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| --- | --- |
|  **Proposal Title:** |  *\*Enter Proposal Title here* |
| **Applicant Organization Name (company or institution)** |  *\*The name that is entered here is how the applicant will be referred to throughout the duration of the project. If a name change is anticipated soon, please apply with that name.* |
| **Applicant Organization Address** |  *\*Include physical address, email address and phone number* [ ]  Residential Address [ ]  Non-Residential Address |
| **Lead Point of Contact Name, Title Email** |  *\*Name, title, email* |
| **If Research Institution, include Technology Transfer Office Contact Name, Phone Number and Email Address:** |  *\*Reminder: Discuss application with your Grants and Contracts office* |
| **Proposed Starting Date:** |   |
| **Proposed Total Budget:** |  *\*Note: maximum size of grant is $75,000* |
| **Prototype category:** | Please indicate if the proposed prototype consists primarily of hardware or software:[ ]  Hardware [ ]  Software [ ]  Both/Combination |
| **Climatetech Area** | Please indicate if the proposed technology is in one of these focus areas:[ ] Energy & Electricity [ ] Transportation [ ] Agriculture & Water[ ] Buildings [ ] Manufacturing & Industry [ ] Resilience & Adaptation |
| **Are you applying to the DICES Program?****Read the RFP for full eligibility details and program requirements.** | [ ]  YES [ ]  NO  |
| 1. **Elevator Pitch**
 |
| *Provide a brief overview of the proposed technology and the project, including the goal of the project and how it will help advance its Technology and Commercial Readiness Levels.* ***Limit 1-3 sentences.*** |
|  |
| 1. **DICES Statement**

*(only applicable to those Applicants seeking a DICES grant)* |
| *How have lived experiences or economic barriers influenced your experience in entering the environmental or entrepreneurial landscape? How have these experiences influenced you and/or made you uniquely situated to contribute to growing the Climatetech field?* ***Limit 1-4 sentences.****MassCEC is committed to providing funding opportunities to Applicants who are underrepresented in the Climatetech industry or faced economic barriers entering the environmental or entrepreneurial landscape. The DICES Program seeks to provide access to funds for those who can speak to how their lived experiences or economic context has caused barriers when entering the Climatetech industry. Examples of such barriers or experiences may include, but are not limited to:** *The Applicant has experienced direct underrepresentation in the Climatetech ecosystem in Massachusetts.*
* *The Applicant has not received substantial support, especially compared to other Applicants, towards the commercialization of their Climatetech project or research.*
* *The Applicant has experienced economic barriers to accessing or receiving capital for seed funding.*
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|  |
| 1. **Potential of the Proposed Technology**
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| **Technology and Project Summary** |
| **Technology Overview** | ***Context/industry overview****:* * *What is the context for this project/technology? Describe the current industry, other technologies etc. that pertain to the project in question. Include some high-level statistics if available.*
* *Why is this industry important to solving climate challenges?*
* *Description of how this opportunity was identified*

***Challenge:**** *What are the pain points of the existing industry solutions addressed by the project?*
* *What are some existing solutions? What are some shortcomings of these solutions?*

***Solution:**** *How will the proposed project solve the problem(s)?*
* *How will it be better than what currently exists in the market and/or other solutions under development?*
 |
| **Technology Details** | * *A description of the technology, including the current state of development.*
* *Description of how this technology operates.*
* *Justify and validate the TRL (must be between 2 - 4.)*
* *Describe the innovative and novel aspects of the technology.*
* *Describe its viability and how it solves a climate challenge.*

