



# DOE's Loan Programs Office

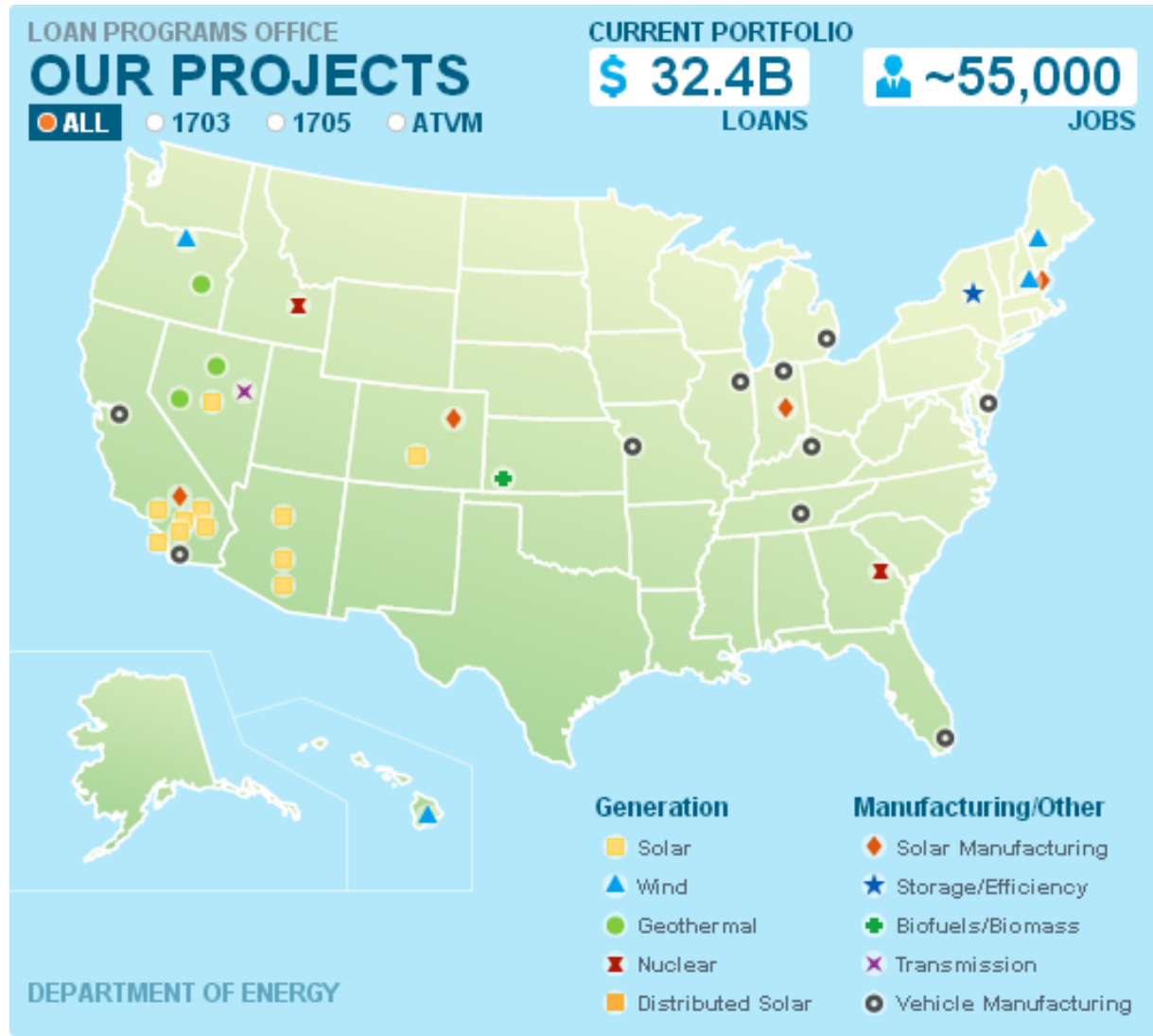
Presentation to the  
United States Energy Association  
December 2013



