



DOE's Loan Programs Office

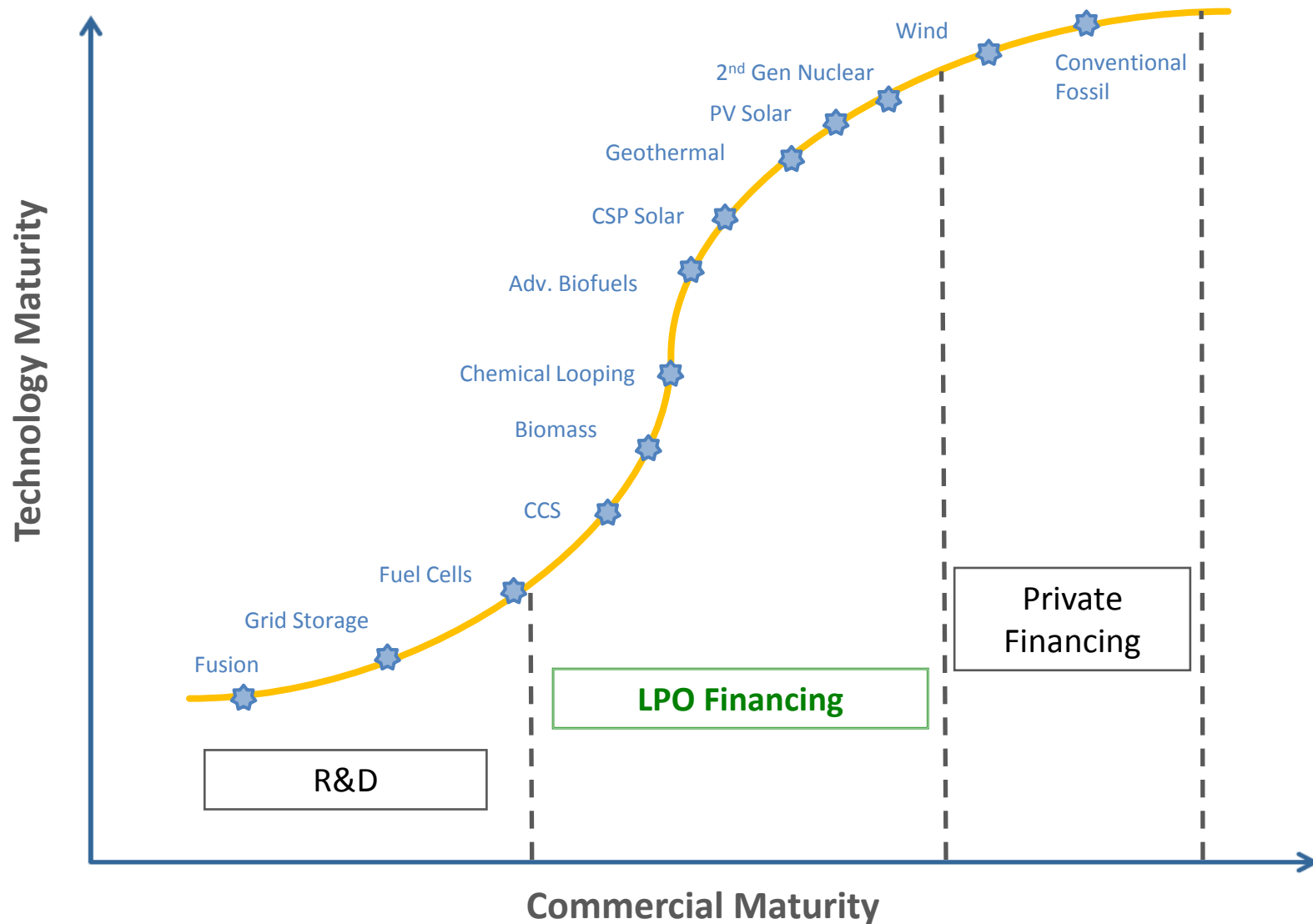
Presentation to the
POWER-GEN Financial Forum
November 2013



U.S. DEPARTMENT OF
ENERGY

LOAN PROGRAMS OFFICE

LPO Supports Innovative, Commercial-Scale Clean Energy Technology



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LPO Has a Broad Portfolio of Successful Projects Nationwide



One of the world's
largest wind farms
to date.



