Guidelines for Rocket Fund Applications – 2019

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

Eligibility: Incorporated or in process; validated lab technology; raised no more than $750,000 equity investment; 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 under discussion that will open up an initial market, leading eventually to customer orders or new investment; estimated timeframe for building the first commercial prototype and begin testing with customer: 9 – 12 months.

We look for:
- Ventures with third-party validated technologies (e.g. patents, university research, DOE national lab, ARPA-E or Electric Power Research Institute data, utility field testing or UL certification)
- Proven lab/bench scale prototypes and a design for a minimum commercial prototype
- Clear idea of the value proposition of the product and target customers
- Understanding of potential market segments the product is addressing

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

Intellectual Property: Please sign and submit **IP Declaration** and **IP Disclosure** forms at the time of entry, and e-mail them to the FLOW/Rocket Fund Office, C/O Stephanie C. Yanchinski, **stephanie.yanchinski@caltech.edu**. If you have applied for patents it is vitally important that the origin, ownership and status of IP be clarified at the time of application.

Topics:

General categories: 1) Energy Efficiency (e.g. novel HVAC); Demand Response; Smart and Microgrid; Data Analytics and Energy Management; Zero Net Energy technologies; Energy Storage; 2) Grid Decentralization; 3) Renewables and 4) CO2 mitigation and conversion; 5) Agriculture/Water Energy Nexus

New:
- Robotics – e.g. in agriculture for water savings; industrial manufacturing energy efficiencies
- AI and cleantech
- Industrial heat processes and thermal storage
- Alternative materials and additive manufacture
- Food Processing industry

Specific member requests:
- Small, cheap control systems for residential "nanogrid" homes with solar, battery and fuel cells
- Catalytic oxidation of fuels for zero NOx thermal applications
- Spark and other ignition systems for Natural Gas Vehicle (NGV) running on H2 blends
- Home and commercial biogas digesters
- Modular prefab retrofit/structural materials
- Systems integration for buildings – from a functional point standpoint e.g. chip—level OEM systems communications standards for energy, automation and other security and environmental controls.
- Efficient water production (e.g. membranes, desalination)
- Efficient water transport (e.g. pumps, Demand Response in water treatment/water conveyance plants
- Efficient water use in Residential, Commercial and Industrial applications

- Agriculture water use
- Water and wastewater treatment
- Hot water and energy efficiencies
- Blockchain
- Transactive Energy and P2P networks
- Innovative solutions for regions where WiFi is not prevalent

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

	TRL (Technology Readiness Levels)
1	Exploratory research transition basic science into laboratory applications
2	Technology concepts and/or application formulated
3	Proof of concept validation
4	Subsystem or component validation in laboratory environment to simulate service conditions
5	Early system validation demonstrated in laboratory or limited field application
6	Early field demonstration and system refinements completed.
7	Complete system demonstration in an operation environment.
8	Early commercial deployment
9	Wide-scale commercial deployment

Application Deadline: Rocket Fund applications will be open February 1 – May 1, 2019. Note: we welcome Rocket Fund applications throughout the year; those arriving after the deadline will be considered in the following Rocket Fund intake. The review process and awarding of grants follow closure of the application process. Register with FLOW for announcements: FLOWinfo@caltech.edu .

The FLOW/Rocket Fund Office, February 2019