*Note: Candidates are encouraged to provide illustrative diagrams or figures that will help further explain the technology.**Note: Candidates who have applied more than three times in the past and are re-applying because of a substantial change in the market which advances their case for an award should briefly describe how the market has changed since their most recent application.* |
| **TRL/ARL of the Technology** *(as identified by the* [*MassCEC Readiness Calculator*](https://www.masscec.com/sites/default/files/documents/MassCEC%20Readiness%20Calculator.xlsm) and US DOE’s [ARL Calculator](https://www.energy.gov/technologycommercialization/adoption-readiness-levels-arl-framework).*)* | *TRL:*  | *ARL:* |
| *Notes:* |
| **Technical and Market Risks** | * *An assessment of the technical risks associated with the technology, including the extent of identified risks and uncertainties, and proposed strategies for risk mitigation.*
* *Identify any market, regulatory or policy drivers that will enable (or inhibit) adoption of the technology.*
* *Identify any market, regulatory or policy drivers that will enable (or inhibit) adoption of the technology.*
 |
| 1. **Commercialization Potential**
 |
| **Commercialization Potential** | * *Please explain your beachhead/initial market*
* *Describe the proposed business model of the company (i.e., will the product be licensed or sold directly to the end consumer?)*
* *If the business model of the company will change over time (i.e. from a licensing to manufacturing model), provide a description of this progression.*
 |
| 1. **Climatetech Benefits**
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| **Total Addressable Carbon (TAC) Analysis\*** | * *Provide an analysis of the potential reduction in greenhouse gas emissions or the avoidance of future GHG emissions achievable given widespread use of the technology/innovation.* *Applicants are encouraged to use tools such as*[***the CRANE tool***](https://cranetool.org/)*, or other credible public data sources such as the United States Department of Energy’s*[***Energy Information Administration***](https://www.eia.gov/todayinenergy/detail.php?id=30712)*, the U.S. Environmental Protection Agency’s*[***National Emissions Inventory***](https://www.epa.gov/air-emissions-inventories/national-emissions-inventory-nei)*(especially for greenhouse gases other than carbon dioxide), the*[***EPA's Greenhouse Gases Equivalencies Calculator***](https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references)*, and others. You may also use MassCEC’s*[***Emissions Reduction Analysis***](https://www.masscec.com/sites/default/files/documents/ERPGranteeInstructions.pdf)*instructions and the corresponding*[***template***](https://www.masscec.com/sites/default/files/documents/erpcollectiontemplate.xlsx) *as tools, in order to quantify the* ***GHG emissions*** *that can be reduced, avoided, or remediated. Other quantification methods include but are not limited to potential megawatt-hours of clean energy generated, tons of carbon dioxide emissions avoided or captured, energy savings compared to existing or alternative technology(ies), efficiency improvement over existing technology(ies). Applicants are encouraged to quantify and/or describe of the potential to mitigate impacts of climate change through adaptation and resiliency (A&R), and consider environmental sustainability (for example, using indicators across social, economic, and environmental impacts). MassCEC acknowledges that quantifying A&R is an emerging field, and we recommend utilizing the 2023*[***ResilientMass Plan***](https://www.mass.gov/info-details/2023-resilientmass-plan)*, as well as the* [***World Economic Forum***](https://www3.weforum.org/docs/WEF_Innovation_and_Adaptation_in_the_Climate_Crisis_2024.pdf) *and*[***FEMA’s BCA Toolkit***](https://www.fema.gov/grants/tools/benefit-cost-analysis) *etc. for toolkits and guidance."*
* *Describe, to the most detailed extent possible:*
* *The current and future market in which emissions reductions are expected.*
	+ *Please reference the aforementioned potential market size for the technology*
* *The emissions currently associated within that sector.*
* *The magnitude of emissions reductions potentially achievable using the technology proposed.*
* *Include a description of how the technology directly or indirectly saves energy, and the magnitude of those energy savings (i.e., “This technology uses (or would use) XX% less energy than the current state-of-the-art.”)*
* *Energy efficiency technologies may calculate energy savings rather than carbon avoidance.*
 |
| *MMT CO2-e reduced per year, assuming optimistic adoption:* |
| *Describe assumptions and calculations:* |
| *List any references used in your estimations and analysis:* |

**Project Plan (2 pages maximum):**

*Pick a project that will advance your technology to the next inflexion point. Once the project is completed, ideally another source of funding should be evident because of what you can show or prove with this project.*

