# U.S. Department of Energy - EERE Commercialization & Deployment Team


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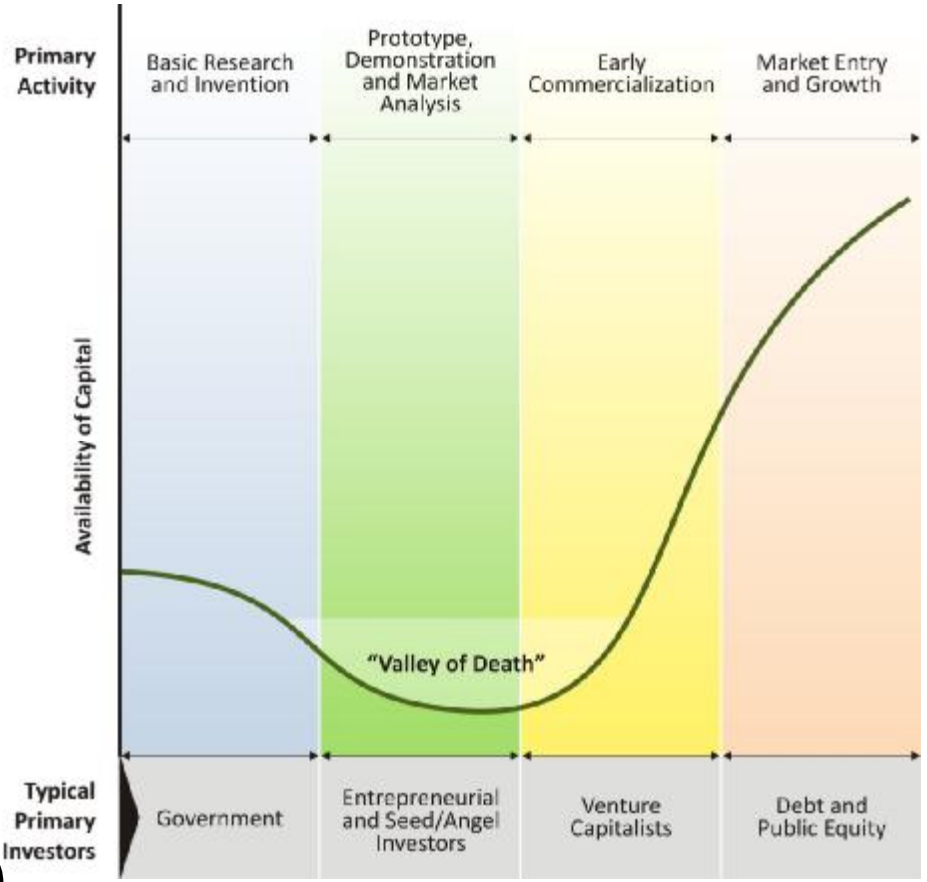
# Commercialization & Deployment Mission

