An Introduction to Interacting with ARPA-E

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ASEE ERC
ARPA-E Mission

Catalyze the development of transformational, high-impact energy technologies

Reduce Energy-Related Emissions
Reduce Energy Imports
Improve Energy Efficiency

Ensure the U.S. maintains a lead in the development and deployment of advanced technologies
Evolution of ARPA-E

- **2007**: America COMPETES Act Published
- **2009**: American Recovery & Reinvestment Act Signed
- **2010**: Rising Above the Gathering Storm Published
- **2011**: America COMPETES Reauthorization Signed
- **2012**
- **2013**
- **2014**
- **2015**
- **2016**: 500+ Awards Announced

Programs To Date:
- **2007**: 1
- **2009**: 7
- **2011**: 12
- **2012**: 16
- **2013**: 20
- **2014**: 23
- **2015**: 32
- **2016**: 40

Funding:
- **2009 (Recovery Act)**: $400 Million
- **2010 (FY2011)**: $180 Million
- **2011 (FY2012)**: $275 Million
- **2012 (FY2013)**: $251 Million
- **2013 (FY2014)**: $280 Million
- **2014 (FY2015)**: $280 Million
- **2015 (FY2016)**: $291 Million
Creating New Learning Curves
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
Technology Acceleration Model

PROGRAM CYCLE

~4 YEARS

PROJECT HANDOFF

Transition Toward Market Adoption

DEFINITION

COMPETITION

ACTIVELY MANAGED EXECUTION
# Focused Program Portfolio

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*2010 - 2012*  
*2013-2014*  
*2015*  
*2016*
OPEN 2015: 41 Projects, 21 States, 9 Areas

3 Transportation Vehicles
3 Transportation Storage
6 Transportation Fuels
3 Building Efficiency
7 Resource Efficiency
6 Distributed Generation
5 Electricity Storage
4 Grid
4 Manufacturing Efficiency
Measuring ARPA-E’s Success

MOVING TECHNOLOGY TOWARD MARKET
- Partnerships with Other Government Agencies
- Licensing/Acquisition by an Established Firm
- Licensing/Acquisition Resulting in a Spinoff
- Private-Sector Funding
- Growth of Existing Company (e.g., Organic Growth)

BREAKTHROUGH ACHIEVEMENTS
- Patents
- Publications

OPERATIONAL EXCELLENCE
- Expedited program development and project selection
- Aggressive performance metrics
ARPA-E Resources

- ARPA-E UNIVERSITY
- REGIONAL RESOURCES
- ANNUAL ENERGY INNOVATION SUMMIT
- ACTIVE PROGRAM MANAGEMENT
- ARPA-E ENGAGE
Unparalleled Networking  
Highly Selected Showcase  
Inspiring Keynotes

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Mar. 12 - 14, 2018  |  Washington, DC
Why Work at ARPA-E?

**CONTRIBUTE TO A BETTER ENERGY FUTURE**
Work towards creating a more efficient, more secure energy future

**WORK IN DIVERSE TECH AREAS**
At ARPA-E you’ll have the opportunity to work with a diversity of energy issues and explore new fields

**JOIN OUR INNOVATIVE STARTUP-LIKE CULTURE**
ARPA-E is a fast-paced, action-oriented Agency

**COLLABORATE WITH OTHER EXPERTS**
Work with other experts from many different disciplines who are devoted to creating a better energy future

If you are interested in applying or learning more, please email arpa-e-jobs@hq.doe.gov.
ARPA-E Recruitment Opportunities

ARPA-E IS CURRENTLY HIRING NEW PROGRAM DIRECTORS — What makes an ideal candidate?

Roles, Responsibilities, and Attributes

Program Development
• Perform technical deep dive to solicit input from multiple stakeholders in the R&D community
• Present and defend program concept in climate of constructive criticism

Active Project Management
• Actively manage portfolio projects from merit reviews through project completion
• Extensive “hands-on” work with awardees

Thought Leadership
• Represents ARPA-E as a thought leader in the program area

Qualifications
• R&D experience; intellectual integrity and flexibility; technical breadth; commitment to energy; communication skills; leadership; and team management
• Confidence, but not arrogance

If you are interested in applying or learning more, please contact a current ARPA-E Program Director or email arpa-e-jobs@hq.doe.gov.
ARPA-E Recruitment Opportunities

ARPA-E IS CURRENTLY HIRING NEW TECHNOLOGY-TO-MARKET ADVISORS — What makes an ideal candidate?

Roles, Responsibilities, and Attributes

Business Development and Technical Marketing
- Advise project teams on market, strategy, business planning, IP, product development, and supply chain considerations
- Target public and private follow-on funding sources

Techno-Economic Analyses
- Perform techno-economic analyses to inform new programs and funded projects

Stakeholder Outreach
- Represents ARPA-E to a range of stakeholders and represents the Agency as a thought leader in the program area

Qualifications
- 5+ years of work experience, including technology, research, and business experience; advanced degree; strong technical background; superior analytic skills; strong written and oral communication skills; demonstrated interest/expertise in energy and energy technologies

If you are interested in applying or learning more, please contact a current ARPA-E Technology-to-Market Advisor or email arpa-e-jobs@hq.doe.gov.
ARPA-E Recruitment Opportunities

ARPA-E IS CURRENTLY HIRING NEW FELLOWS — What makes an ideal candidate?

Roles, Responsibilities, and Attributes

Independent Energy Technology Development
- Perform primary technical and economic analyses to identify high-impact technologies for the Agency
- Learn from and brainstorm with experts in a variety of fields
- Publish original research papers and reviews

Program Director Support
- Help develop future programs through technical analysis, discussions, debate and workshops
- Support existing programs through technical and economic analyses and on-site project visits

Organizational Support
- Contribute to the strategic direction and vision of the Agency
- Review proposals and funding opportunities

Qualifications
- Ph.D. in science or engineering; strong analytical, research, and communication skills; ability to initiate independent projects; passion to change the world through energy technology research; U.S. citizenship

If you are interested in applying or learning more, please contact a current ARPA-E Fellow or email arpa-e-jobs@hq.doe.gov.
Enhance Technological Lead in Advanced Energy Technologies

Ensure U.S. Energy and Economic Security

Develop Clean, Efficient, Reliable Energy Systems