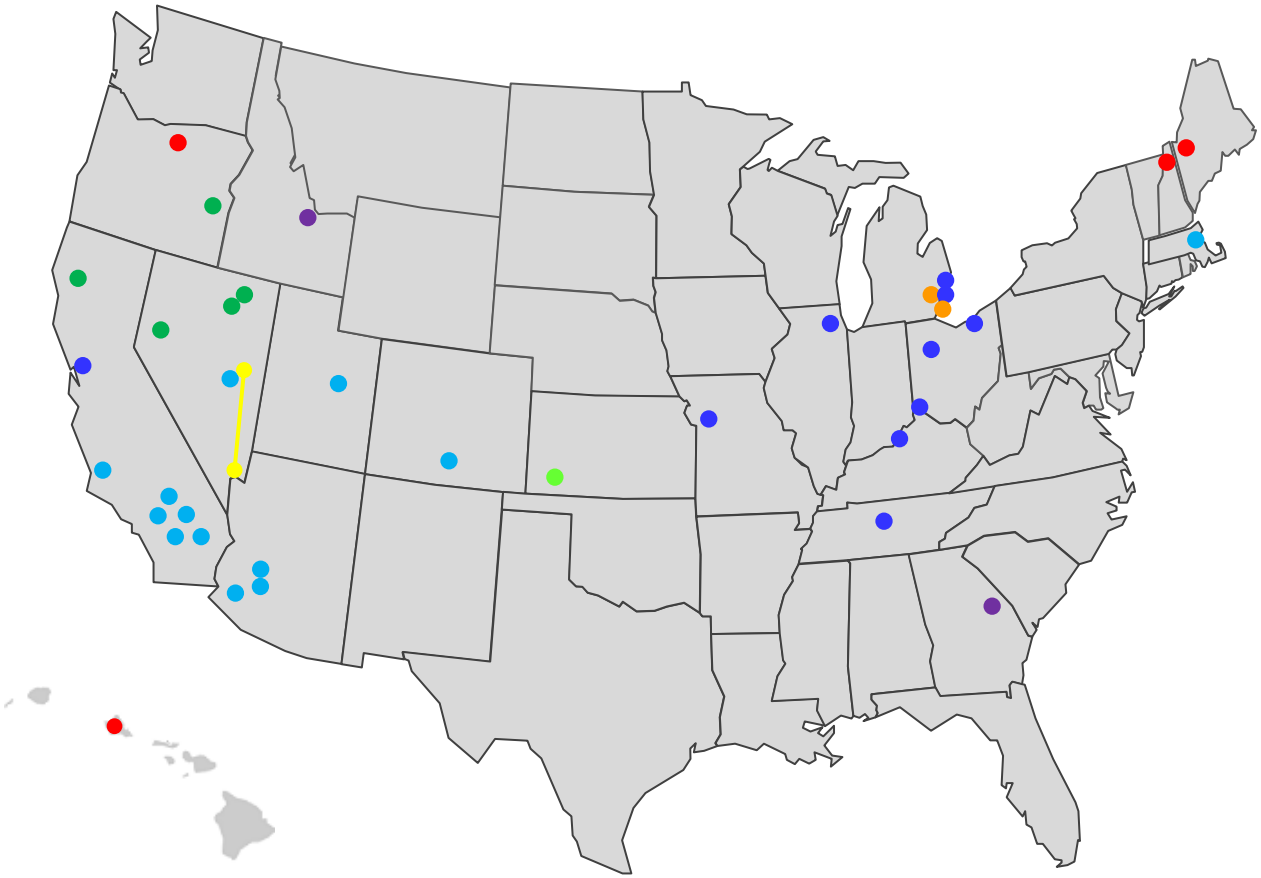
Renewable Energy & Energy Efficiency Projects

Loan Guarantee Solicitation

July 2014

U.S. DEPARTMENT OF ENERGY | LOAN PROGRAMS OFFICE

LPO: The Financing Force for a Clean Energy Economy



- Solar
- Wind
- Geothermal
- Transmission
- Storage & Batteries
- Nuclear
- Biomass
- Powertrains & Advanced Vehicles

