



ROCKET FUND - 2018

CalSEED/BlueTechValley Information Session
JANUARY 26, 2018



Caltech

Caltech's Studio for Sustainability



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Two Programs

First Look West (FLOW) – business plan challenge for early cleantech entrepreneurs, sponsored by the Department of Energy

Rocket Fund – granting program for building commercial prototypes and field testing with customers, sponsored by California utilities



FLOW Offers

Apply: www.flow.caltech.edu

\$100K+ in Prizes, present at DOE Nationals

DOE Prize: \$50k - student, new grad startups

NEW, DOD track: military cleantech technologies

IN-LA Blitz NSF I-CORPS boot camp

Channel to Rocket Fund grants



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FLOW 2018 DATES

Apply: www.flow.caltech.edu

Midnight, February 28: Online Submissions Close
March 1-3: Round 1 Screening
March 5, 12, 19, 26: IN-LA Blitz Bootcamp
April 20: Round 2, Semi-Final, in LA
May 24 Final, at Caltech



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FLOW Snapshot

1,000 entrepreneurs, 30 universities, 19 states

Helped launch more than 20 companies

New Ventures' follow on funding close to \$80 million

2 acquisitions, by big clean energy players



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Rocket Fund

Founded 2015: by Emerging Technologies Coordinating Council of utilities, the Moxie Foundation and Caltech

To date: 14 grants, close to \$400,000 awarded

Companies funded (selection): Axiom Exergy, Xstream Trucking, CalSEED: South 8, BK Litec, PowerFlex, Fluency Lighting



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Rocket Fund Free, Fast, Flexible

\$10,000 - \$75,000 grants, non-directed, unencumbered

No IP required, non-dilutive

Fast : application to receiving award – 6 months (maximum)

Flexible: minimal reporting requirements

Work closely with utility experts who understand the market

Access to utility matching funds, testing facilities



Rocket Fund Covers

Equipment purchase

Engineering design: design software, product engineering consulting

Prototype building

Software programming – grid data & management; IOT

Certification services and testing

Consulting services – manufacturing process



Rocket Fund Scope

Energy Track: utility five year plans and roadmaps; CEC technology cluster and CalSEED priorities

Energy efficiency
Energy Storage
Grid management
Distributed Energy Resources (DER)
Food processing
Water/energy nexus
Ag/energy nexus
Software and energy data management

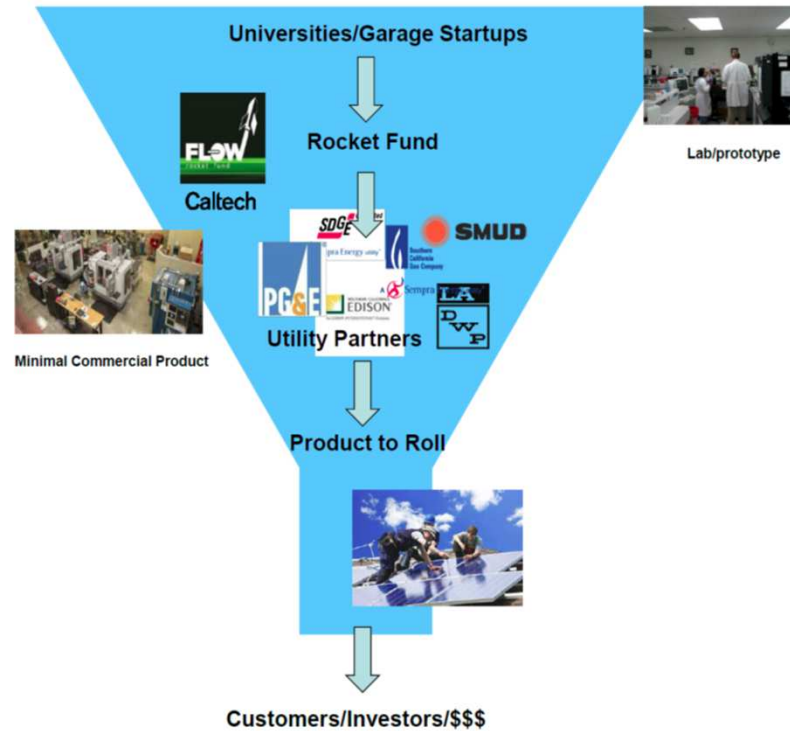
Sustainability: Everything else except environmental; CEC and DOE priorities

Renewable Energy generation – wind, water, sun
Waste heat conversion
Biofuels
Advanced transportation
CO2 mitigation
Energy efficient manufacturing
Desalinization
Energy efficient materials



De-risks Technology

Rocket Fund Companies



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Rocket Fund Benefits

Key Partners



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Rocket Fund Process

Apply: <http://www.flow.caltech.edu/rocket-fund>

Four-stage application process

Timeframe: application to award - six months

Operates like any grant: set milestones against payments

Project timeline: 9 – 12 months from award

Multiple applications welcome but not in same year

Stage 1: Application



What we look for:

