**All information requested in this document must be included in a scope of work. The format used in this template is not required.**

# **Introduction:**

Include the following information:

* Intent of the study.
* Outline the customers goals and reason(s) for requesting technical assistance.
* List all participants involved in the study and their role in the project (e.g., Consultant conducting the work, all sub-contractors, building owner, property management company, owners’ representative, etc.).

# **Facility Description:**

**For projects with multiple buildings, the information included in the table below should be included for each building.**

|  |  |
| --- | --- |
| **Facility Description** | |
| Facility Name: |  |
| Facility Address (including zip code): |  |
| Building Use Type(s): | ***[e.g. Commercial, Industrial, Multifamily, Higher Education, P-12 School, etc.]*** |
| Year Built |  |
| Building Count: |  |
| Number of Stories: |  |
| Gross SQFT: |  |
| Conditioned SQFT: |  |
| Unit Count (# of dorms/apartments) |  |

# **Existing Conditions:**

**For projects with multiple buildings, the information below should be included for each building.**

Include the following information:

* List any energy retrofits that have been completed at the building and the approximate date of completion.
* For all studies (including RCx), include an inventory of all equipment to be evaluated and/or tested. Indicate the sampling rate of all equipment to be evaluated and/or tested.
* Provide a summary of all systems related to the study. Include:
  + Equipment Type
  + Fuel source
  + Capacity
  + Efficiency
  + Age
  + Condition

Complete the table below:

|  |  |
| --- | --- |
| **Building Operations** | |
| Schedule of Operation: |  |
| Hours of Operation: | X:XX AM – X:XX PM |
| Average occupants: |  |

# **Tasks and Deliverables:**

**Project tasks should be itemized. For each task, include the language, tables, and requested detailed information indicated in each example task listed below.**

**If the consultant is utilizing a sub-contractor(s) please indicate which party will be completing each indicated task.**

*Optional for Clean Green Campuses (CGC) Members Only:*

* *Student Intern Bonus (optional, CGC members only)*
  + *Include a specific task for student intern engagement that describes the anticipated activities to be completed by the student intern(s) in support of the scope of work.*
  + *A deliverable that meets requirements stated in PON 4192 Section IV is required for student intern tasks. Include a description of the student intern deliverable(s) to be submitted to NYSERDA.*
* *Develop Curriculum/Student Clean Energy Engagement (optional, CGC members only)*
  + *Include additional task(s) that describe the activities to be completed by faculty for developing curriculum/student clean energy engagements.*
  + *A deliverable that meets requirements stated in PON 4192 Section IV is required for these tasks. Include a description of the deliverable(s) to be submitted to NYSERDA.*

## Example Task 1: Document Collection

*Scope:* Collect a minimum of 12 months of utility statements including rates and usage

## Example Task 2: Utility Bill Analysis

*Scope:* Analyze at least 12 months of utility bills to identify annual heating, cooling, and base load energy usage, rates, current EUI, target EUI, and energy end use breakdown.

## Example Task 3: Site Walkthrough

*Scope:* The site visits for this project are expected to take ***[# of Days]*** days to complete and include the review and completion of following systems/tasks as part of the scope:

## Example Task 4: Measures to be Evaluated

**For multifamily projects, measures with the potential to transfer cost burden to a tenant should include information on the potential impact.**

For a comprehensive list of feasibility, calculation, and economic analysis requirements, refer to Attachment B-1 Study Report Requirements: [FlexTech Documents and Resources](https://www.nyserda.ny.gov/All-Programs/FlexTech-Program/FlexTech-Documents-and-Resources).

For each of the systems that will be studied, provide the following detailed information, as applicable to the study:

* Scope:
  + Subject systems
  + Problem statement
  + List of Energy Efficiency Measures
  + Expected Results
* Data Collection Method:
  + Include sampling rates for all equipment.
  + E.g. data logging, BMS, nameplate data, etc.
* Feasibility Review:
  + Explain the method used to determine if a measure is feasible or not
* Calculation Method:
  + Scopes of work must indicate and be very clear about the method of analysis
  + Must be based on site specific existing conditions and utility data
* Economic Analysis:
  + At minimum, include simple payback analysis for each individual measure (ECMs and RCMs).
* Deliverable:

## Example Task 4.1 Envelope Solutions

*Scope:*

The following EEMs will be studied as part of this scope:

Measure 1:

Measure 2:

*Data Collection:*

*Feasibility Review:*

*Calculation Method:*

*Economic Analysis:*

*Deliverable:*

## Example Task 5: Study Report Generation

**Upon completion of the study, copies of the following deliverables will be submitted to NYSERDA for their review and comment.**

Study Report: Will present the results of all tasks as outlined in the approved scope of work and will be prepared to adhere to NYSERDA’s Study Report Requirements presented in [Attachment B-1](https://www.nyserda.ny.gov/All-Programs/FlexTech-Program/FlexTech-Documents-and-Resources).

Project Summary Spreadsheet: A summary including all the information presented in [Attachment B-2](https://www.nyserda.ny.gov/All-Programs/FlexTech-Program/FlexTech-Documents-and-Resources).

Supporting documentation: Will include all relevant supporting documentation for the evaluated measures including but not limited to: Historical energy Costs (minimum 12 months), Energy savings calculations, carbon savings calculations (if applicable), Energy simulation model input and output files (if applicable), Measured data logs (if applicable), itemized project implementation costs, and cost estimate sources, NYSERDA climate resiliency questionnaire and for projects that include a student intern (Clean Green Campus members only), student interns must complete a final report summarizing their tasks and how it relates to the project.

