create drawings and specifications for the TEN, select equipment, and update energy calculations. The Contractor shall define all building and project site upgrades needed for each building to connect to the TEN, including but not limited to the building HVAC systems and building and/or site electrical infrastructure. The Contractor shall complete an internal design and drawing review. The Contractor shall consolidate and submit the design drawings, specifications, and updated energy and emissions calculations to NYSERDA.

The Contractor shall develop construction cost estimates and a project schedule. The Contractor shall submit the construction cost estimates and project schedule to NYSERDA

and organize a meeting with project stakeholders, including the Site Owner and NYSERDA, to review the design, construction cost estimates, and project schedule. The Contractor shall submit a memo to NYSERDA that summarizes the stakeholder meeting.

The Contractor shall develop the system design and associated documentation according to all applicable codes, standards, regulations, and industry best practices including but not limited to CSA/ANSI 448 and IAPMO Uniform Mechanical Code Chapter 17, as well as ASHRAE manuals.

Deliverables:

- Schematic Design drawings and specifications
- Updated energy calculations, emission calculations, and life cycle cost analyses based on final design
- Construction cost estimates and project schedule
- Memo documenting stakeholder meeting

Go/No-Go Decision Point:

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 3. Develop Business Model and Financing Plan (Project Phase 1)**

The Contractor shall consolidate and present a summary of the business model to NYSERDA. The business model should identify the intended system owner and planned financial structure, indicating all the parties involved and their role in financing, constructing, owning, maintaining and operating the TEN. The business model shall include the thermal energy rate structure and define the obligations and options of all parties.

The Contractor shall also prepare a financing plan identifying all sources of funding and financing, including public funding (incentives, rebates, and tax credits) and private funding for the TEN and related costs including but not limited to building and site upgrades required to construct the TEN. The Contractor shall develop a proforma clearly indicating the return on any private investment capital.

Deliverables:

- Memo summarizing business model

- Memo summarizing financing plan, with attached proforma

**Go/No-Go Decision Point:**

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 4. Develop Construction Contract Documents (Project Phase 1)**

The Contractor shall finalize drawings and specifications to prepare for contractor bidding. The Contractor shall coordinate with all trades (mechanical, electrical, and pipefitter/plumbing) to finalize the drawings and specifications, including front-end specifications which dictate the conditions of the contract and contractor requirements. The Contractor shall submit a copy of the finalized drawings, stamped by a Professional Engineer, and specifications to NYSERDA.

Construction Drawings will be developed to full permit and construction document state as outlined above for the Phase 1 project scope but will be developed only to construction bid state for the Phase 2 scope. Because it is expected that permitting and construction for Phase 2 will happen at a to be determined later date once funding is secured by the Village, the Phase 2 project design documents will be issued as not for construction.

The Contractor shall convene a stakeholders' "check-set" meeting of 90% contract document completion and invite NYSERDA. During this convening, the Contractor shall present in-process documents for review and discussion. The Contractor shall submit a memo to NYSERDA that summarizes the stakeholder meeting.

The Contractor shall incorporate feedback from stakeholders and convene a final stakeholder meeting to share the final contract documents and construction cost updates, as applicable. In coordination with the Site Owner, the Contractor shall set bid dates and discuss advertisement to bid. The Contractor shall submit to NYSERDA the final contract documents and a memo that summarizes the final stakeholder meeting.

NYSERDA approval of deliverables under this Task does not represent approval of construction.

**Deliverables:**

- Finalized drawings and specifications
- Memo documenting stakeholders' "check-set" meeting

- Final contract documents
- Memo documenting final stakeholder meeting

**Go/No-Go Decision Point:**

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 5. Develop System Schematic Design and Specifications (Project Phase 2)**

The Contractor shall define the size, quantity, and locations of each TEN component, including but not limited to the geothermal borefield, piping, water storage, distribution pumps, heat pumps, heat exchangers, metering equipment, and geothermal water supply and distribution. The Contractor shall create drawings and specifications for the TEN, select equipment, and update energy calculations. The Contractor shall define all building and project site upgrades needed for each building to connect to the TEN, including but not limited to the building HVAC systems and building and/or site electrical infrastructure. The Contractor shall complete an internal design and drawing review. The Contractor shall consolidate and submit the design drawings, specifications, and updated energy and emissions calculations to NYSERDA.