Validated Technology

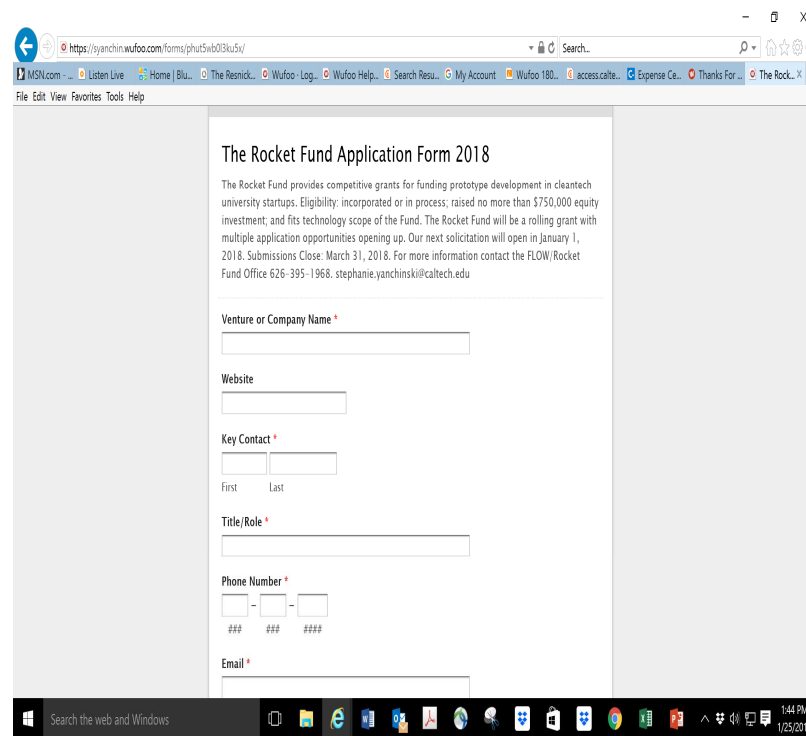
Competitive Value Proposition

Market size: MVP, TAM and SAM

Customers identified

Staged Use of Rocket Funds

Deadline: April 30, 2018



The Rocket Fund Application Form 2018

The Rocket Fund provides competitive grants for funding prototype development in cleantech university startups. Eligibility: incorporated or in process; raised no more than \$750,000 equity investment; and fits technology scope of the Fund. The Rocket Fund will be a rolling grant with multiple application opportunities opening up. Our next solicitation will open in January 1, 2018. Submissions Close: March 31, 2018. For more information contact the FLOW/Rocket Fund Office 626-395-1968. stephanie.yanchinski@caltech.edu

Venture or Company Name *

Website

Key Contact *

First Last

Title/Role *

Phone Number *

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Email *

Stage 2: Due Diligence



What we look for

- **Technology Development**
- Technology/product, how it works
- Product lifecycle position, IP
- Development challenges
- **Manufacturing Process**
- Describe the process
- How to scale to full production
- **Customer, Industry Partners, Path to Commercialization**
- Describe target customer
- Complaint being addressed
- **Economic , Business, Market Outlook**
- Cost projections , competitive assessment
- Market size, market share
- **Impact**
- Energy savings (e.g. kw projections); impact on greenhouse gases, decarbonization; water use reduction or efficiencies

Rocket Fund Application 2018- Due Diligence Worksheet

Entity Information			
Entity Name			
Entity Type			
	Group/Division/Lab name		
Entity Description			
Technology Name			
Company Info			
	Website		
	Year Founded		
	Primary Location(s) - HQ		
	Company Status		
	Funding Stage		
Primary Contact			
	Name		
	Title		
	email		
	Phone - Work		
	Phone - Mobile		
General - Organization			
	Solution Type		
	Market Tag(s)		
	Policy Tag(s)		
	Key Words		
Recent News (link)		This is required, if available.	
Assessment Summary			
Prelim - Technology Assessment	EPs	Self	Ag
Technology Readiness Level (TRL)			0
Manufacturing Readiness Level (MRL)			0
Time to Commercialization (yrs.)			0
Key Insight/Impact			
Key Limitations			
Signpost			
Next-Steps, Opportunities for Engagement			

Stage 3: Pitch Day

Rocket Fund Review Committee – Utility, Entrepreneurs, Business

What We Look For:

Technology validation, performance data

Clearly articulated customer & market focus, plan of attack

Outline of plans for field trials with customers

Use of funds –staged in \$75k, \$50k, \$25k tranches

Manufacturing plan including cost analysis of eventual product

The ask: how we can help – utility technical support, testing, connections to potential customers

Stage 4: After the Win

Negotiation

Memorandum of Understanding
- non-legally binding

Agreed Goals and Milestones,
payment schedule, timetable

Metrics: energy savings, # field
trials, # customers & LOIs,
additional funding attracted

Reporting

Quad Report: monthly while project lasts

Teleconferences: per negotiation

Metrics –beginning of project, mid-way,the end

Payments will depend on hitting milestones



Rocket Fund, Results

14 awards made to date across a wide range: peak shifting energy storage, irrigation technology, novel lighting technologies (IOT, laser lighting), EV charge management, DER & microgrid, trucking device for saving energy for long haul vehicles

2 companies raised seed rounds of \$2.5 million

3 companies have multi million dollar customer contracts

4 companies secured \$ 1 million+ in ARPA-e, SBIR grants; 3 CalSEED Awards



AXIOM EXERGY

A Rocket Fund Awardee

- 2015: FLOW First Prize
- 2015: Rocket Fund
- 2015/16: Pilot with SDG&E, SCE, Walmart
- Con Edison \$5m contract
- 2016/17: Raised >\$5.0 m 1st and 2nd rounds



Information

FLOW: <http://www.flow.caltech.edu/>

Rocket Fund: <http://www.flow.caltech.edu/rocket-fund>

Caltech: Stephanie.Yanchinski@caltech.edu