U.S. DEPARTMENT OF  
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# Loan Programs Office Has a Strong Portfolio of Projects



**Mission:** Accelerate the U.S. commercial deployment of clean energy and advanced vehicle technology

**Strong Portfolio:** More than 30 projects with committed loan value of ~\$32 billion

**Diverse Portfolio:** Loan authority for fossil energy, renewable energy, nuclear, and advanced vehicles

**Solid Performance:** Losses represent ~2% of total loans, loan guarantees, and commitments

*\*The current portfolio includes loans, loan guarantees, and commitments.*

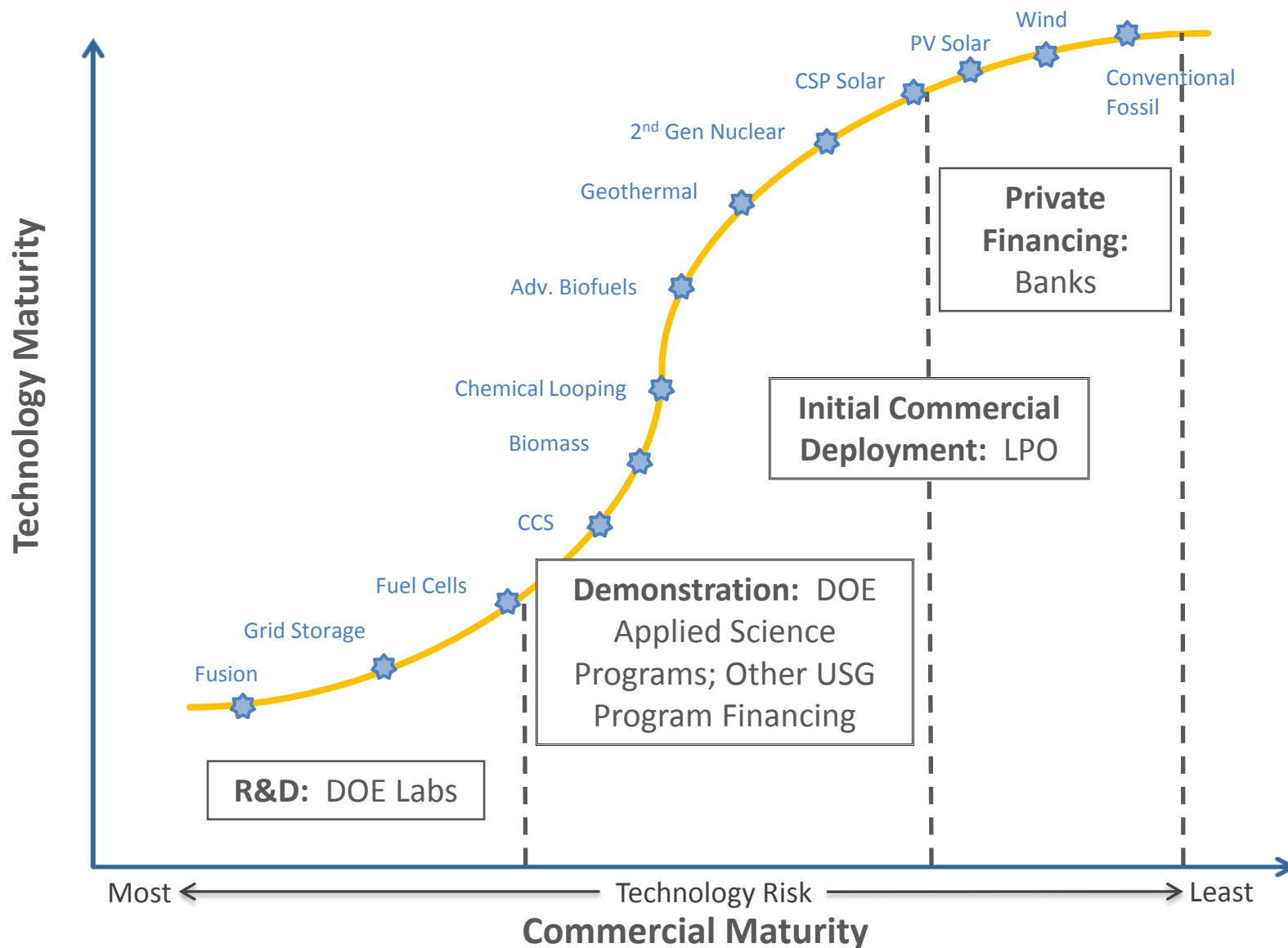


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# LPO Supports Commercialization of Innovative Technologies



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# The LPO Portfolio Has Strong Financial Performance

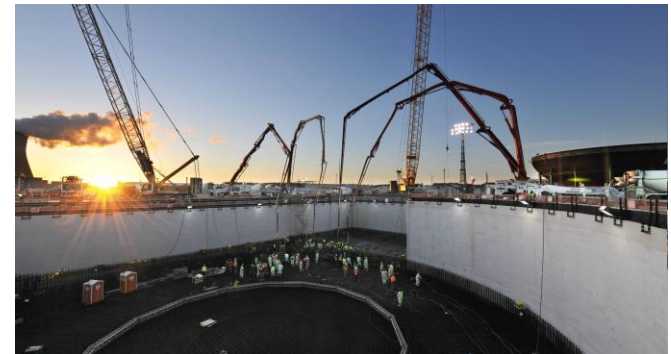
<b>NUMBER OF PROJECTS</b>	<b>MORE THAN 30</b>
<b>TOTAL LOAN / LOAN GUARANTEE AMOUNT COMMITTED</b>	<b>MORE THAN \$32 BILLION</b>
<b>DISBURSED</b>	<b>\$18.5 BILLION</b>
<b>LOAN LOSS RESERVE ESTABLISHED BY CONGRESS</b>	<b>\$10 BILLION</b>
<b>LOSSES AS % OF TOTAL LOAN AMOUNT</b>	<b>APPROXIMATELY 2%</b>
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



# LPO Supports Many of the Largest & Most Innovative U.S. Projects

**LPO is one of the largest project finance team in the world supporting:**

- One of the world's largest wind farms: Shepherds Flat
- Several of the world's largest solar generation facilities and nighttime solar storage systems:
  - Photovoltaic generation: Agua Caliente, Desert Sunlight
  - Large concentrating solar power plants with innovative thermal energy storage: Solana, Solar Reserve Tonopah
  - Largest solar thermal plant: Ivanpah
- Retooled three all-electric vehicle manufacturing facilities: Tesla, Nissan, and Ford
- One of the country's first commercial-scale cellulosic ethanol plants: Abengoa Biomass
- First nuclear power plant to begin construction in the US in the last 30 years: Vogtle