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

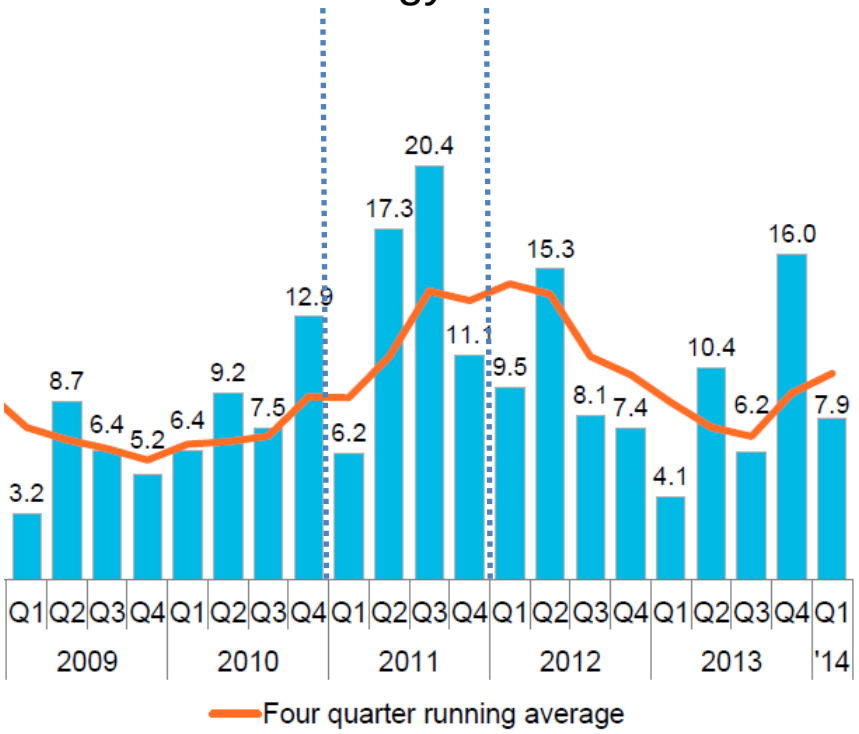
Mission: Accelerate the U.S. commercial deployment of innovative clean energy and advanced vehicle manufacturing.

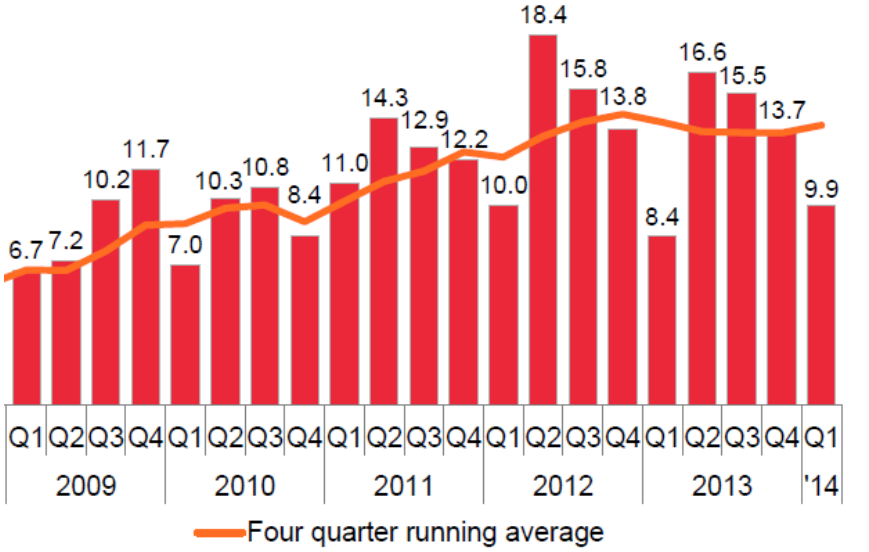
What We Do: Provide project debt for clean energy projects. We also encourage co-lending with commercial lenders.

Who We Are: World class clean energy financing institution based within DOE - one of the largest project finance and clean energy lenders in the U.S.

