

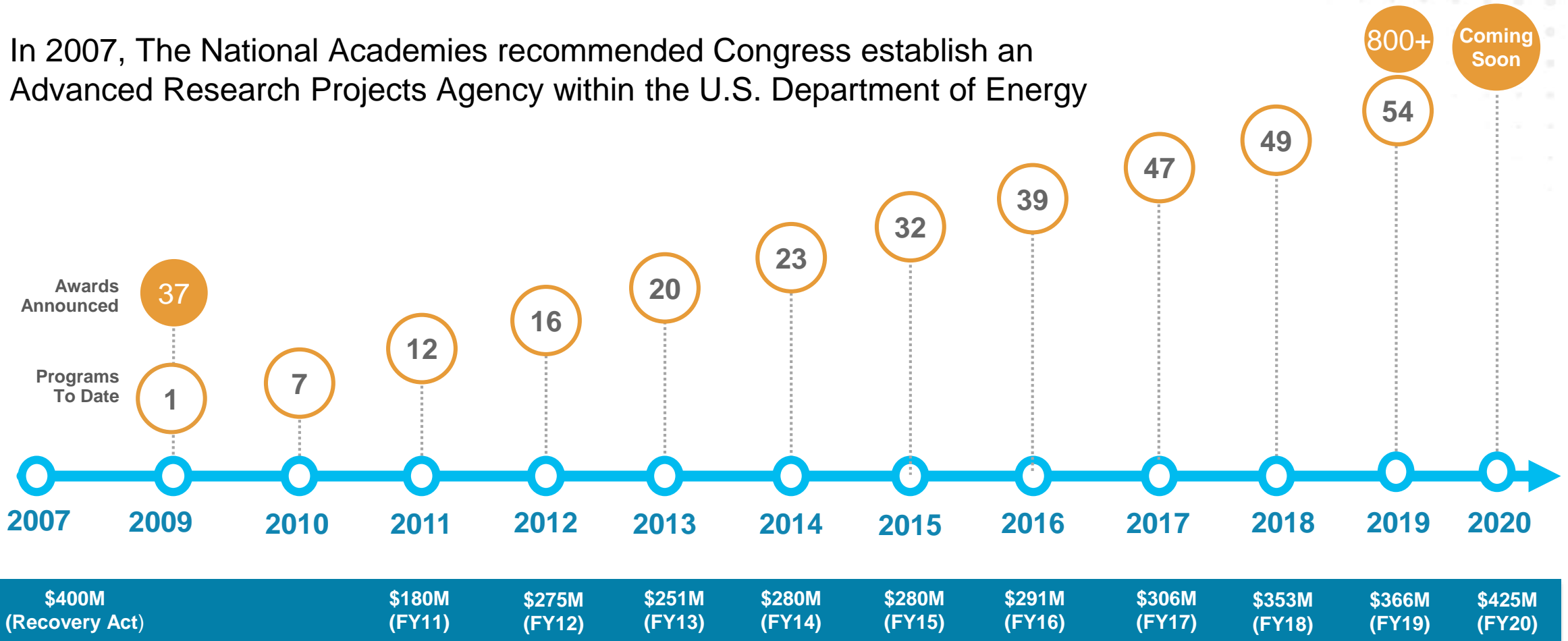
ARPA-E Overview

Dr. James Zahler, Associate Director of Technology-to-Market
ARPA-E



History of ARPA-E

In 2007, The National Academies recommended Congress establish an Advanced Research Projects Agency within the U.S. Department of Energy