*This section should include two items: Milestones Map and Milestones Justification*

*Milestones Map:*

1. *A detailed description of what milestones are to be achieved during the up to 12-month Catalyst/DICES award period, and what milestones will be achieved with Catalyst/DICES funding.*
	1. *Use the following table as a guide, the first row has been completed as an example.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Milestone Number** | **Completion Date** | **Title of Milestone** | **Responsible Person** | **Budget Estimation** | **Description** |
| *1* | *March 1, 2026* | *Development of a process for destruction of PFAS in water.* | *Maria Smith* | *$35,000* | *Describe how meeting this milestone will move your technology towards your commercialization goals. Reference any key literature, including existing work, or background information from the web, listing URLs.* |
| 2 | … | … | … | … | … |
| 3 | … | … | … | … | … |

*Milestones Justification:*

1. *The following information, in a bulleted list as follows:*
	1. *A description of how the Catalyst/DICES award directly supports the applicant commercializing the technology and securing a follow-on round of funding. Corroboration in the form of non-binding letters of support from potential future investors, partners, or customers indicating how the completion of a Catalyst/DICES project would serve as an impetus for investment, joint venture, or other collaboration, is strongly encouraged. These can be attached separately as an Appendix.*
	2. *A long-term “product development roadmap” that reaches beyond completion of the award work, assuming the above milestones can be completed using Catalyst/DICES funding.*
	3. *A projection of what funding will be required to bring the product to commercialization once the Catalyst/DICES funded work has been completed and what the source of that funding is expected to be. While the funding should be stated as an order of magnitude, if a major go/no go milestone will occur following the Catalyst/DICES Award, that information should be included as well.*

**Project Budget Summary:**

*Note: If your research institution requires overhead, it needs to be included in this budget. Verify cost of overhead with the institution, as many institutions have waived overhead for this award in the past. MassCEC does not fund overhead for startup companies and company applicants should not include any overhead in their proposed budgets. For personnel costs please remember to include all benefit and fringe expenses. The total cost should equal $75,000 or less.*

|  |  |
| --- | --- |
| **Category** | **Cost** |
| Project Staff: |  |
|  PI/Project Lead (include breakdown for personnel salaries and benefits) |  |
|  Other Project Staff (include breakdown for personnel salaries and benefits) |  |
|  Student, Grad Student and Postdocs (include breakdown for student fees if applicable) |  |
|  |  |
| External Advisors and Consultants  |  |
|  |  |
| Subcontracts and Services  |  |
|  |  |
| Supplies (provide breakdown; and if more than $3K, provide justification below) |  |
|  |  |
| Equipment (if more than $3K, provide justification below) |  |
| Travel (if more than $3K, provide justification below) |  |
| Other  |  |
|  |  |
| TOTAL | $ 0.00 |

*After filling out the above table, right click the “Total Cost” box and select “update field” to refresh the value.*

*Note: Supplies are considered disposable items for testing technology or items needed as part of a prototype, whereas Equipment is a tool that can be used for multiple projects.*

**Travel, Supplies and/or Equipment justification:**

*If requested in Budget Summary, provide brief justification here.*

**Team Members (1-page max)**

*Provide a brief description of the engineering development, manufacturing and business development team members and their relationship to each other. Also, provide any achievements (i.e. awards, publications, etc.) that are relevant to developing the product/ technology.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Role** | **Name and Title** | **Institute or Company** | **Email Address** | **Hours per Month on Project** | **Experience/Qualifications** |
| PI/Project Lead |  |  |  |  |  |
| Co-Applicant |  |  |  |  |  |
| Other Project Staff |  |  |  |  |  |
| Student/Grad Student/Post-doc  |  |  |  |  |  |
| External Advisors and Consultants |  |  |  |  |  |
| Other |  |  |  |  |  |
|  |  |  |  |  |  |

*You may provide 1-page resumes for each team member in the Appendix, if the space above is insufficient.*