U.S. Needs to Compete in the Global Clean Energy Race

LPO 1705 Program: **$16 billion** clean energy investment

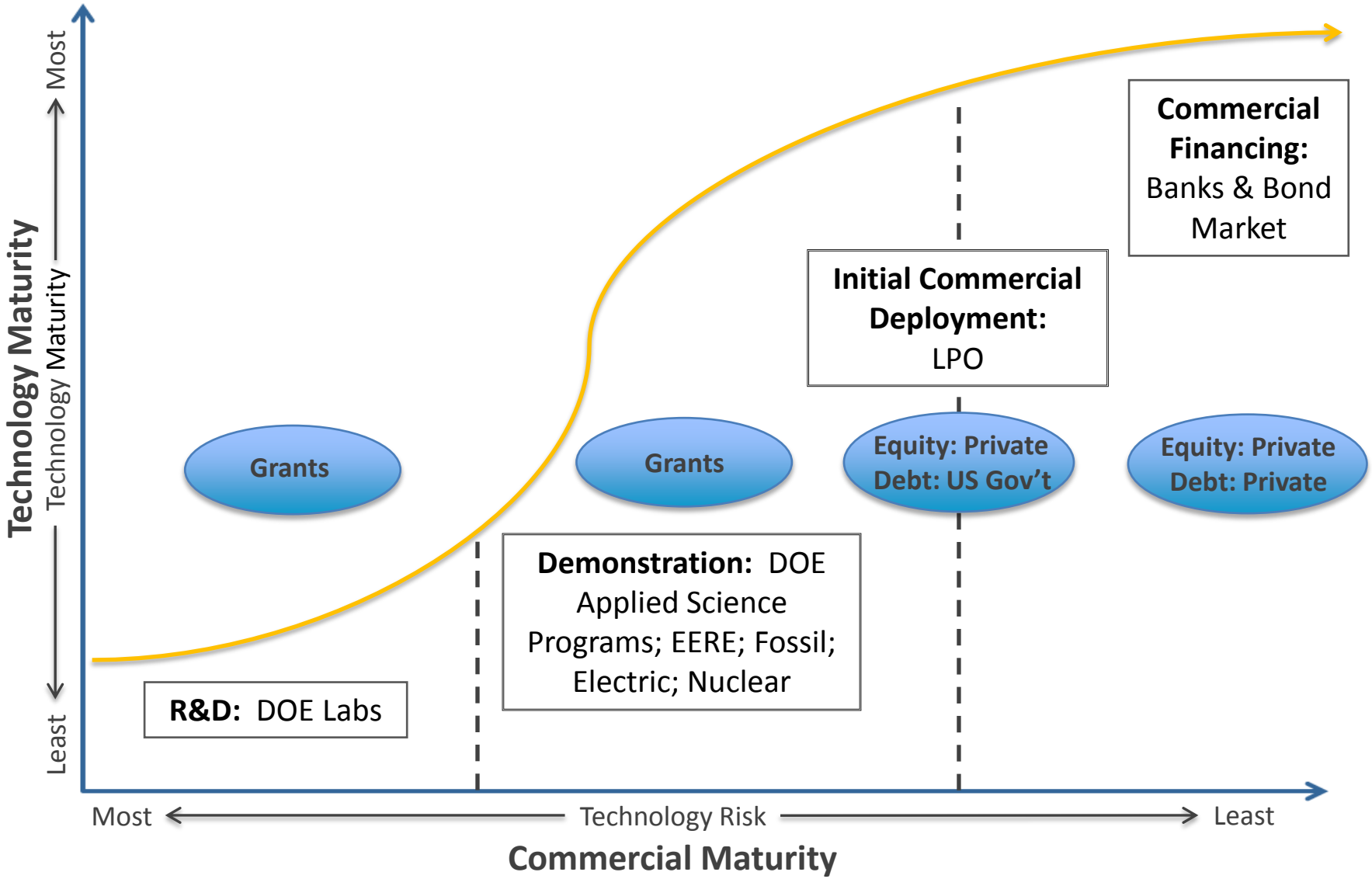




U.S. investment declining

Chinese investment rising

DOE Programs Support the Full Arc of Commercialization



LPO Portfolio Has Strong Financial Performance

NUMBER OF PROJECTS	MORE THAN 30
TOTAL LOAN /LOAN GUARANTEE AMOUNT COMMITTED	MORE THAN $32 BILLION
DISBURSED	$21 BILLION
TOTAL LOAN LOSS RESERVE ESTABLISHED BY CONGRESS: *ATVM:* *1705:* *1703:*	 $7.0 BILLION $2.9 BILLION SELF-PAY
LOSSES AS % OF TOTAL LOAN AMOUNT	APPROXIMATELY 2%
TOTAL ECONOMIC INVESTMENT LEVERAGED	MORE THAN $50 BILLION

LPO Has More than $40 Billion in Remaining Loan Authority

Existing Portfolio
> $30 Billion

Remaining Authority
$41.8 Billion

Advanced Fossil | Mixed Use | Renewable & Efficiency | Nuclear | Advanced Vehicles

LPO Has Financed Deployment of Groundbreaking Projects

UTILITY-SCALE SOLAR

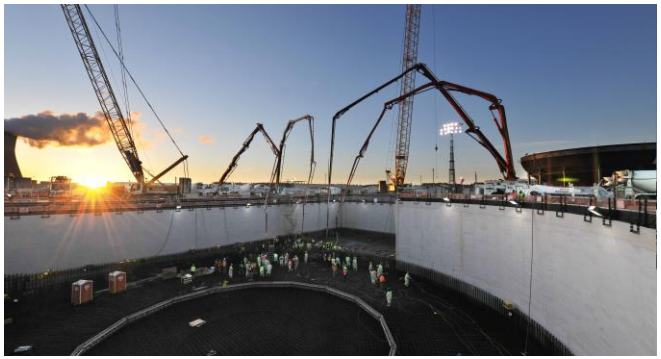
- Some of the world's largest photovoltaic (PV) facilities: Agua Caliente, Desert Sunlight, CVSR, AVSR.
- The world's largest solar thermal plant: Ivanpah.
- Created *"Night-Time Solar"* with world's largest thermal energy storage: Solana, Solar Reserve Tonopah.