The Contractor shall develop construction cost estimates and a project schedule. The Contractor shall submit the construction cost estimates and project schedule to NYSERDA and organize a meeting with project stakeholders, including the Site Owner and NYSERDA, to review the design, construction cost estimates, and project schedule. The Contractor shall submit a memo to NYSERDA that summarizes the stakeholder meeting.

The Contractor shall develop the system design and associated documentation according to all applicable codes, standards, regulations, and industry best practices including but not limited to CSA/ANSI 448 and IAPMO Uniform Mechanical Code Chapter 17, as well as ASHRAE manuals.

**Deliverables:**

- Schematic Design drawings and specifications
- Updated energy calculations, emission calculations, and life cycle cost analyses based on final design
- Construction cost estimates and project schedule
- Memo documenting stakeholder meeting



**Go/No-Go Decision Point:**

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 6. Develop Business Model and Financing Plan (Project Phase 2)**

The Contractor shall consolidate and present a summary of the business model to NYSERDA. The business model should identify the intended system owner and planned financial structure, indicating all the parties involved and their role in financing, constructing, owning, maintaining and operating the TEN. The business model shall include the thermal energy rate structure and define the obligations and options of all parties.

The Contractor shall also prepare a financing plan identifying all sources of funding and financing, including public funding (incentives, rebates, and tax credits) and private funding for the TEN and related costs including but not limited to building and site upgrades required to construct the TEN. The Contractor shall develop a proforma clearly indicating the return on any private investment capital.

**Deliverables:**

- Memo summarizing business model
- Memo summarizing financing plan, with attached proforma

**Go/No-Go Decision Point:**

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 7. Develop Construction Contract Documents (Project Phase 2)**

The Contractor shall finalize drawings and specifications to prepare for contractor bidding. The Contractor shall coordinate with all trades (mechanical, electrical, and pipefitter/plumbing) to finalize the drawings and specifications, including front-end specifications which dictate the conditions of the contract and contractor requirements. The

Contractor shall submit a copy of the finalized drawings, stamped by a Professional Engineer, and specifications to NYSERDA.

Construction Drawings will be developed to full permit and construction document state as outlined above for the Phase 1 project scope but will be developed only to construction bid state for the Phase 2 scope. Because it is expected that permitting and construction for Phase 2 will happen at a to be determined later date once funding is secured by the Village, the Phase 2 project design documents will be issued as not for construction.

The Contractor shall convene a stakeholders' "check-set" meeting of 90% contract document completion and invite NYSERDA. During this convening, the Contractor shall present in-process documents for review and discussion. The Contractor shall submit a memo to NYSERDA that summarizes the stakeholder meeting.

The Contractor shall incorporate feedback from stakeholders and convene a final stakeholder meeting to share the final contract documents and construction cost updates, as applicable. In coordination with the Site Owner, the Contractor shall set bid dates and discuss advertisement to bid. The Contractor shall submit to NYSERDA the final contract documents and a memo that summarizes the final stakeholder meeting.

NYSERDA approval of deliverables under this Task does not represent approval of construction.

Deliverables:

- Finalized drawings and specifications
- Memo documenting stakeholders' "check-set" meeting
- Final contract documents
- Memo documenting final stakeholder meeting

Go/No-Go Decision Point:

The Contractor shall not commence work on the following Tasks until-and-unless authorized to do so in writing by the NYSERDA Project Manager. Such authorization shall be at NYSERDA's sole discretion. The go/no-go decision will be based on the information presented in the Task Deliverable. If the project is found to have a fatal flaw or is deemed non-viable, as determined by NYSERDA, a no-go decision will be issued and the Agreement will be terminated pursuant to Section 12.02 of Exhibit B.

**Task 7. Develop Workforce Development Plan**

The Contractor shall work with the Site Owner to identify required operation and maintenance costs and staffing required to monitor and operate the TEN.

The Contractor shall submit a workforce development plan, with a preference for a plan that includes and prepares local historically disadvantaged community members for roles related to system installation, operation, and/or maintenance and repairs. The workforce development plan must be submitted in two parts – Construction phase workforce development plan as well as an Operations and Maintenance workforce development plan. The Contractor shall submit a draft to NYSERDA for review and a final development plan addressing NYSERDA's comments.

