See the formatting requirements and page limit recommendations in Part III, Section A of the Solicitation Manual.

The Project Narrative must respond to each sub-criterion below.

**Technical Merit**

1. The proposed project provides a clear and concise description of the technological, scientific knowledge advancement, and/or innovation that will overcome barriers to achieving the State’s statutory energy goals.
2. Describes the competitive advantages of the proposed technology over state-of-the-art (e.g., efficiency, emissions, durability, cost).

*In addition, provide a competition matrix to compare current and competing technologies, such as*

**Table X: Competition Matrix***:*

| **Comparable Attribute** | **Applicant’s Technology** | **Current Leading Technology** | **Competing Technology** |
| --- | --- | --- | --- |
| Example: Electrical efficiency | (1 unit) | (3 units) | (2 units) |
| Example: Temperature range | (20 units) | (10 units) | (10 units) |
|  |  |  |  |
|  |  |  |  |

1. Provides the proposed technical specifications and describe how the project will meet or exceed the technical specifications by the end of the project.
2. Describes the technology readiness level (TRL) the proposed technology has achieved and the expected TRL by the end of the project.
3. Describes at what scale the technology has been successfully demonstrated, including size or capacity, number of previous installations, location and duration, results, etc.
4. Provides information described in Section I.C

Provide detailed answers to the following questions, from Section I.C:

1. What is the value proposition of the technology? What potential competitive advantages does it have over current benchmark or best-in-class solutions?
	1. If the technology is a key component of a larger system that falls under an eligible technology category, describe the performance of the overall system and how the component relates to the overall system.
2. What is the target market(s) for the technology and what is the size of each in California? What independent analysis, reports or studies support these estimates?
	1. If the technology is a key component of a larger system that falls under an eligible technology category, describe the first customer market and end-user markets. For example, will the component be supplied to an original equipment manufacturer or used in the applicant’s own product?
3. What steps has the applicant taken to determine there is market demand for this technology?
4. What pilot demonstrations or field trials have been conducted that demonstrate the technology is ready to move to LRIP?
5. What steps have already been taken to determine the manufacturing requirements for the technology? For example, what are the key cost, manufacturing, and scalability risks associated with the proposed technology and how will these risks be addressed?
	1. If the technology is a key component of a larger system that falls under an eligible technology category, describe the specific challenges facing the technology that require manufacturing support.
6. What steps have been taken to establish the supply chain that supports low-rate production volume, and to address potential risks to scale-up production volume?
7. What plans, if any, does the applicant have to provide local manufacturing jobs and on-the-job-training as part of this project?
8. What entities have or in the future may have legal rights to the technology and what are those rights?
9. How may the project be impacted due to other entities having legal rights to the technology?

**Technical Approach**

1. Proposal describes the technique, approach, and methods to be used in performing the work described in the Scope of Work
2. The Scope of Work identifies goals, objectives, and deliverables, details the work to be performed, and aligns with the information presented in Project Narrative.
3. Proposal identifies the reliability that the project and site recommendations as described will be carried out if funds are awarded.
4. Identifies and discusses factors critical for success, in addition to risks, barriers, and limitations (e.g. loss of demonstration site, key subcontractor). Provides a plan to address them.
5. Discusses the degree to which the proposed work is technically feasible and achievable within the proposed project schedule and the key activities schedule in Section I.E.
6. Describes the knowledge transfer plan, including how key stakeholders and potential users will be engaged, and the plan to disseminate knowledge of the project’s results to those stakeholders and users.
7. Provides information described in Section I.C

Provide detailed responses to the following prompts, from Section I.C:

1. The proposed steps the applicant will take to bring the technology to a MRL of 8 by the Anticipated Agreement End Date listed in the Key Activities Schedule in Section I.E.
2. The estimated lead time for all equipment expenses, with a priority list of when equipment should be ordered to prevent delays to the project schedule. Note that some equipment may need to be ordered soon after the Anticipated Agreement Start Date listed in the Key Activities Schedule in Section I. E to prevent delays to the project schedule.

**Impacts and Benefits to California IOU Ratepayers**

1. Explains how the proposed project will benefit California Investor-Owned Utility (IOU) ratepayers and provides clear, plausible, and justifiable (quantitative preferred) potential benefits. Estimates the energy benefits including:
	* annual electricity (EPIC) and thermal savings (PIER NG) (kilowatt-hour and therms), energy cost reductions, peak load reduction and/or shifting, infrastructure resiliency, infrastructure reliability.

**In addition, estimates the non-energy benefits including:**

* greenhouse gas emission reductions, air emission reductions (e.g. NOx), water savings and cost reduction, and/or increased safety.
1. States the timeframe, assumptions with sources, and calculations for the estimated benefits, and explains their reasonableness. Include baseline or “business as usual” over timeframe.
2. Explains the path-to-market strategy including near-term (i.e. initial target markets), mid-term, and long-term markets for the technology, size and penetration or deployment rates, and underlying assumptions.
3. Identifies the expected financial performance (e.g. payback period, ROI) of the demonstration at scale.
4. Identifies the specific programs which the technology intends to leverage *(e.g. feed-in tariffs, IOU rebates, demand response, storage procurement)* and extent to which technology meets program requirements.

**Team Qualifications, Capabilities and Resources**

1. Identifies credentials of prime and any subcontractor key personnel, including the project manager, principal investigator and technology and knowledge transfer lead *(include this information in the Project Team Form).*
2. Demonstrates that the project team has appropriate qualifications, experience, financial stability and capability to complete the project.
3. Explains the team structure and how various tasks will be managed and coordinated.

*Include an organization chart similar to the one below*

 **Figure X: Organization Chart**

1. Describes the facilities, infrastructure, and resources available that directly support the project.
2. Describes the team’s history of successfully completing projects in the past 10 years including subsequent deployments and commercialization.

**Budget and Cost Effectiveness**

1. Budget forms are complete for the applicant and all subcontractors, as instructed in Budget Attachment.

*Provide a budget by tasks, such as:*

**Table X: Task Budget**

| **Task (by major task)** | **Energy Commission Funds** | **Match Share** | **Total** |
| --- | --- | --- | --- |
| Task 1: General Project Tasks |  |  |  |
| Task 2: |  |  |  |
| Task [TBD-1]: Evaluation of Project Benefits |  |  |  |
| Task [TBD-2]: Technology/ Knowledge Transfer Activities \* |  |  |  |

\* **Requires 5% of total CEC funds**

1. Justifies the reasonableness of the requested funds relative to the project goals, objectives, and tasks.
2. Justifies the reasonableness of direct costs (e.g., labor, fringe benefits, equipment, materials & misc. travel, and subcontractors).
3. Justifies the reasonableness of indirect costs (e.g., overhead, facility charges (e.g., rent, utilities), burdens, subcontractor profit, and other like costs).

**Funds Spent in California**

This project proposes to spend $\_\_\_\_\_\_\_\_\_ of Energy Commission funds in California.

**Disadvantaged Communities**

1. Proposal identifies how the target market(s) will benefit disadvantaged and low-income communities.
2. Identifies economic impact on low-income and disadvantaged communities including customer bill savings, job creation, partnering and contracting with micro- and small-businesses, and economic development.
3. Describes how the project will increase access to clean energy or sustainability technologies within disadvantaged or low-income communities and how the development will benefit the communities.
4. Applicants have letters of support from technology partners, community based organizations, environmental justice organizations, or other partners that demonstrate equity, feasibility, and commercial viability in low-income and disadvantaged communities.