



**Jennifer Gerbi**  
**Associate Director for Technology**

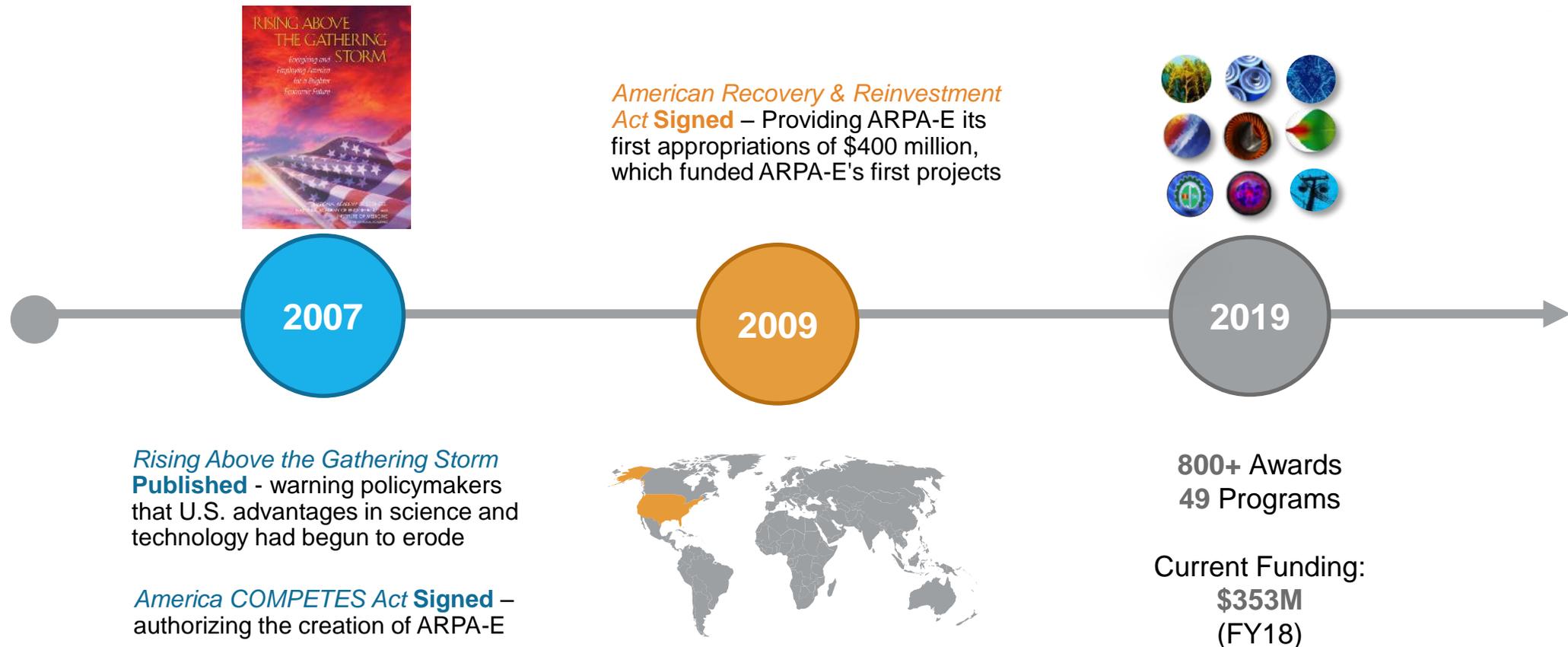
**ARPA-E**

**Ultrahigh Temperature Materials Workshop for Energy Applications**

**Nov 21-22, 2019, Seattle, WA**

# History of ARPA-E

In 2007, The National Academies recommended Congress establish an Advanced Research Projects Agency within the U.S. Department of Energy to fund advanced energy R&D.