The workforce development plan shall include, at a minimum, the following items:

- Key occupations needed;
- Number of positions needed per occupation;
- Specific skills sets needed;
- Approximate timing of when various occupations are needed during the installation and operation phases;
- Any anticipated workforce shortages and a plan for addressing these shortages;
- Training needed and plans to address training, including how to leverage NYSERDA workforce development programs to address training needs;

Deliverables:

- Draft workforce development plan plans for both Construction Phase and Operations Maintenance Phase
- Final workforce development plan plans for both Construction Phase and Operations Maintenance Phase

**Task 8. Preliminary Customer Protection Plan**

The Contractor shall develop a preliminary Customer Protection plan that includes the following components:

- The basic conceptual structure of a final Customer Protection Plan
- Customer engagement activities to date and planned for the future
- A customer agreement that documents the customer's rights and responsibilities that are associated with the Thermal Energy Network

The customer engagement section of the preliminary Customer Protection Plan shall include the following:

- A description of the thermal energy network
- A proposed customer engagement budget
- A recruitment plan, including method to recruit participants and responsible parties for accomplishing recruitment
- A customer outreach and education plan, including, but not limited to:

- Communication methods
- Messaging
- Detailed list of outreach materials, including which languages they will be made available in
- Planned approach for ensuring customer understanding and acknowledgement of the Customer Protection Plan.

The customer agreement template shall include at a minimum:

- Home Energy Fair Practices Act protections, including, but not limited to:
  - Language regarding service terminations and the complaint process
  - Customers' participation/withdrawal options
  - Pricing options to minimize the risk of higher energy bills
  - Metering, billing process, fees, and payment options
  - Installation and maintenance responsibilities
  - Customer exit options
  - Customer consent and customer privacy.

The Contractor shall consider additional guidance provided by the Department of Public Service in the Utility Thermal Energy Network and Jobs Act proceeding (CASE 22-M-0429) in the development of the Preliminary Customer Protection Plan.

The Contractor shall submit a draft plan to NYSERDA for review and a final plan addressing NYSERDA's comments.

**Deliverables:**

- Draft version of preliminary Customer Protection Plan
- Revised version of preliminary Customer Protection Plan

**Task 9. Define Hurdles and Challenges**

The Contractor shall keep a list of the challenges that arise in the previous tasks. An issues list shall be kept along with the solution for each challenge.

The Contractor shall consolidate and present a summary of the hurdles and challenges identified, along with the solutions, to NYSERDA.

**Deliverables:**

- Summary of the hurdles and challenges

#### **Task 10. Produce Final Report**

The Contractor shall prepare a non-proprietary/non-confidential Final Report, in accordance with the Exhibit E Report Content Guide, covering all aspects of the work performed under this Agreement.

Such final report shall address the following information at a minimum and shall be organized as follows:

##### **Describe the project site and buildings to be served by the TEN:**

- Describe the project site and location. Provide a brief history of project development, including how the project progressed to the feasibility and design phases.
- Describe how the TEN fits into the long-range master plan or goals of the project site owner(s).
- Describe the specific cluster of buildings included in the design that will be connected to and served by the TEN. Describe the building end uses and physical characteristics, including thermal efficiencies and plans for upgrades to the building envelopes and HVAC systems to become compatible with the TEN, as applicable.
- Provide the updated 8760 hourly loads for each building to be served by the TEN, as well as the 8760 aggregated loads for the buildings. The 8760 profiles shall incorporate updated building data, as well as other improvements in the system modeling and analysis since the feasibility phase of the project.
- Describe how aggregating the individual buildings achieves a meaningful amount of “load smoothing” and thereby reduces the overall peak size of equipment needed for the TEN.
- Describe site constraints, including potential challenges with accessing thermal resources or mobilization of construction equipment.