Revisions will be made to the Study Report, Project Summary Sheet, and Supporting documentation until deemed satisfactory by NYSERDA.

## Example Task 6: Progress Updates/Interim Deliverables (as applicable)

Scope: Explain the nature of the intended progress updates. Examples include:

* + Monthly or quarterly emails to customer and NYSERDA for review and approval,
  + Interim task additions for review and approval,
  + Scheduled in person updates with customer and NYSERDA, and
  + Interim draft reports to be reviewed, approved, and finalized with customer and NYSERDA.

Deliverable:

## Example Task 7: Climate Resiliency Evaluation **(required)**

Scope: For each building included in the Project, the Contractor shall complete an on-line Climate Resiliency Questionnaire (<https://nyserda.az1.qualtrics.com/jfe/form/SV_eRNOW5H6uDhCQxE>) to evaluate and identify relevant current and future climate hazards to the project site(s), building(s), and system components therein.

*\*For Contractor reference only, a sample Climate Resiliency Questionnaire is available on the* [*FlexTech Documents and Resources*](https://www.nyserda.ny.gov/All-Programs/FlexTech-Program/FlexTech-Documents-and-Resources) *web page to understand the content and relevant sections of the Questionnaire. All projects are required to evaluate for flood resiliency. For P-12 Public School Projects only, heat resiliency shall also be evaluated.*

Deliverable:

The Contractor shall download a PDF of the completed on-line Questionnaire(s) and shall include as supporting documentation with the final report deliverable. All supporting mapping shall be attached to the Questionnaire(s).

# **Assumptions:**

**Provide a list of assumptions relevant to project completion.**

Examples of assumptions include but are not limited to:

* It is assumed that there will be an active partnership between building management/operations staff and the Consultant for the duration of the study. Building management/operations staff will be asked to be available to assist our engineering staff during the site visits and will be responsible for providing the following:
* Minimum of 12 months (24 is preferred) of utility bills including rates and usage will be provided. Utility statements are essential to the analysis of the building.
* Access to the site common spaces including mechanical rooms, roof, basement, utility meters, and attics will be provided.
* Access to and accompaniment by facility staff to tenant spaces will be provided. For multifamily projects, access to a sample of at least 8% or 24 dwelling units as per ASHRAE guidelines.
* Access to building management software systems will be provided.
* Minimum of 1 year of preceding utility bill rates and usage will be required and utilized.
* Access to all available construction and design documentation including as-builts, MEP drawings, blueprints, schematics, specifications, etc.
* Operations and maintenance procedures and logbooks for systems present at the building.
* Previous engineering studies/energy analysis performed either in-house or by 3rd party service providers will be shared with the consultant.

# **Schedule and Site Visits:**

**Provide an anticipated schedule for completing tasks in a “weeks from Purchase Order” format. Each SOW task item (including each potential EEM) must be listed as a separate schedule line item. Deliverables to NYSERDA must be listed as separate schedule line items.**

It is expected that this energy study and report will take ***[# of weeks]*** weeks to complete, this timeframe will begin once the Contract Letter and Purchase Order (PO) is received from NYSERDA.

Below is a detailed deliverable schedule based in weeks after receipt of the PO:

|  |  |  |
| --- | --- | --- |
| ***Task #*** | ***Task*** | ***Schedule***  *(in weeks from PO)* |
| 1 | Document Collection |  |
| 2 | Utility Bill Analysis |  |
| 3 | Site Walkthrough |  |
| 4.1 | Envelope EEMs |  |
| 4.2 | HVAC EEMs |  |
| 4.3 | DHW EEMs |  |
| 4.4 | Lighting EEMs |  |
| 4.5 | Controls EEMs |  |
| 4.6 | Process EEMs |  |
| 5 | Study Report Generation |  |
| 6 | Progress Updates/Interim Deliverables |  |
| 7 | Climate Resiliency Evaluation |  |

**Budget:**

**Provide a detailed budget breakdown using the** [**Budget Template**](https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/FlexTech/Energy-Study-Budget-Template.xlsm)**, or equivalent that includes all the information identified in the Budget Template. For this section, include the language below these instructions and add the following detailed information:**

* **Each SOW task item (including each potential EEM) must be listed as a separate budget line item**

**Sub-contractor Language:** For consultants utilizing a sub-contractor, please use the following language:

* The consultant will be utilizing **[Sub-contractor Name]** as a sub-contractor to complete the following tasks, **[Enter Sub-contractor Tasks Here]**.

**Project Cost Share Information:** Include the following language:

* The total cost to complete the tasks associated with this scope of work is $**[Total Study Cost]**. The Customer will contribute $**[Customer Cost]** and NYSERDA will contribute $**[NYSERDA Cost]**, as specified in the NYSERDA Purchase Order and summarized in the table below.

For cost shares and cap information, please reference the cost share table from [PON 4192](https://portal.nyserda.ny.gov/CORE_Solicitation_Detail_Page?SolicitationId=a0rt000000kXV1yAAG&_gl=1*9c2fgq*_ga*MjEwNDAwOTIwMC4xNjk5Mjk3NDE2*_ga_DRYJB34TXH*MTY5OTQ3Mzk3NS45LjEuMTY5OTQ3NDI0MC4wLjAuMA..*_gcl_au*MzA0MzU4NjM0LjE2OTkyOTc0MTY.).