# ARPA-E Mission

**Mission:** To overcome long-term and high-risk technological barriers in the development of energy tech

**Ensure U.S. Technological Lead & U.S. Economic and Energy Security**

*What problem should be solved?*

*What should the solution look like?*



**REDUCE  
IMPORTS**



**IMPROVE  
EFFICIENCY**



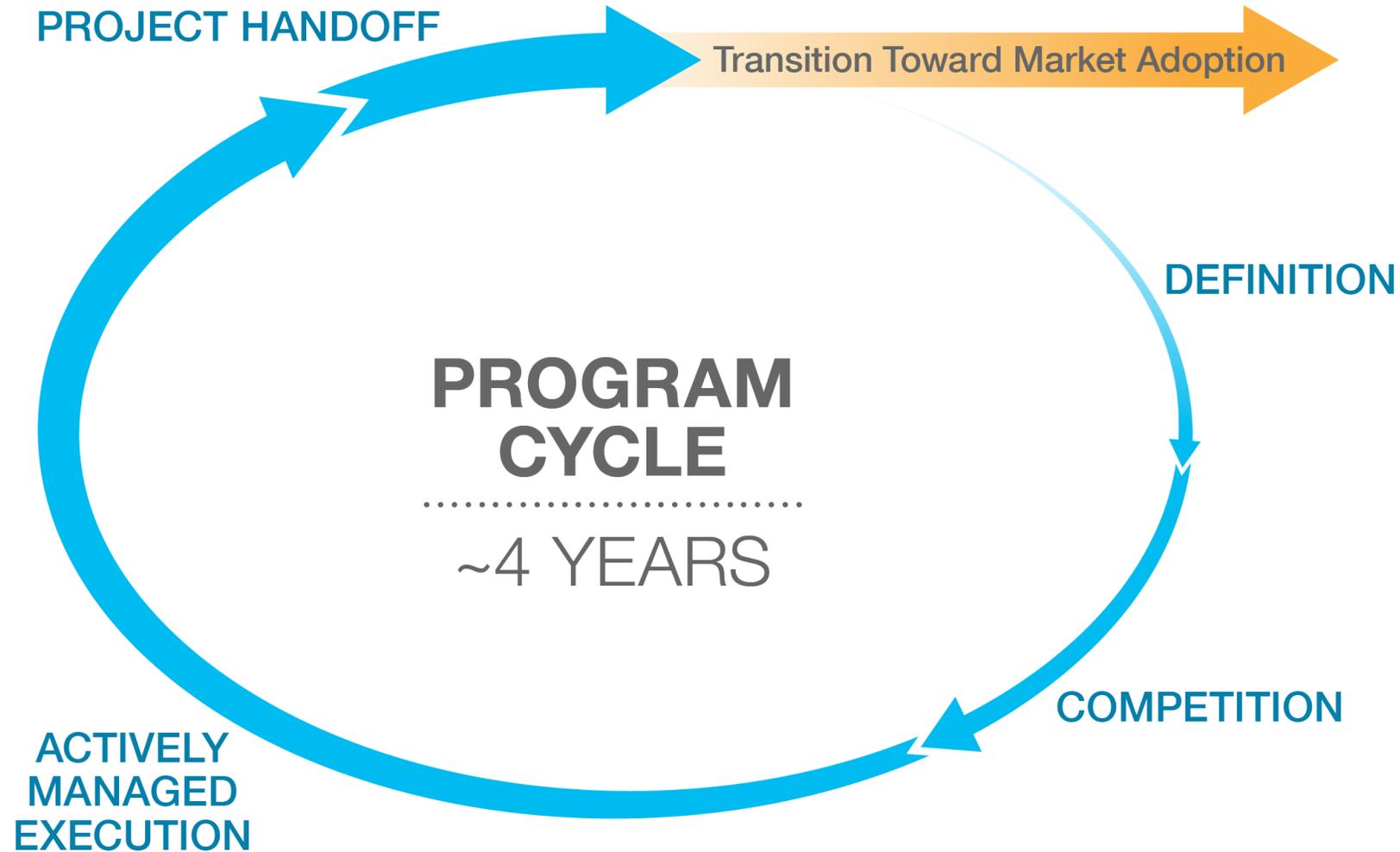
**REDUCE  
EMISSIONS**



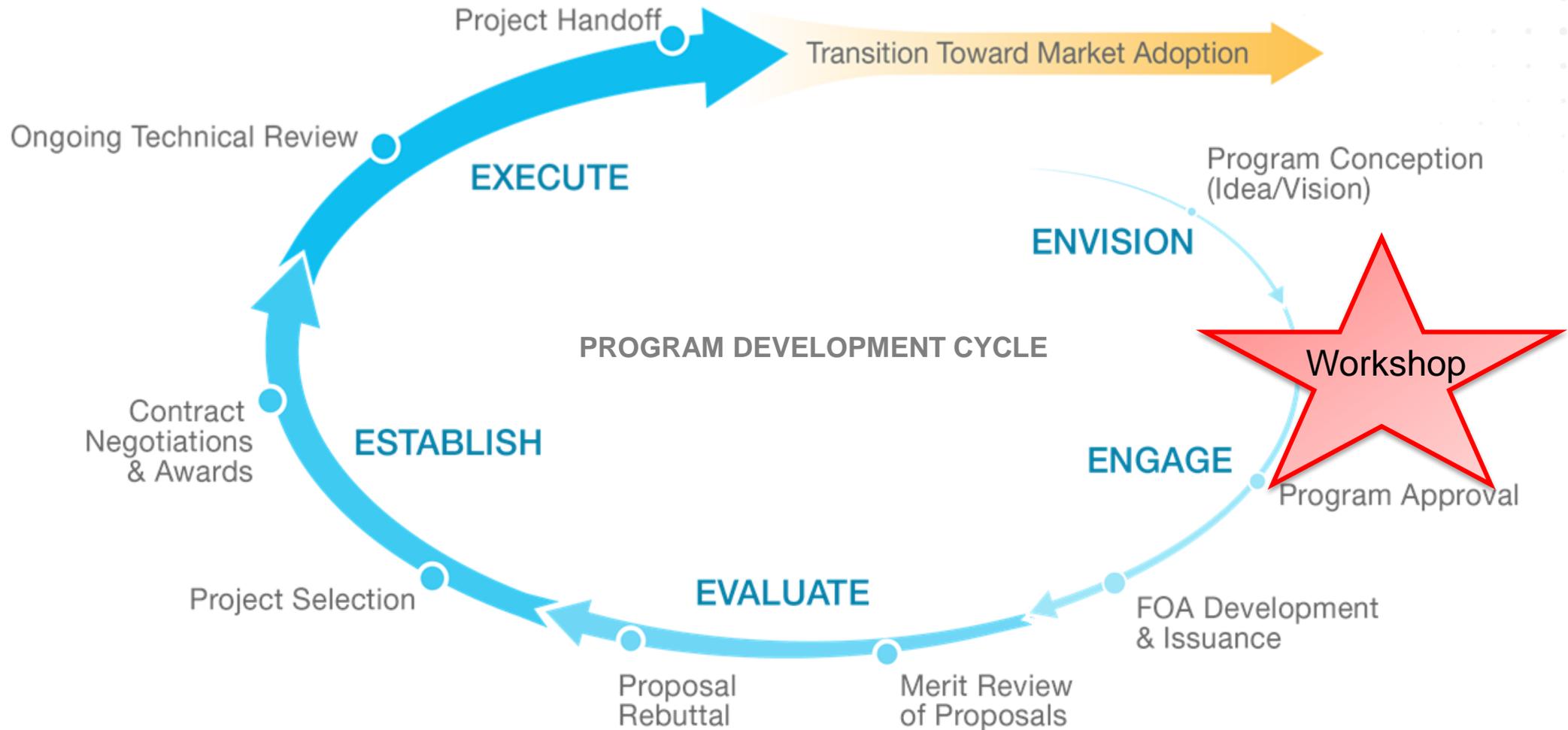
If it works...