**Retooled three all-electric
vehicle manufacturing facilities in
the U.S.: [Tesla](#), [Nissan](#) & [Ford](#)**



One of the country's first
**commercial-scale cellulosic
ethanol plants.**



The largest utility scale
**photovoltaic generation
facility to date.**



The largest concentrated
**solar power plants
in the world.**



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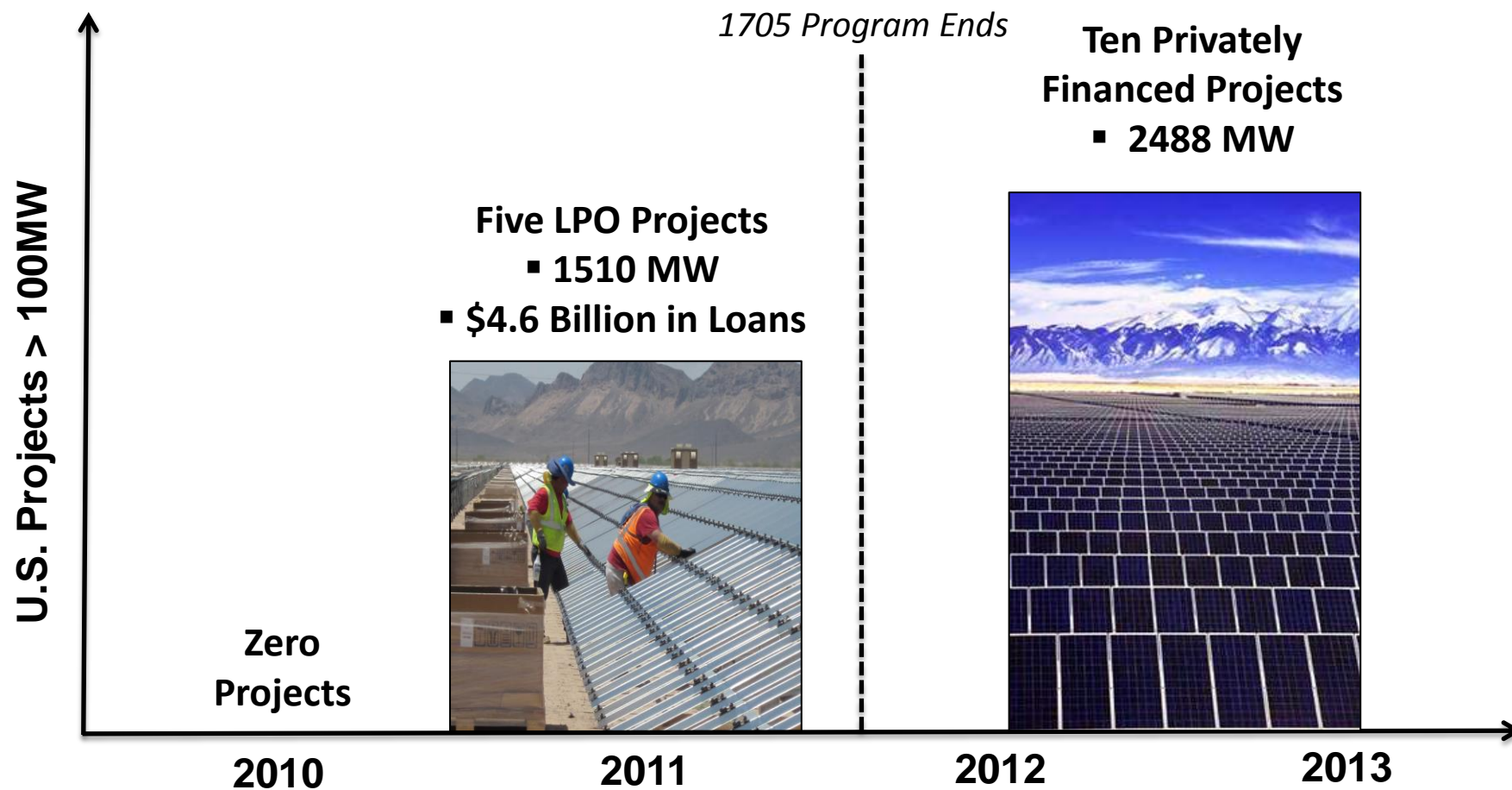
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The LPO Portfolio Has Strong Financial Performance

NUMBER OF PROJECTS	MORE THAN 30
TOTAL LOAN / LOAN GUARANTEE AMOUNT COMMITTED	MORE THAN \$32 BILLION
DISBURSED	\$18.5 BILLION
LOAN LOSS RESERVE ESTABLISHED BY CONGRESS	\$10 BILLION
LOSSES AS % OF TOTAL LOAN AMOUNT	APPROXIMATELY 2%
TOTAL ECONOMIC INVESTMENT LEVERAGED	MORE THAN \$50 BILLION



LPO Launched Utility-Scale Photovoltaic Market in the U.S.