##### **Describe the TEN design:**

- Describe the engineering design basis.
- Describe the modeling method (e.g., software system) used and sources of data.
- Describe the key assumptions, sensitivity analysis methodology and confidence bands.
- Describe the extent to which friction caused by pumping creates additional heat load that must be rejected during cooling season and/or helps to achieve heating during heating season. Include the impacts of friction as well as other thermal losses/gains due to uninsulated piping or heat transfer to the ground/ambient space in the calculation of annual and peak loads.
- Describe the types and details of thermal resources that will be connected to the TEN, including supporting data and results of any thermal testing performed.
  - Describe the extent that the thermal extraction/rejection/dissipation achieves

balance over an annual cycle such that the ground loop temperature profile will stay within tolerances throughout the life of the project, if the system will include a geothermal borefield.

- Discuss whether a test borehole was installed, and if so, its suitability for later repurposing in the constructed TEN.
- Describe the resultant technical design and system configuration of the TEN (resource options, appraisal and selection), including considerations for ease of accommodating future needs as load patterns change over time, while mitigating the need to overbuild.
- Describe adjunct thermal systems if any, such as thermal storage, solar thermal, and low-carbon supplemental thermal systems.
- Describe adjunct clean distributed energy systems if any, such as on-site solar photovoltaics (PV), battery electric storage and the impact of such systems on peak electric demand from the TEN.
- Describe how thermal and electric grid resiliency and reliability are maximized in the design.
- Quantify the energy and environmental benefits.
- Provide construction specifications (e.g., bid specs) including:
  - Design drawings.
  - Make/model/size of every major piece of equipment.
  - Purchase price/installation cost of every major piece of equipment.
  - Operating characteristics/maintenance routines/maintenance costs of every major piece of equipment.

Describe the business model:

- Describe the investment hurdle threshold of each prospective customer that will connect to the TEN to understand what features of a deal would be needed for them to connect to the TEN (e.g., how much cost savings would they require relative to their traditional expense).
- Describe the preliminary commercial terms/contractual relationships between project participants and roles of each party in financing, constructing, owning, maintaining, and operating the TEN.
- Compare and contrast total project costs versus out-of-pocket costs (as a result of incentives, tax credits, etc) for the TEN configuration and the individual smaller systems configuration, and highlight any awkward economic signals (e.g., an awkward economic signal would be if the TEN configuration has lowest lifecycle costs, but due to the incentive/tax effects of cost-shifts associated with less equipment and more piping/labor, has highest out-of-pocket).
- Describe how other clean energy technologies, such as solar PV, battery storage, or thermal storage were evaluated and their impact on the total project economics.
- Describe how the preferred ownership model unlocks value, including access to state and/or federal tax credits, incentives, financing, desirable depreciation schedules of equipment, and other funding sources.

- Provide an investment-grade analysis of the project economics and describe the financial viability for constructing and operating the TEN.
  - Discuss first costs, operating costs, and lifecycle costs.
  - Discuss energy consumption during system operation.
- Describe how the project offers a value proposition to the different various stakeholders.
- Describe opportunities to improve the project value proposition to stakeholders.
- Describe the strategy for negotiating binding agreements including importance of timing relative to the sequence of project development.
- Describe regulatory/legal/environmental suitability, including permitting and franchising.

Describe challenges and lessons learned:

- Discuss improvements to methods to recruit and select additional teammates to conduct subsequent work (e.g., an RFP to expand the team for conducting the next stage, if applicable).
- Discuss challenges and strategies to minimize disruption/costs during cut-over from old system to new TEN system.

Describe the next steps for constructing the TEN:

- Summarize any detailed project construction and commissioning proposals received such as in response to the bid specs (equipment specifications, procurement plans, project and operational management, permitting), and the process for evaluating bids.
- Describe the workforce needs and workforce development plan for the construction and operation and maintenance phases of the project.
- Describe the construction schedule and intermediate steps, including contractor selection, securing financing, finalizing customer contracts, construction phases (initial installation and future expansion), customer connection timing, etc.

In addition, the submission of the Final Report shall include the completion of the data spreadsheet listed as Exhibit F.

Draft Version and Final Version of Final Report: A draft version of the Final Report shall be submitted to NYSERDA's Project Manager no later than the date specified in the Milestone Schedule of the NYSERDA Agreement for this task. NYSERDA will comment on the draft version within 60 working days after receipt of such draft. Within 30 working days after receipt of NYSERDA's comments, the Contractor shall prepare a final version of the report reflecting therein careful consideration of NYSERDA's comments to the satisfaction of NYSERDA and submit one (1) electronic copy of the final version of the Final Report.