*"Out of the Labs and into the Market"*

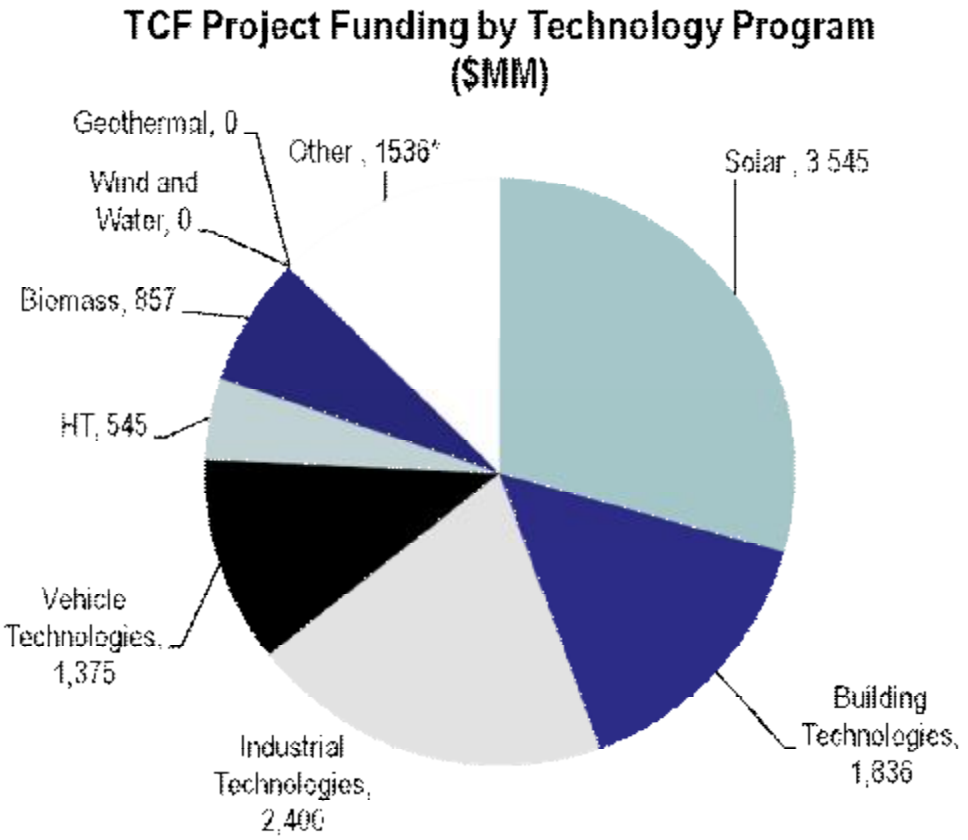
Identify and implement opportunities to accelerate EERE technology commercialization and deployment

- Connect investors to technologies (Entrepreneur in Residence, Technology Showcase, Technology Portal)
- "Valley of Death" Funding (SBIR, Technology Commercialization Fund)
- Deployment and ARRA Initiatives (Advanced Technology Vehicle Manufacturing Loan program, Renewables Manufacturing tax credit)