LPO is Deploying 'Nighttime' Solar

LPO is financing some of the world's largest concentrated solar with thermal energy storage facilities



Solana *Arizona*

- Completed in 2013
- 250 MW Concentrated Solar Project
- Six Hours of Thermal Energy Storage
- \$1.45 billion loan guarantee

Tonopah *Nevada*

- 2014 - Expected Completion
- 110 MW Concentrated Solar Project
- Ten Hours of Thermal Energy Storage
- \$737 million loan guarantee

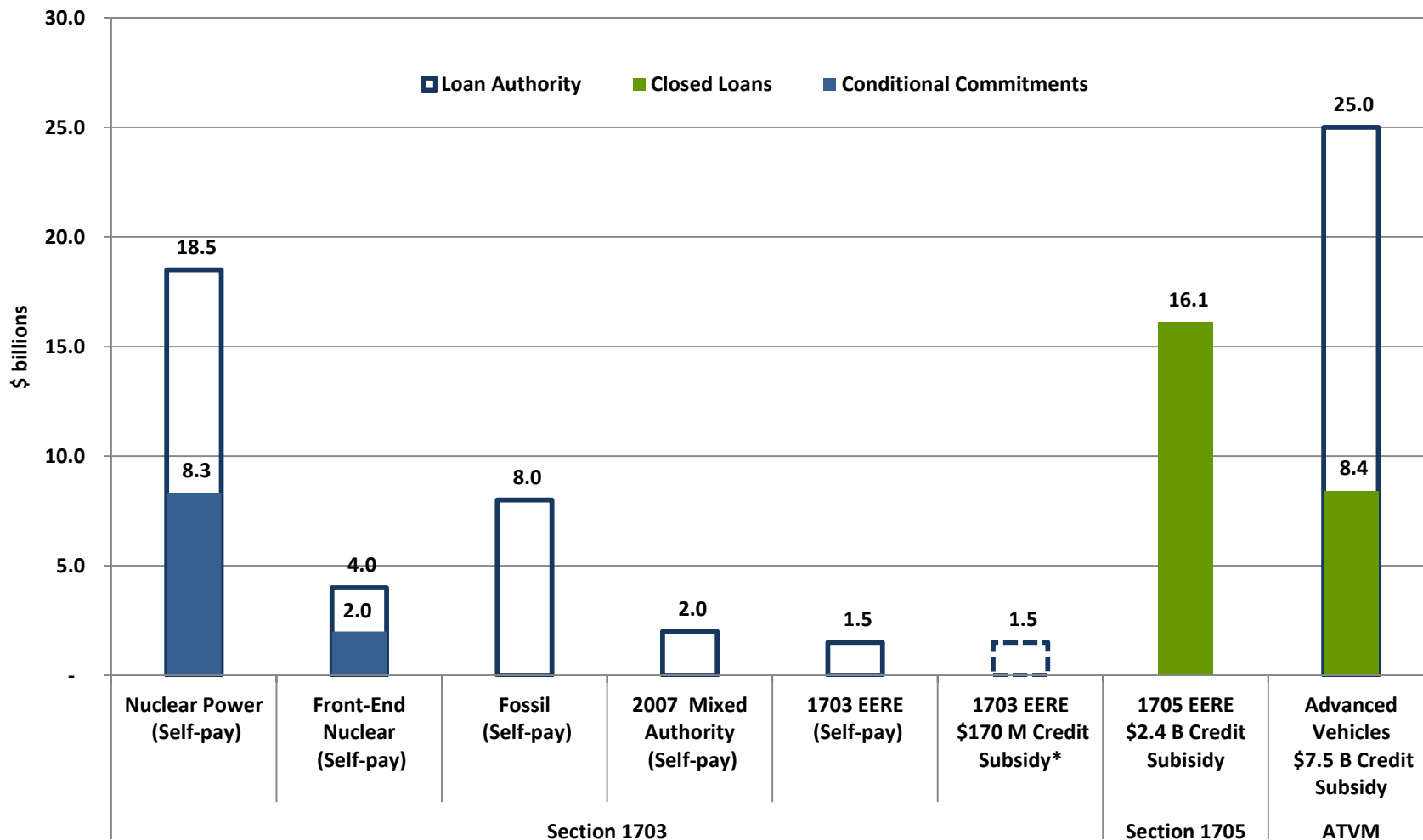


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LPO Has More than \$40 Billion in Remaining Loan Authority



*Imputed loan authority. Actual loan volume will depend on actual credit subsidy rates for projects.