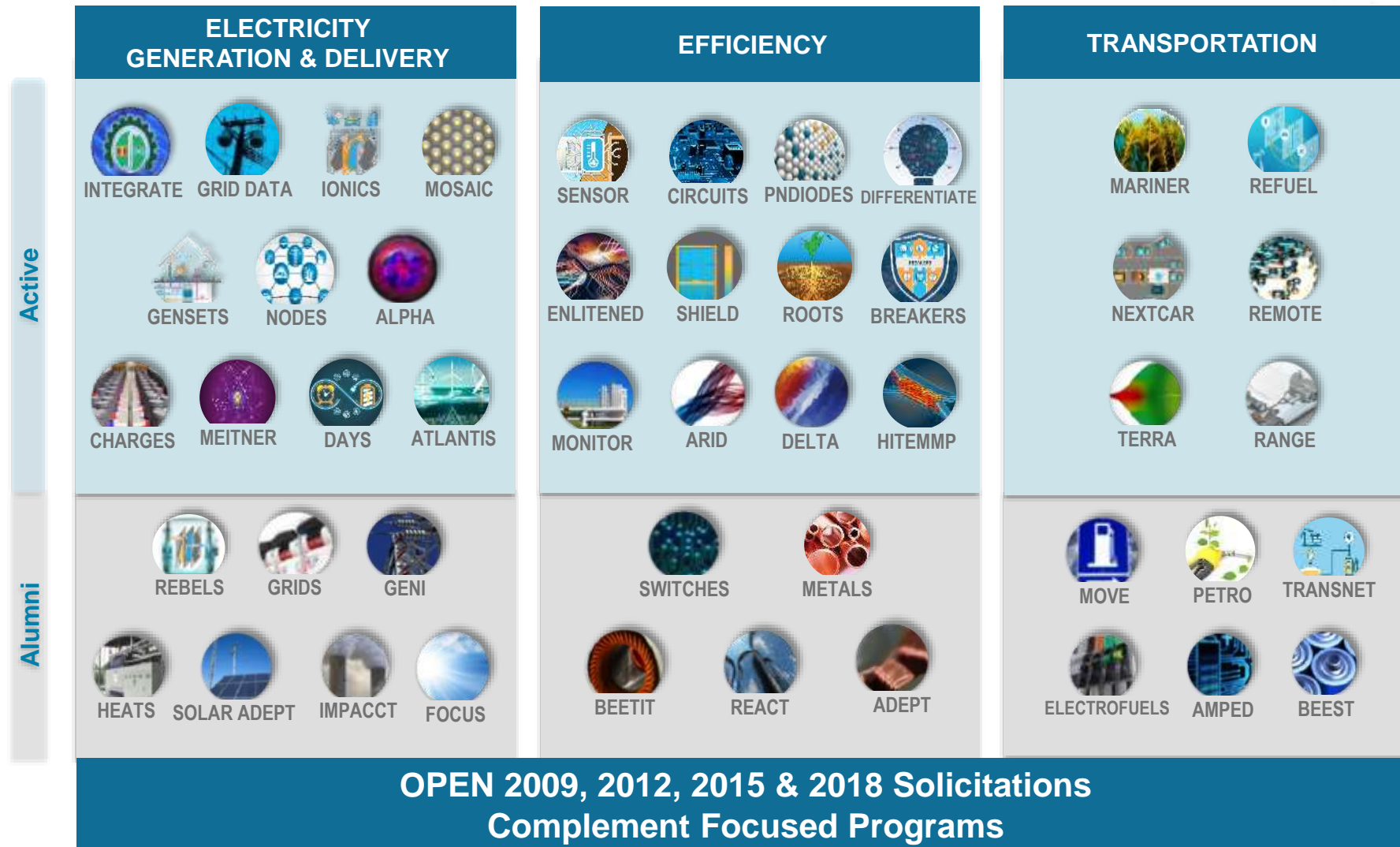


ARPA-E Mission

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



ARPA-E Program Portfolio

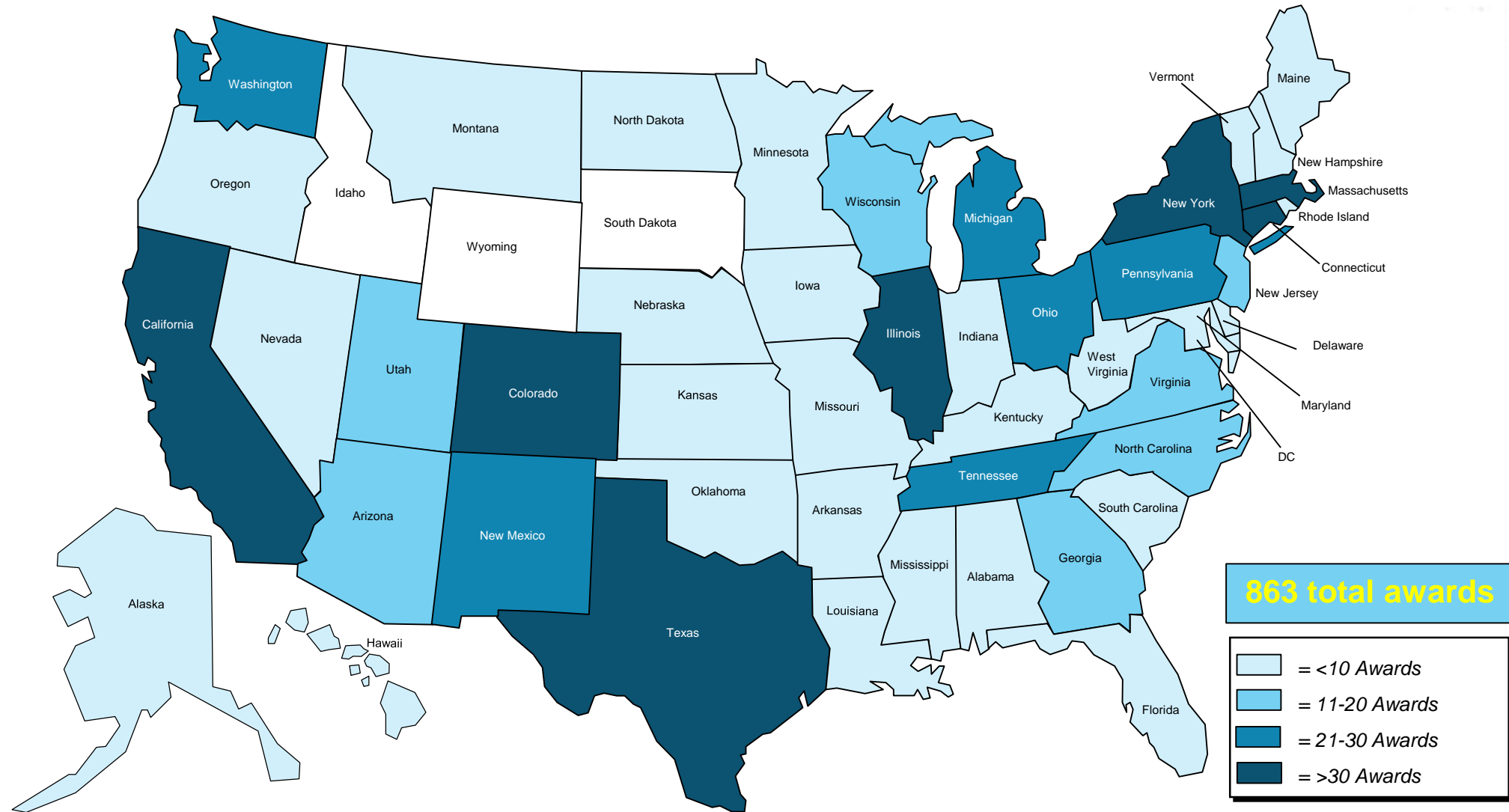


ARPA-E Current and Future Program Areas

Current Programs	Total Funding
Bioenergy	\$246M
Building Efficiency	\$274M
Electrical Efficiency	\$128M
Grid	\$367M
Industrial	\$107M
Power Generation: Fossil/Nuclear	\$347M
Power Generation: Renewable	\$249M
Transportation	\$441M

Future Programs (FY20)	Program
Nuclear Energy – modeling	GEMINA (\$35M)
Carbon Capture and storage	FLECCS (\$43M), SMARTFARM (\$20M)
Electrification of Aviation powertrain and engine systems	REEACH (\$20M), ASCEND (\$35M)
Commercial Fusion energy technology	BETHE (\$30M), TBD
Follow-on funding for ARPA-E Technologies	SCALEUP (\$50M)
Bioenergy	TBD
Waste-to-Energy	TBD
Rare Earth Materials Extraction	TBD
Pipeline Reconstructing	TBD

2020 ARPA-E Awards by State





If it works...

will it matter?

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



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***



U.S. DEPARTMENT OF
ENERGY

<https://arpa-e.energy.gov>

james.zahler@hq.doe.gov