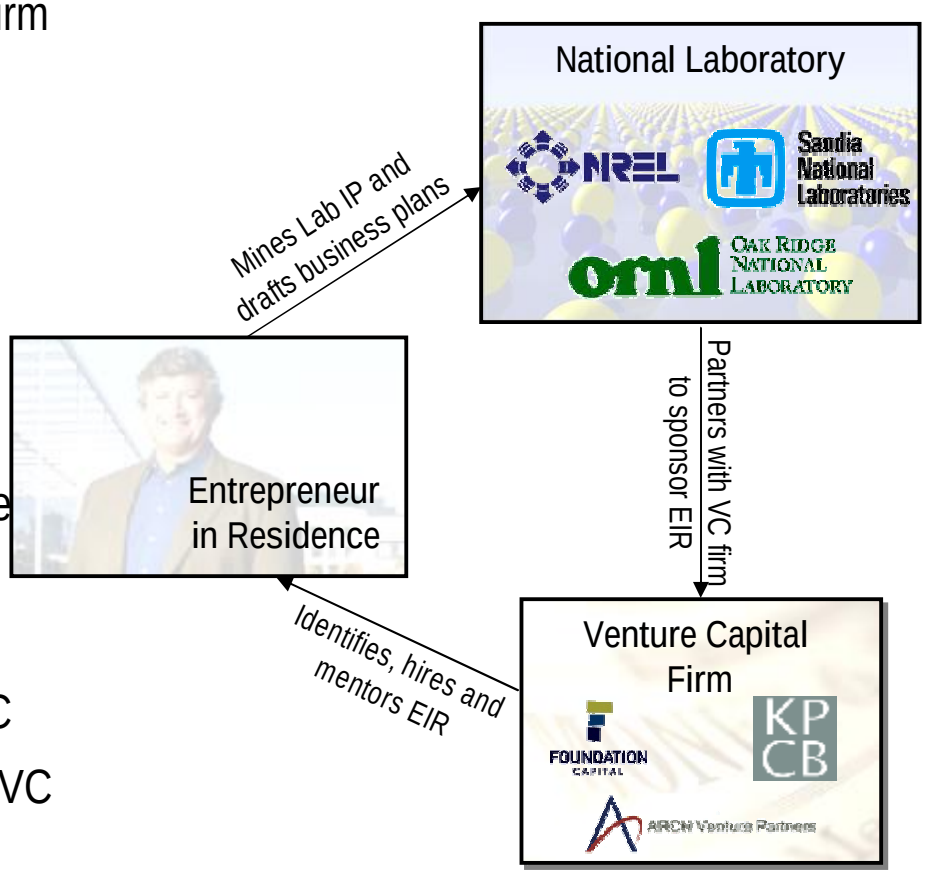
# Technology Commercialization Fund

- Innovations struggle to find financing post-research and pre-venture capital funding
- TCF provides funding for lab technologies on the brink of commercialization
- Funds restricted to prototype development, demonstration and deployment – not further scientific research
- 50/50 industry-matched funds required to participate proves market interest
- DOE TCF funding typically ranges from $100,000 to $250,000 per technology
- In 2007 and 2008 fund size determined by 0.9% of EERE Applied R&D spend
- Over $14m of funding awarded to 8 National Labs over past two years



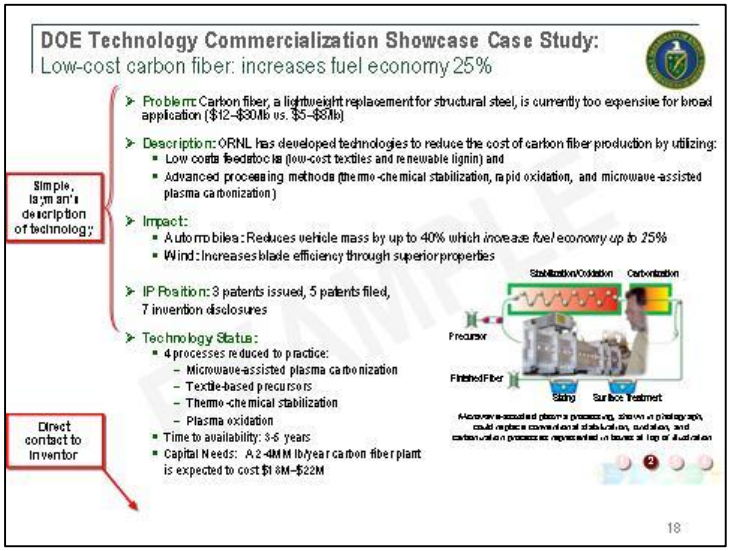
# DOE's Entrepreneur in Residence program connects leading scientific and business talent

- EERE Competitively selects Venture Capital Firm
- Venture Capital Firm hires entrepreneurs
- EERE provides small matching-funds and full access to laboratory ($50-100K)
- Pre-Negotiated standard equity share license agreement (Stanford Model)
- 3 EIRs in 2008 - Pilot
  - One lab – one entrepreneur – one venture capital EERE model
- 6 EIRs in 2009 – Rollout & Emulation
  - 4 EERE – 3 with single VCs, 1 multiple VC
  - 2 Lab emulations – 1 ingle VC, 1 multiple VC



# Technology Commercialization Showcase

- Many EERE-funded technologies stall in the "commercialization valley of death" simply because the innovation has not been clearly communicated to the business community
- Identified nearly 100 promising EERE technologies
- Created simple, layman's descriptions of the innovation opportunity
- Invited prominent investors to a two-day conference showcasing technologies



