1. ***INSTRUCTIONS***

*Prior to submitting a concept paper, please read the* [*terms of the Cooperative Research and Development Agreement (CRADA)*](https://woodheat.bnl.lbl.gov/sites/default/files/2023-06/WHICCRADA_15JUN2023_1.docx)*. The Wood Heater Innovation Collaboration (WHIC)* [*Common CRADA template*](https://woodheat.bnl.lbl.gov/sites/default/files/2023-06/WHICCRADA_15JUN2023_1.docx) *has been reviewed and approved by all participating DOE labs. This template will be used for all WHIC projects and is non-negotiable. The CRADA is applicable only to WHIC projects where there is at least one non-DOE lab party, although there may be any number of DOE labs.*

*A CRADA project is a partnership between a government agency and a private sector company to collaborate on research and development activities. The goal of a CRADA project is to leverage the expertise, resources, and capabilities of both parties to develop new technologies, products, or services that can benefit society.*

*All DOE Bioenergy Technologies Office (BETO) funding will go directly to the national laboratories to execute the scope of the project, with the partnering applicant committing a minimum of 20% cost share to the project. Further details of this funding opportunity announcement can be found on the Wood Heater Innovation Collaboration website:* [*woodheat.bnl.lbl.gov*](http://woodheat.bnl.lbl.gov/)*.*

*Complete this template in Section C and submit it to* *woodheat@ee.doe.gov* *by 11:59 PM PDT on date specified in the announcement (see woodheat.bnl.lbl.gov). You will receive a confirmation of receipt by email. No late submissions will be accepted.*

1. ***REVIEW CRITERIA***

*The DOE (BETO) makes an independent assessment of each Concept Paper based on the criteria shown in Section B.1. BETO will encourage a subset of applicants to continue on with the Full Proposal development process. Other applicants will be discouraged from submitting a Full Proposal. An applicant who receives a “discouraged” notification may not submit a Full Proposal.*

* 1. *CONCEPT PAPER REVIEW CRITERIA*

*Concept Papers are evaluated based on consideration of the following factors. All sub-criteria are of equal weight.*

 ***Concept Paper Criterion: Overall CRADA Call Responsiveness and Viability of the Project (Weight: 100%)***

*This criterion involves consideration of the following factors:*

* *The applicant clearly describes the proposed technology, describes how the technology is unique and innovative, and how the technology will advance the current state-of-the-art;*
* *The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that BETO funding and the proposed project would have on the relevant field and application;*
* *The applicant has the qualifications, experience, capabilities, and other resources necessary to complete the proposed project;*
* *The application effectively leverages the unique capabilities and resources at the selected National Laboratory and describes how the project will effectively utilize laboratory resources to maximize efficiency and outcomes;*
* *The applicant has indicated the potential impact the project goals have in terms of supporting disadvantaged communities and societal equity challenges; and*
* *The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the CRADA Call.*
1. ***CONCEPT PAPER TEMPLATE: Prior to submitting your proposal, remove this page and all blue instructional text throughout this template and ensure text in brackets are complete.***

**2023 Wood Heater Innovation Collaboration (WHIC) CRADA Call
CONCEPT PAPER TEMPLATE**

**I. PROJECT TITLE:**

**II. APPLICANT INFORMATION:**

1. Applicant/Organization Name: [Legal company name]
2. Point of Contact Name: [technical point of contact first and last name]
3. Point of Contact Email:
4. Point of Contact Address:
5. Point of Contact Phone Number:
6. Is the applicant incorporated in the U.S.: [Yes/No]
7. Is the company owned by a foreign entity: [Yes/No. If Yes, provide parent name and country.]
8. Company description (100 words max): [Provide a brief description of your company.]
9. Location(s): [List your company’s major U.S. manufacturing or research and development sites.]

**III. NATIONAL LAB PREFERNCE AND REQUESTED RESOURCES**

National Lab Preference (select one or both if you would like to use resources at both labs):

[ ]  Brookhaven National Lab

[ ]  Lawrence Berkeley National Lab

**IV. PROJECT SUMMARY (50 words)**

*Provide a general layman’s description of the proposed project. Ideally in one or two sentences.*

**V. PROJECT GOAL or OUTCOME (200 words)**

*Describe your immediate goal in the context of a 12-18 month Wood Heater Innovation Collaboration project. Figures may be included. Examples include but are not limited to: demonstrate novel tech reduces emissions by 50%, demonstrate integration of technology with heat pump, or a model that predicts airflow in the combustion chamber and informs design improvements for the combustion chamber. Describe the scientific or technological motivation, long-term goals, and significance of your project in the context of advancing wood heaters.*

**VI. PROJECT PLAN (500 words)**

*Briefly describe the proposed technical approach to achieve the project goals. Approach should be clearly organized into high-level task descriptions.*

*Specifically, describe your project plan, indicating the work to be done at your home institution and at the National Laboratory Facilities of your choice using the resources in “Request Resource”*

*Describe how each of these pieces of work contributes to the immediate goal identified in “Project Goals”. Describe the expected timeline of your project, including an estimate of the time required. Small figures or charts are permissible.*

**VII. RELEVANT EXPERIENCE (300 words)**

*Describe the current level of skills and expertise of each organizational team member in relation to the proposed work. Provide only one or two sentences for the point of contact and any additional relevant team members. If applicants expected to do hands-on work at the National Labs, be explicit about the individual’s level of training or experience on the requested resources, and describe the tasks they would be expected to perform.*

*Also describe the supporting capabilities of the applying organization and known or anticipated gaps in facilities or capabilities requests (e.g., no combustion modeling expertise).*

*Cooperative planning and executing iterative development (or something that indicates we'll do design changes and evaluate the performance in lab -- that would essentially check off Gaseous and Particle sampling but it would include a bit more too)*

**VIII. NEED FOR WOOD HEATER INNOVATION PARTNERSHIP (300 words)**

*Select the categories for how the National Lab will support your project in the list below*

How will the National Lab support your project (select applicable)?

[ ]  Experimental performance validation (e.g., gaseous and particle emissions, efficiency, design iterations etc.)

[ ]  Computational modeling

[ ]  Data analysis

[ ]  Other (please explain in narrative below)

*Describe your need for specific WHIC capabilities and expertise checked above. Highlight any interdisciplinary aspects of the project and how your team will leverage the expertise and resources of a National Laboratory to develop innovative solutions to address wood heater challenges.*

**IX. SUPPORTING DISADVANTAGED COMMUNITIES (100 words)**

*Briefly describe how this project will support underserved communities as identified by the* [*Climate and Economic Justice Screening Tool (CJEST)*](https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5)*.*

**X. REFERENCES or RELEVANT WEBSITE LINKS (if applicable)**