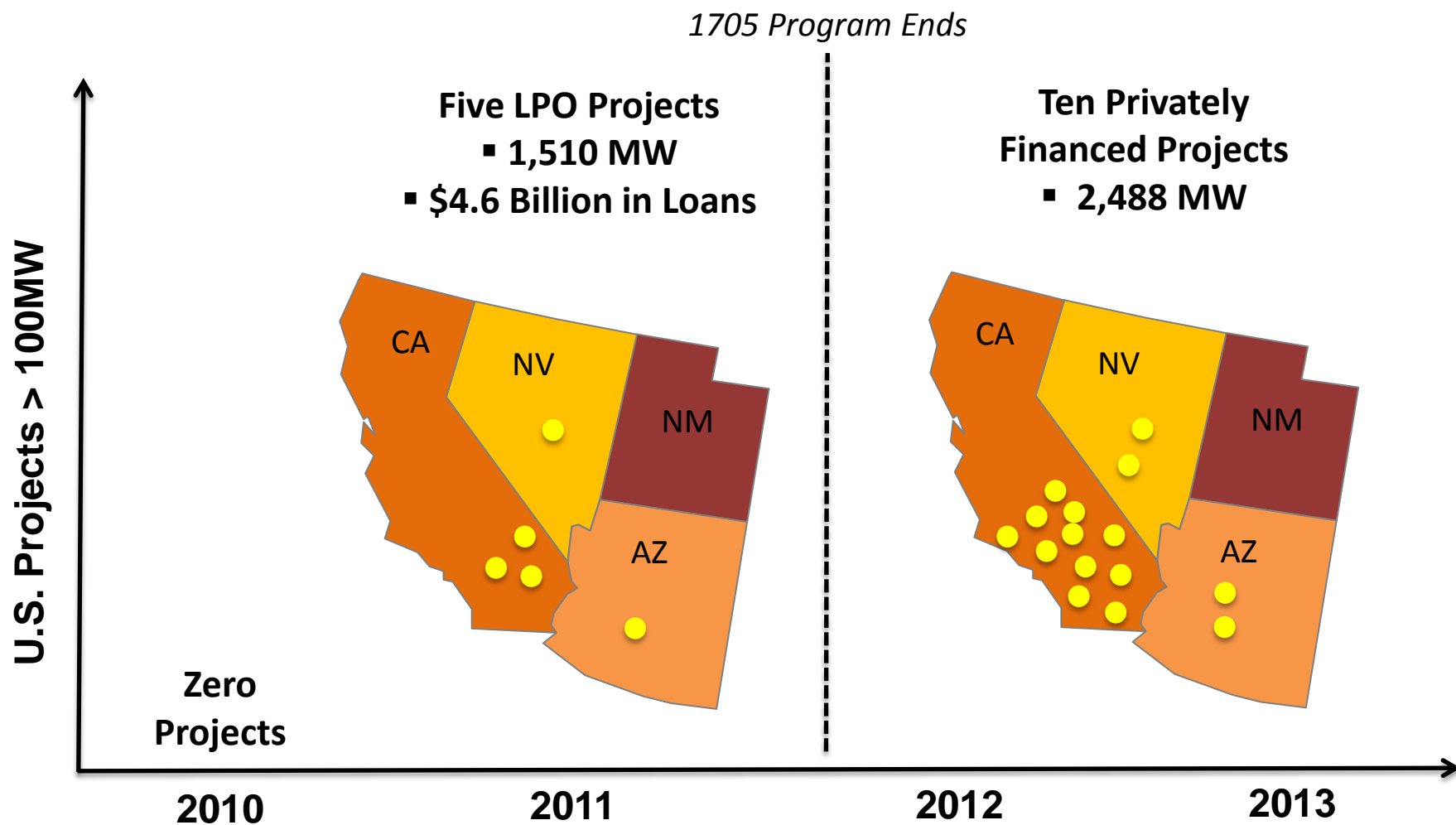


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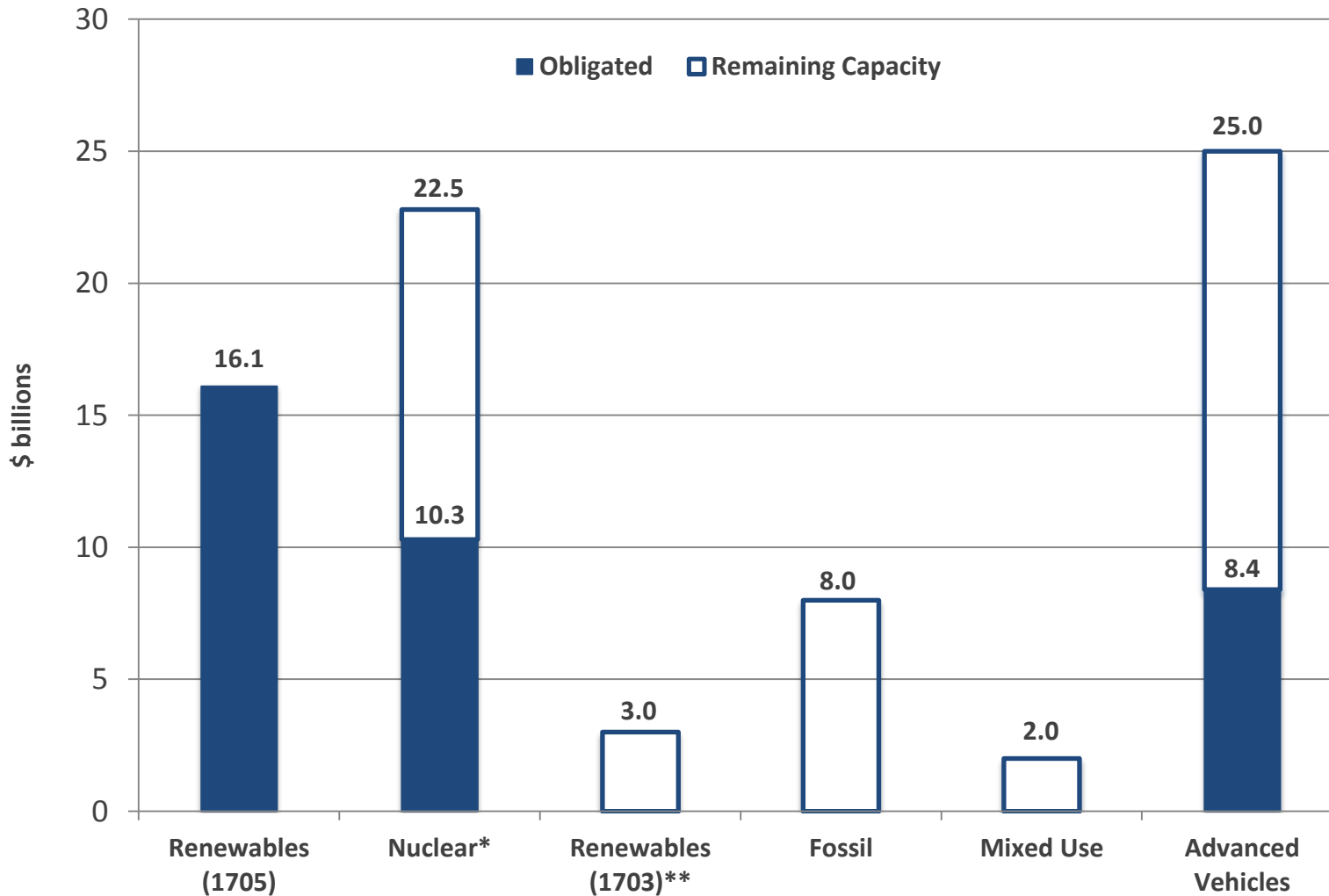
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# LPO Launched Utility-Scale Photovoltaic Market in the U.S.



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



\*Includes nuclear generation and front-end nuclear projects.

\*\*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\*



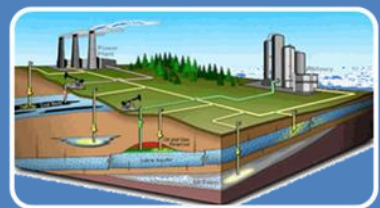
## Advanced Resource Development

- Coal-bed methane recovery
- Novel oil and gas drilling



## Low Carbon Power Systems

- Chemical looping or process that isolate fuel from air during combustion
- Fuel cells which convert chemical energy into electricity without combustion



## Carbon Capture

- CO<sub>2</sub> capture from traditional coal or natural gas electricity generation
- Permanent geologic storage or utilization in enhanced oil recovery (EOR)



## Efficiency Improvements

- Combined heat and power (CHP) and waste recovery
- High-efficiency distributed fossil power systems, and microgrids

*\*Qualifying projects may include but are not limited to the technologies within.*



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



For further information on LPO, please visit: [www.lpo.energy.gov](http://www.lpo.energy.gov)



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