MICROGRID TECHNOLOGIES COMPETITION
-- ROUND 2 --

ALASKA CENTER FOR MICROGRID TECHNOLOGIES COMMERCIALIZATION

6/23/2017

COLLABORATORS:

ALASKA CENTER FOR ENERGY AND POWER,
BUSINESS ENTERPRISE INSTITUTE,
UNIVERSITY OF ALASKA CENTER FOR ECONOMIC DEVELOPMENT,
AND
ALASKA SMALL BUSINESS DEVELOPMENT CENTER
AT THE UNIVERSITY OF ALASKA

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ALASKA CENTER FOR ENERGY AND POWER
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AT THE UNIVERSITY OF ALASKA

PLEASE SEND ALL INQUIRIES TO ACMTC.QUESTIONS@ALASKA.EDU
Microgrids are everywhere from airports to military bases to remote communities, and the microgrid market is predicted to rise to $35.1 billion by 2020 (Transparency Market Research, 2016). Alaska is home to more than 200 small community microgrids and approximately 12% of the developed microgrids in the world. These remote communities, specifically the local utilities, are very interested in the integration of new technologies so that the contributions of renewable energies in their systems can be increased and the use of expensive diesel fuel decreased. Private companies and other solution developers have an interest in confirming that their technology can operate efficiently in remote areas, cold weather, and harsh conditions.

To address these needs, the Alaska Center for Microgrid Technologies Commercialization has launched a competition for companies who want to improve their technology for use in remote and/or austere microgrid environments.

Through this competition, **ACEP will provide services valued up to $308,000** to companies who are interested in R&D support to accelerate commercialization for products intended to improve operation and technical efficiency of microgrids.

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**Figure 1**: Components of an islanded microgrid setup
The Rewards

<table>
<thead>
<tr>
<th>Microgrid Project*</th>
<th>Technology Seed Support**</th>
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<tbody>
<tr>
<td>Up to 40 days R&amp;D in the ACEP PSI (Power Systems Integration) Laboratory&lt;br&gt;(Lab days either going to 1 project or be split between 2 projects)</td>
<td>R&amp;D to commercialization review&lt;br&gt;3 small projects (for each with up to 125 man-hours)</td>
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The competition will have one or two grand prizewinner/s that will receive up to 40 days of R&D time in the ACEP Power Systems Integration Laboratory. This includes R&D support and in-system testing of their technology, to prove its feasibility, and improve it for use in microgrids around the world. The competition will also award up to 125 man-hours for R&D support to 3 smaller projects.

Through the use of the Alaska Center for Energy and Power’s facilities and expertise, we’ll help you prove your technology and its financial feasibility for use around the world.

*R&D time for the grand prizewinner includes access to ACEP Power Systems Integration (PSI) Laboratory and associated staff for in-system R&D and testing of their technology. Lab days awarded can be expended on R&D and review work, retooling of the PSI Lab and installation of the winner’s equipment (cost of materials excluded), and operation of the laboratory for in-system R&D and testing (PSI Lab equipment operated solely by ACEP Staff).

**Technology Seed Support is limited to R&D support (e.g., drafting, specification development, identification of necessary improvements, support of software development, interface specification), design reviews and consulting with the objective of accelerating a successful commercialization trajectory.
How to Apply

Step 1: Submit “Expression of Interest”

If you’re interested in the competition, please submit your information in a questionnaire at http://bit.ly/2rpeJXL to let us know about your project, your needs, and how we can reach you. On the questionnaire you can also request free and confidential business advising through the Alaska Small Business Development Center (SBDC).

As the competition deadline approaches, we will send you updates and reminders.

Expressions of interest are due by: August 2nd, 2017.

Step 2: Review of Eligibility Requirements

We’re looking for projects with the potential of a big economic impact. To make sure that we’re taking on the best projects, we’ve assembled an independent advisory team that will review projects for eligibility.

To be considered, applicants must submit the following items:\1:

- A technology, product, or service description
- A project plan
- A financial plan
- A commercialization plan
- A market analysis

\1 Full application instructions will be made available to those registered in Step 1 prior to the opening of the application period.
Qualified Applicants will demonstrate that:

• The project will positively impact microgrids by increasing technical efficiency, renewable contribution, and stability of microgrid systems  
• The project can be conducted within necessary technical and safety protocols  
• The project can be completed within the budget and within 12 months (grand prize), or 6 months (small awards) of the award  
• The project will lead to the commercialization of a product, service, or technology  
• The applicant provides matching funds through either cash or in-kind support through the provision of goods and/or labor\(^2\)  
• Intellectual property rights to the product or service originate with the applicant

Preference will be given to applicants who demonstrate:

• The potential for large economic impact, i.e., reduction of energy cost in remote microgrids and creation of jobs in the U.S. EDA Western Region\(^3\), with preference on Alaska  
• A proof of concept, a prototype, and/or intellectual property ownership  
• Business ownership and/or a business plan  
• A letter of endorsement from an Alaskan utility for their technology  
• A physical presence in the U.S. EDA Western Region

2 webinars are scheduled where the application process will be explained and where questions can be asked by potential applicants. Furthermore, requests for information about any part of the application process or simply a request for help can be emailed to acmtc.questions@alaska.edu at any time.

Step 3: Submit a Formal Application

We anticipate our formal application period to be from August 2\(^{nd}\), 2017 to September 1\(^{st}\), 2017.

Send an electronic copy of your application in PDF format, and following the application guidelines, to acmtc.competition@alaska.edu\(^4\). Applications that do not follow the requested format or are missing requested information will be rejected.

Emails have to be received no later than 11:59PM AKDT on September 1\(^{st}\), 2017 to be considered.

\(^2\) Allowable matching funds are: provision of cash for additional ACEP staff time and/or lab time (see budget worksheet for rates); in-kind: internal labor not to exceed industry typical rates, and provision of additional supplies (valued at acceptable market rates) necessary for integration of equipment in PSI Lab (applicable only for grand prize, labor for installation by ACEP staff will be billed against award or cash match).


\(^4\) Do not use this email address for general inquiries.
Selection and Testing

Selection of the top projects will begin on September 4th, 2017 and winning applicants will be contacted via email by November 10th, 2017 to finalize any contracts. An additional pitch presentation may be required for a subset of applicants in the above time frame should the review team deem this necessary to make selections. A minimum of one business day notice will be give for pitch presentations.

Disclaimers

Work is contingent upon availability of funding, eligibility, and legal requirements.

Laboratory R&D and testing is contingent upon safety review by ACEP staff and approval by University of Alaska Fairbanks Environmental Health and Safety and Risk Management.

All persons present in the laboratory during R&D and testing are required to provide their own PPE in accordance with general and specific laboratory rules.

Awards will be made under a Master Agreement issued by the University of Alaska Fairbanks. This master agreement will include timelines, services provided, scope of work, and time and matching/in-kind budget (see Agreement between UAF/ACEP and Awardee for general terms). The Master Agreement for each awardee will determine IP ownership, the work to be completed, and the method of collaboration.

Successful applicants are required to accept terms and conditions provided in the award contract. These terms are not negotiable.

All funds awarded will be spent at ACEP. Awards will not be made in cash or actual monetary funding, but in form of R&D man-hours or laboratory time.