Applicants must limit their responses to **eight** pages.

The Pre-Application Project Abstract must describe the proposed project and respond directly to each criterion below.

1. **Innovation.**
2. Explain how the product works. What are the key components? How does it have a modular design that is “plug-and-play ready?” Include photos and schematics as necessary.
3. What makes this product unique, and how does it improve upon existing solutions? To what extent has the technology been developed and demonstrated to date? Technologies should enter the agreement term at an initial technology readiness level (TRL) 6 – 8.
4. How does your technology help accommodate future electrification of the residential building’s energy use?
5. **Methodology.**
6. Describe the project’s research objectives and technical approach. How will you ensure the project is realistic and feasible? How will you identify project partners?
7. What data will you collect? What metrics will you track? How will you evaluate performance of your technology, including ability to provide backup power during both planned and unplanned outages? How will you compare your solution to alternatives in the market, such as diesel generators or existing commercial solar and storage options?
8. Describe your methodology in identifying and engaging with potential demonstration site hosts and what prior activities have been conducted thus far. What Community-Based Organizations are you planning to partner with to deploy the technology?
9. Describe the project team and qualifications, identifying prior experience in successfully completing similar projects.
10. **Market Competitive.**
11. Describe your understanding of customer preferences, pain points, and potential adoption barriers. Explain how your product addresses these market needs and offers a competitive advantage over alternative solutions in the market.
12. Describe your path-to-market strategy.
13. Describe what financial and energy related benefits the customer will gain by using the backup power system paired with your product both during outages and on normal days when there is no power outage. What energy and financial analyses will be performed?
14. **Comparison Tables for Appendix. (Not subject to page limit)**

Applicants must submit comparison tables as part of Phase 1, aiming to complete all the attribute rows included in the table below; they are welcome to include additional attribute rows as they see fit. Applicants must state their assumptions, ranges, estimates, and citing sources for their estimates.

**Table X: Competition Matrix**

|  |  |  |  |
| --- | --- | --- | --- |
| **Comparable Attribute** | **Applicant’s Technology Paired with Zero-Emission Backup Power System** | **Current Leading Technology**  **(e.g., Solar + storage without applicant’s technology)** | **Competing Technology**  **(e.g., Diesel Generation)** |
| Quantity of loads powered as energy capacity (kW) |  |  |  |
| Time duration that critical loads can be powered |  |  |  |
| Levelized cost of energy for the full backup power solution |  |  |  |
| Cost of permits for the full backup power solution |  |  |  |
| Cost of utility interconnection requirements (if needed) |  |  |  |
| Costs incurred from electrician’s billed labor hours for installation |  |  |  |
| Operational steps for customers to shift into island mode |  |  |  |
| Annual maintenance requirement |  |  |  |

1. **Photos of the Proposed Product for Appendix. (Not subject to page limit)**

Applicants must submit detailed pictures and/or diagrams showing how the product works and detailing its components.