

HPC4EnergyInnovation Concept Paper Instructions

In partnership with Idaho National Laboratory, the HPC4EI Program is utilizing an electronic proposal application to collect submissions. To access the application portal visit <https://proposalshpc4.inl.gov/>. Applicants are required to create a user account, complete the electronic application, and upload concept paper as a PDF file.

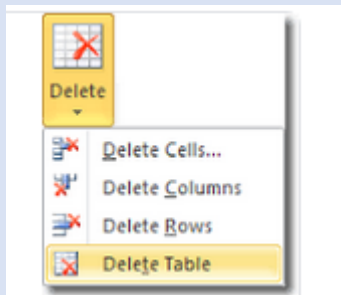
Some content requested in the electronic proposal application and in the uploaded PDF concept paper template, may be a duplication.

If you need assistance contact Michelle Herawi at (925) 423-4964 or hpc4ei-submissions@inl.gov.

Use the following template as an outline to develop your concept paper.

Formatting: Single spaced pages using 12-point Times New Roman font, and 1” margins. Upload to electronic proposal application as a PDF file.

Shaded instructional boxes are for reference only. Delete shaded boxes from your submission. To delete, select table by placing cursor over the top left corner of the box and press delete.



HPC4EnergyInnovation Concept Paper Template
Upload submission at <https://proposalshpc4.inl.gov/>

Proposal Tracking Number:

Project Title:

Company Name:

National Laboratory PI Contact Information (*This information is not required. A PI will be assigned to projects selected for full proposals if this information is not entered.*):

Name:

Laboratory:

These sections are limited to two (2) single spaced pages using 12-point Times New Roman font, and 1” margins. A concept paper that does not meet guidelines will be rejected for review.

Abstract (150 words or less)

Non-proprietary, publishable summary of the problem being addressed, why the problem is important to the energy future of the US, plan to address the problem, and what impact the solution will have.

Background

Explain the technical challenge to be addressed, the state of the art in this area and how this work advances the state-of-the-art, how solving this problem will meet the goals of the HPC4EI Program as defined by the list of topics of interest, the relevant expertise of the industry partners, what national lab expertise is needed, and why national laboratory HPC resources are required and how they will be used.

Project Plan and Objectives

Describe the technical scope of work to be performed and how this project fits into an overall solution strategy for the challenges being addressed. Describe how the results of the project will be validated, including availability of data. If possible, identify simulation codes to be used in this effort. Summarize how your project plan will address the key proposal review criteria indicated in bold italics:

Advances the current state of the art in the industrial sector:

Technical feasibility:

Relevance to high performance computing:

Impact

Estimate how this specific HPC effort will result in national-scale, long-term energy savings across the industry; the performance improvements that are expected over existing technologies; and the ability of industry to accelerate the adoption of energy-efficient technologies. Describe how this specific HPC work contributes to a transformational change in the energy sector and enduring economic impact. Describe how this effort will result in changes in the way your company operates. Describe the alternative actions if this effort is not funded including reliance on experimental technologies or other courses of action. Include metrics for energy improvements, performance increases, cost savings, and/or time reductions.

Changes from Previous Submissions (Reapplications)

For proposals that have been re-submitted from a previous solicitation, briefly describe how you have incorporated changes based on reviewer comments from the previous submission.

For the follow-on projects, the concept paper should not exceed three (3) single spaced pages using 12-point font (Times New Roman preferred). In addition to the required sections above, the following component is required:

Results from the prior funded project (one page maximum with figures)

Review the results and knowledge gained from the demonstration project. Explain how these results will be used to address the objectives of the current proposal. If you believe that the current proposal is distinctly different from the previous project and should not be considered as a follow-on project, please articulate the differences.

Appendix A. References (optional – not included in page count)