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Next Steps: Advanced Fossil Energy Projects Solicitation



LPO Provides Project Finance Debt Capital

- \$8 Billion in Loan Guarantee Authority for Fossil Energy
- Long-Term Financing Available



What is an Advanced Fossil Energy Project?

- Projects Must Be Innovative, Utilize Fossil Energy
- Reduce Greenhouse Gas Emissions
- Located in U.S. with Reasonable Prospect of Repayment



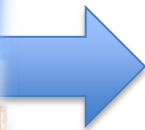
Timeline for Accepting Applications

- Draft Solicitation Published in June 2013
- Final Solicitation Expected Winter 2013
- Applications Accepted When Final Solicitation is Published

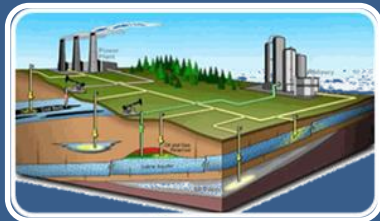


The Advanced Fossil Solicitation Has Broad Applicability

- **Projects May Utilize any Fossil Fuel**
 - Including, but not limited to, coal, oil, natural gas, shale gas, coal bed methane, and methane hydrates.
- **Covers the Full Fossil Fuel Value Chain**
 - Projects can include, but are not limited to, extraction, generation, greenhouse gas removal, and efficiency improvements.
- **Solicitation is Open to a Wide Variety of Applicants**
 - Power plants, mines, refineries, utilities, project developers, and factories
 - Public and Private Sector infrastructure, such as universities, airports, and hospitals
 - Others



The Advanced Fossil Solicitation Covers Four Technology Areas



Carbon Capture

- *Qualifying projects may include, but are not limited to:* CO₂ capture from traditional coal or natural gas electricity generation for permanent geologic storage or utilization in enhanced oil recovery (EOR).



Advanced Resource Development

- *Qualifying projects may include, but are not limited to:* coal-bed methane recovery, underground coal gasification, novel oil and gas drilling, and use of waste gases that are co-produced with oil and natural gas in place of flaring.



Low Carbon Power Systems

- *Qualifying projects may include, but are not limited to:* coal or natural gas oxycombustion, chemical looping or process that isolate fuel from air during combustion, or fuel cells using synthesis gas, natural gas, or hydrogen to convert chemical energy into electricity without combustion.

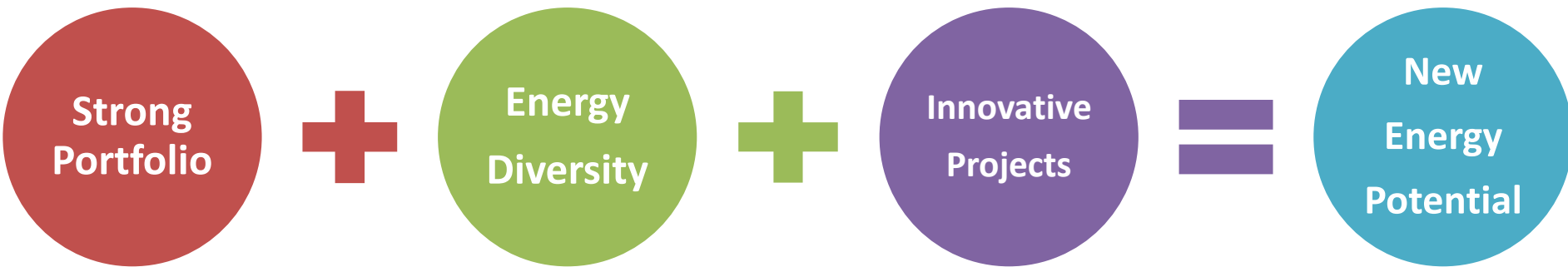


Efficiency Improvements

- *Qualifying projects may include, but are not limited to:* Combined heat and power (CHP) and waste recovery, high-efficiency distributed fossil power systems, such as distributed power, microgrids, and high-temperature materials including superalloys and ceramic refractories.



Final Thought: LPO Can Provide a Bridge for U.S. Energy Innovation



For further information on LPO, please visit: www.loanprograms.energy.gov

