Jennifer Gerbi
Associate Director for Technology

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.

- *Rising Above the Gathering Storm* Published - warning policymakers that U.S. advantages in science and technology had begun to erode

- *America COMPETES Act* Signed – authorizing the creation of ARPA-E

- *American Recovery & Reinvestment Act Signed* – Providing ARPA-E its first appropriations of $400 million, which funded ARPA-E’s first projects

- 800+ Awards
- 49 Programs
- Current Funding: $353M (FY18)
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

REDUCE IMPORTS  IMPROVE EFFICIENCY  REDUCE EMISSIONS
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
If it works…

will it matter?
Technology Acceleration Model

Program Development Cycle

Envision

Program Conception (Idea/Vision)

Transition Toward Market Adoption

Engage

Program Approval

Establish

Contract Negotiations & Awards

Project Selection

Evaluate

Proposal Rebuttal

Merit Review of Proposals

Execute

Project Handoff

Ongoing Technical Review

Workshop

FOA Development & Issuance

arpa.e

Changing What's Possible
Tech To Market Approach

SCOPE
Provide strategic market insights necessary to create innovative, commercially relevant programs

MANAGE
Manage project teams’ T2M efforts through T2M plans and jointly developed milestones

ADVISE
Support project teams with skills & knowledge to align technology with market needs

PARTNERSHIPS
Engage third-party investors and partners to support technology development towards the market
### ARPA-E Program Portfolio

**ELECTRICITY GENERATION & DELIVERY**
- INTEGRATE
- GRID DATA
- IONICS
- MOSAIC
- GENSETS
- NODES
- ALPHA
- CHARGES
- FOCUS
- MEITNER
- DAYS
- REBELS
- GRIDS
- GENI
- HEATS
- SOLAR ADEPT
- IMPACCT

**EFFICIENCY**
- SENSOR
- CIRCUITS
- PNDIODES
- ENLITENED
- SHIELD
- ROOTS
- BREAKERS
- MONITOR
- ARID
- DELTA
- HITEMMP
- SWITCHES
- METALS
- BEETIT
- REACT
- ADEPT
- ELECTROFUELS
- AMPED
- BEEST

**TRANSPORTATION**
- MARINER
- REFUEL
- NEXTCAR
- TRANSNET
- TERRA
- RANGE
- REMOTE
- MOVE
- PETRO

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Complement Focused Programs
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

As of March 2019
ARPA-E Could be the Hallmark of Your Career

Learn more and apply:
www.arpa-e.energy.gov/jobs