Guidelines for Rocket Fund Applications – 2023

**Awards:** $25,000 - $75,000, with the opportunity to apply again

**Eligibility:** Incorporated or in process; $3 million equity investment cap at date of application; companies closing investment after the deadline are still eligible to apply; students & new graduates as well as garage entrepreneurs welcomed; fits technology scope of the Fund; national and international companies qualify as long as entity has interest in establishing California presence; customer site for prototype demonstration either arranged or being finalized; intended to open up an initial market and lead to customer orders or new investment; estimated timeframe for designing, and building the first commercial prototype for testing with customer: 12 months from time of receiving the award.

We look for:

- Strong, third-party validated technologies (e.g., patents, university research, DOE national lab e.g., NREL, ARPA-E or Electric Power Research Institute [EPRI] data, utility field testing or UL certification) or innovative software platforms with early demonstration of market value
- Clear idea of the value proposition of the product, market segments and target customers for establishing your beachhead (early adopter) niche
- Well-defined use of Rocket Funds with a potential customer providing a test site for your technology demonstration

**Diversity and Inclusion:** In 2021 the Rocket Fund established a commitment to strengthening diversity and female leadership as well as to spreading the benefits of cleantech and sustainability more broadly to disadvantaged or underserved communities. A significant portion of the scoring during the competition will address this challenge. Please ensure you describe fully your company’s commitment to diversity and inclusivity, preferably as part of the business model: current leadership and recruitment initiatives; technology impact with wide adoption of your product, partnership initiatives or corporate policy changes that indicate you are considering how to enhance your approach to this challenge.

**Scope:** The Rocket Fund provides competitive grants for funding early commercial prototype development (TRL 5 – 7, DOE*) in cleantech and sustainability startups. Rocket Fund covers: Initial prototype design, build out and installation; equipment purchase; consulting support for specialized tasks such as programming user interfaces and manufacturing process development, product engineering and scale up; technology certification; lab testing for technology/product validation and manufacturing.

* From the Electric Power Research Institute, based on Department of Energy Information

<table>
<thead>
<tr>
<th>TRL (Technology Readiness Levels)</th>
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<tbody>
<tr>
<td>1</td>
<td>Exploratory research transition basic science into laboratory applications</td>
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<tr>
<td>2</td>
<td>Technology concepts and/or application formulated</td>
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<td>3</td>
<td>Proof of concept validation</td>
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<td>4</td>
<td>Subsystem or component validation in laboratory environment to simulate service conditions</td>
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<td>5</td>
<td>Early system validation demonstrated in laboratory or limited field application</td>
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<td>6</td>
<td>Early field demonstration and system refinements completed.</td>
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<td>7</td>
<td>Complete system demonstration in an operational environment.</td>
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<td>8</td>
<td>Early commercial deployment</td>
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<td>9</td>
<td>Wide-scale commercial deployment</td>
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Rocket Fund Target Sectors:

**Rocket Fund 2023 Tracks**

Track 1: Integrated Resilient Grid and Decarbonized Energy Systems
- Energy resiliency, smart and micro grids, information technology and AI
- Long duration storage, including hydrogen energy
- Short duration battery storage innovations
- ZEVs, BEV batteries, and BEV integration and charging management
- Zero-carbon electricity generation including distributed generation, fuel cells, hydrogen turbines
- Grid and pipeline couplings
- Dispatchable hydrogen production
- Grid hardening for wildfire mitigation

Track 2: Green buildings and Materials
- HVAC
- Smart building controls, advanced automation and control of energy flexible load
- Advanced building envelope, including building electrification
- Green materials – including CO2 conversion to building materials
- Advanced water heating
- Nanogrids, distributed generation, energy resiliency
- End use energy efficiency and demand response

Track 3: Hard to decarbonize
- Zero-carbon fuels/chemicals/hydrogen for heavy transport, commodity use
- Zero emissions off-road transportation (rail, marine, air, construction, agriculture, materials handling)
- Decarbonized heat for industry
- Industrial materials processes: steel, cement, plastics
- Ag industry decarbonization processes
- Carbon capture and repurposing
- Industrial processes electrification
- Renewable methane, methane leak detection

Track 4: Environment
- Water management
- Precision/smart/sustainable agriculture
- Waste-to-energy (e.g. biomass conversion)
- Air quality monitoring, wildfire mitigation, rewilding, regenerative agriculture
- Carbon dioxide removal, including direct air and ocean capture

Track 5: Moonshot
- Plant-based carbon sequestration
- Other

RSl Office of Entrepreneurial Programs 11.02.22

**Application Deadline:** Midnight Friday March 3, 2023. For more information contact stephanie.yanchinski@caltech.edu

**Schedule:**

*The Office of Entrepreneurial Programs, Resnick Sustainability Institute, November 2022*