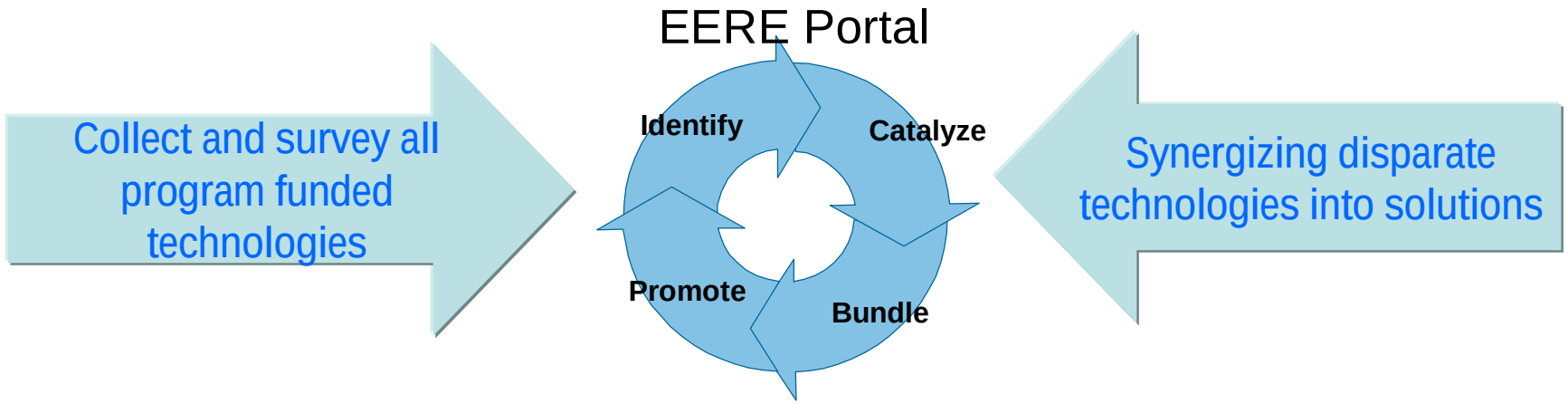

## Sample of 75+ Firms Represented in 2007 & 2008

NGP ENERGY TECHNOLOGY PARTNERS
khosla ventures
venture assistance, strategic advice, venture capital
PINNACLE VENTURES
KPCB
Nth POWER
Energy | Vision | Capital
MASSACHUSETTS GREEN ENERGY FUND
ROCKPORT CAPITAL PARTNERS
MATRIX PARTNERS
Good Energies
@Ventures
MDV
MOHR DAVIDOW VENTURES
BATTELLE | VENTURES
FLAGSHIP VENTURES

# EERE Technology Portal

## Promote technology ready for commercialization

- Web-based system that provides listings of energy-relevant technologies
- 1st Phase requires effort to get technologies written up and into the portal before the next phase can begin.
- "One-stop shop" for technology seekers (companies, venture capitalists, etc.) to identify and bundle energy relevant technologies.


There is potential to scale, add additional features and expand scope of mission

# EERE Commercialization Evolving

| | Start up | Transition | Steady State |
|---|---|---|---|
| | Manual,<br>small scale<br>A few labs<br>Focus on VCs | | Large scale, embedded<br>All technologies all labs<br>All partners wanting to commercialize |
| Connect Investors and Technology | • EIR<br>• TCS | • EIR at more labs and testing multiple VC model<br>• TCS expanded, regional, larger audience, more participation from labs | • Portal: all technologies from all labs transparent to all entrepreneurs and investors all the time |

# 48C Manufacturing Credit

## Program Summary

- Goal is to grow U.S. domestic manufacturing of renewable & efficiency technologies
- $2.3bn for 30% tax credits of capital costs
- IRS as lead; EERE as subcontractor
- Program due 180 days after ARRA

## Covered Technologies

| | |
|---|---|
| Solar | CCS |
| Wind | Energy Conservation |
| Geothermal | Vehicle storage |
| Microturbines | Plug-in electric drive |
| Fuel cells | Other renewables |

… and any other renewable property

…or as determined by the Secretary

## Selection criteria

- Reasonable expectation of commercial viability
- Domestic job creation
- Potential for technological innovation & commercial deployment
- Net impact in avoiding or reducing GHG emission or avoiding or reducing air pollution
- Lowest levelized costs of generating, storing or reducing consumption of electricity
- Lowest levelized cost of reducing greenhouse gas emissions