Deliverables:

- Draft version of the Final Report
- Final version of the Final Report



### Milestone Schedule

Task	Milestones / Deliverables	Beginning Date (in weeks from Contract Execution)	Ending Date (in weeks from Contract Execution)	Milestone Payment Amount (\$) (NYSERDA Part)	
Project Management and Project Reporting		Beginning of week 1	End of week 104		
	Brief report summarizing Project Kickoff Meeting	End of week 4		\$15,000	\$15,000
	Brief report summarizing Project Completion Meeting	End of week 104		\$5,000	\$5,000
Task 1: Characterize the Existing Site Conditions and Update TEN Model	Thermal resource characterization report	End of week 8		\$50,000	\$50,000
	Pre-design analysis methodology report	End of week 10			
	Pre-design analysis report	End of week 14			
Task 2: Develop System Design and Specifications (Project Phase 1)	Design drawings, specifications, updated energy calculations, updated lifecycle cost analyses	End of week 15	End of week 45	\$75,000	\$75,000

	Construction cost estimates and project schedule	End of week 60			
	Memo documenting stakeholder meeting	End of week 62			
Task 3: Develop Business Model and Financing Plan (Project Phase 1)	Memo summarizing business plan	End of week 63	End of week 70	\$25,000	\$25,000
	Memo summarizing financing plan, with attached proforma	End of week 70			
Task 4: Develop Construction Contract Documents (Project Phase 1)	Finalized drawings and specifications	End of week 71	End of week 90	\$100,000.00	\$100,000.00
	Memo documenting stakeholder’s “check-set” meeting	End of week 85			
	Final contract documents	End of week 95			
	Memo documenting final stakeholder meeting	End of week 100			

Task 5: Develop System Design and Specifications (Project Phase 2)	Design drawings, specifications, updated energy calculations, updated lifecycle cost analyses	End of week 15	End of week 45	\$75,000	\$75,000
	Construction cost estimates and project schedule	End of week 60			
	Memo documenting stakeholder meeting	End of week 62			
Task 6: Develop Business Model and Financing Plan (Project Phase 2)	Memo summarizing business plan	End of week 63	End of week 70	\$25,000	\$25,000
	Memo summarizing financing plan, with attached proforma	End of week 70			
Task 7: Develop Construction Contract Documents (Project Phase 2)	Finalized drawings and specifications	End of week 71	End of week 90	\$100,000.00	\$100,000.00
	Memo documenting stakeholder’s “check- set” meeting	End of week 85			
	Final contract documents	End of week 95			
	Memo documenting final stakeholder meeting	End of week 100			
Task 5: Develop Workforce Development	Draft workforce plan	End of week 63	End of week 70	\$10,000.00	\$10,000.00
	Final workforce plan	End of week 72			

Plan					
Task 6: Develop Customer Protection Plan	Draft preliminary customer protection plan	End of week 63	End of week 70		
	Revised preliminary customer protection plan	End of week 72			
Task 7: Define Hurdles and Challenges		End of week 100	End of week 104	\$10,000.00	\$10,000.00
Task 8: Produce Final Report	A draft final version of the Final Report	End of week 90	End of week 95	\$50,000	\$50,000
	A final version of the Final Report	End of week 104			
				\$500,000	\$500,000

### Budget

The total cost to complete the tasks associated with this scope of work is \$1,000,000.00. The Contractor's team will contribute a total of \$500,000.00 in the form of in-kind labor and request a total of \$500,000.00 reimbursement from NYSERDA, such reimbursements as specified in the above Milestone Schedule.

In response to NYSERDA receiving proper invoices, NYSERDA will pay the Contractor in accordance with the milestone payment schedule as set forth in the Milestone Schedule. Each milestone payment shall be due and payable only to the extent it is supported by the completion of the corresponding individual milestones to the satisfaction of NYSERDA. Each milestone

does not necessarily represent the cost of the work included in such milestone; accordingly, the milestone payments do not necessarily represent an actual measure of the progress of the work.