*will it matter?*

# Program Lifecycle: Driven by Program Directors



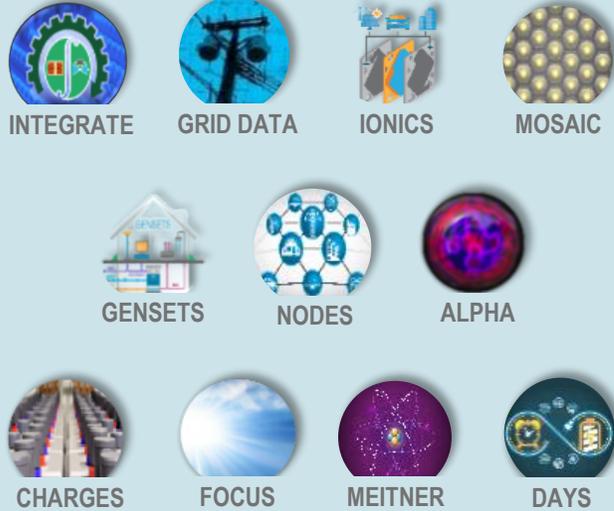
# Why are we here today?



# ARPA-E Program Portfolio

Active

## ELECTRICITY GENERATION & DELIVERY



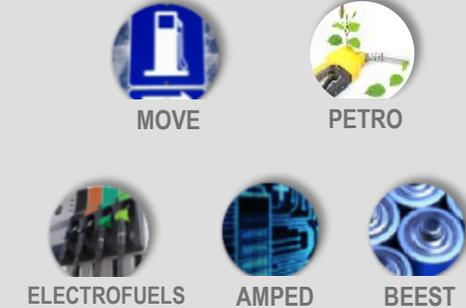
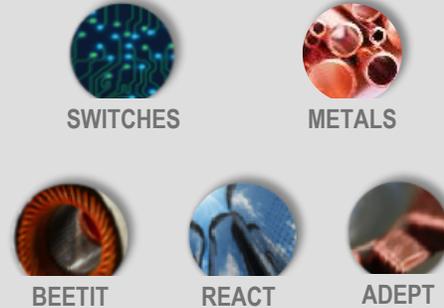
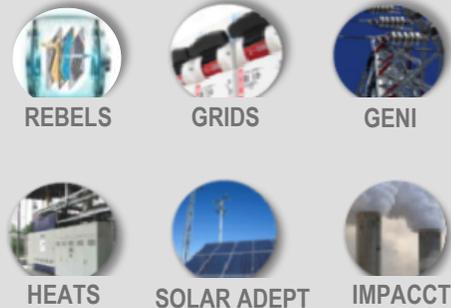
## EFFICIENCY



## TRANSPORTATION



Alumni



OPEN 2009, 2012, 2015 & 2018 Solicitations  
Complement Focused Programs

# What Makes an ARPA-E Project?



## IMPACT

- ▶ High **impact** on ARPA-E mission areas
- ▶ Credible path to market
- ▶ Large commercial application



## TRANSFORM

- ▶ **Challenges what is possible**
- ▶ **Disrupts existing learning curves**
- ▶ **Leaps beyond today's technologies**



## BRIDGE

- ▶ Translates science into breakthrough technology
- ▶ Not researched or funded elsewhere
- ▶ **Catalyzes** new interest and investment



## TEAM

- ▶ Comprised of best-in-class people
- ▶ Cross-disciplinary skill sets
- ▶ Translation oriented

# ARPA-E Impact Indicators

Since 2009  
ARPA-E has  
provided

**\$2 billion**

in R&D funding to  
more than **800 projects**



**145 Projects** have  
attracted more than

**\$2.9 billion**

in private-sector follow-on funding



**76 projects**

have formed  
**new  
companies**



**131 projects**

have **partnered**  
**with other**  
**government**  
**agencies**  
for further  
development



**2,489**

peer-reviewed  
**journal articles**  
from ARPA-E  
projects



**346 patents**

issued by U.S.  
Patent and  
Trademark Office



# ARPA-E Could be the Hallmark of Your Career

## PROGRAM DIRECTOR



- ✓ Program development
- ✓ Active project management
- ✓ Thought leadership
- ✓ Explore new technical areas

## TECHNOLOGY-TO-MARKET ADVISOR



- ✓ Business development
- ✓ Technical marketing
- ✓ Techno-economic analyses
- ✓ Stakeholder outreach

## FELLOW



- ✓ Independent energy technology development
- ✓ Program Director support
- ✓ Organizational support



CONTRIBUTE TO A  
BETTER ENERGY  
FUTURE



COLLABORATE WITH  
OTHER EXPERTS

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