ADVANCED VEHICLES: New domestic manufacturing of fuel-efficient and electric vehicles: Ford Motor Company, Nissan North America, & Tesla.

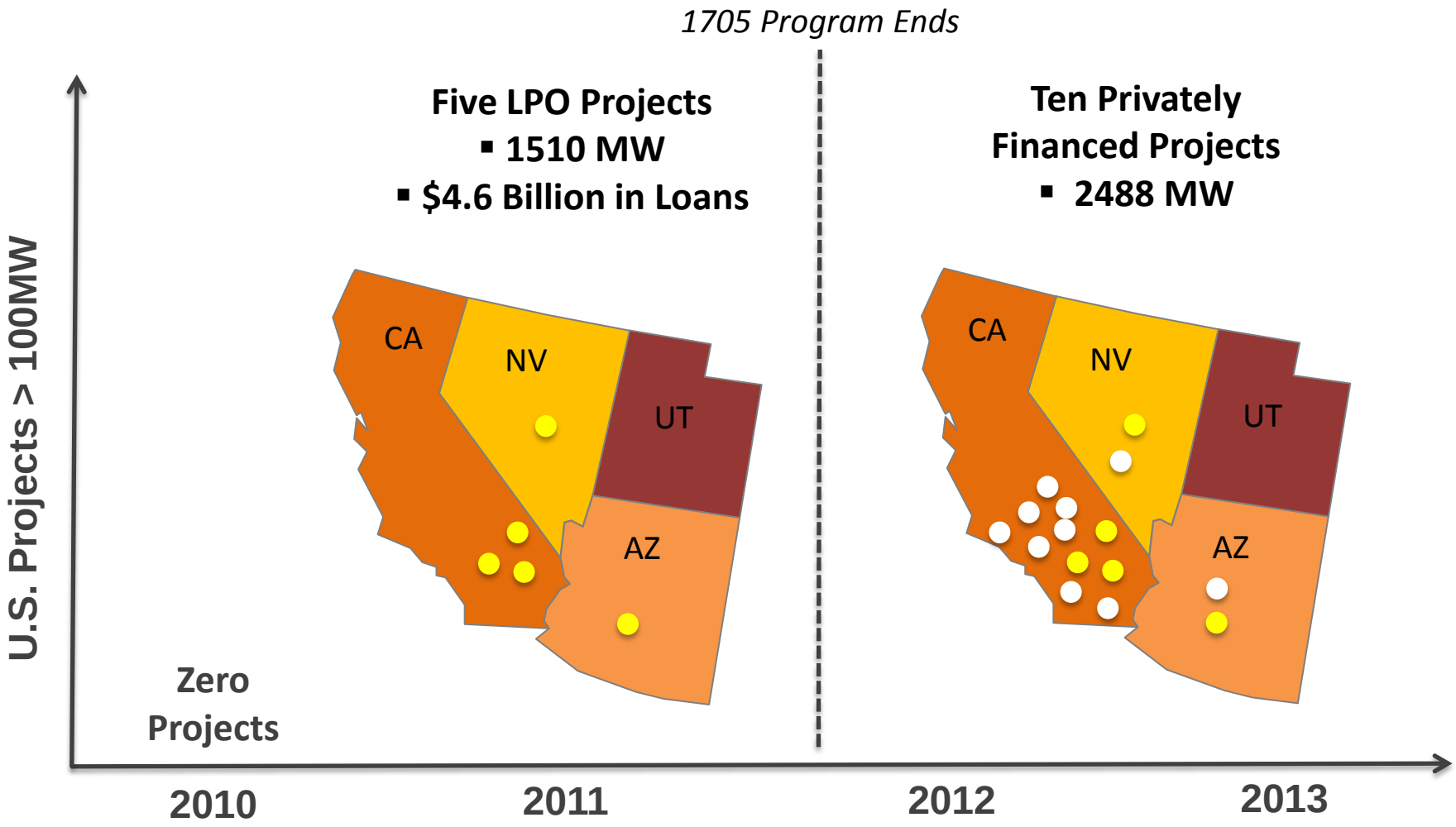
ONSHORE WIND: One of the world's largest wind farms at Shepherds Flat.

CELLULOSIC BIOFUELS: One of the country's first commercial-scale cellulosic ethanol plants: Abengoa Biomass.

ADVANCED NUCLEAR: First nuclear power plant to begin construction in the US in the last 30 years: Vogtle.

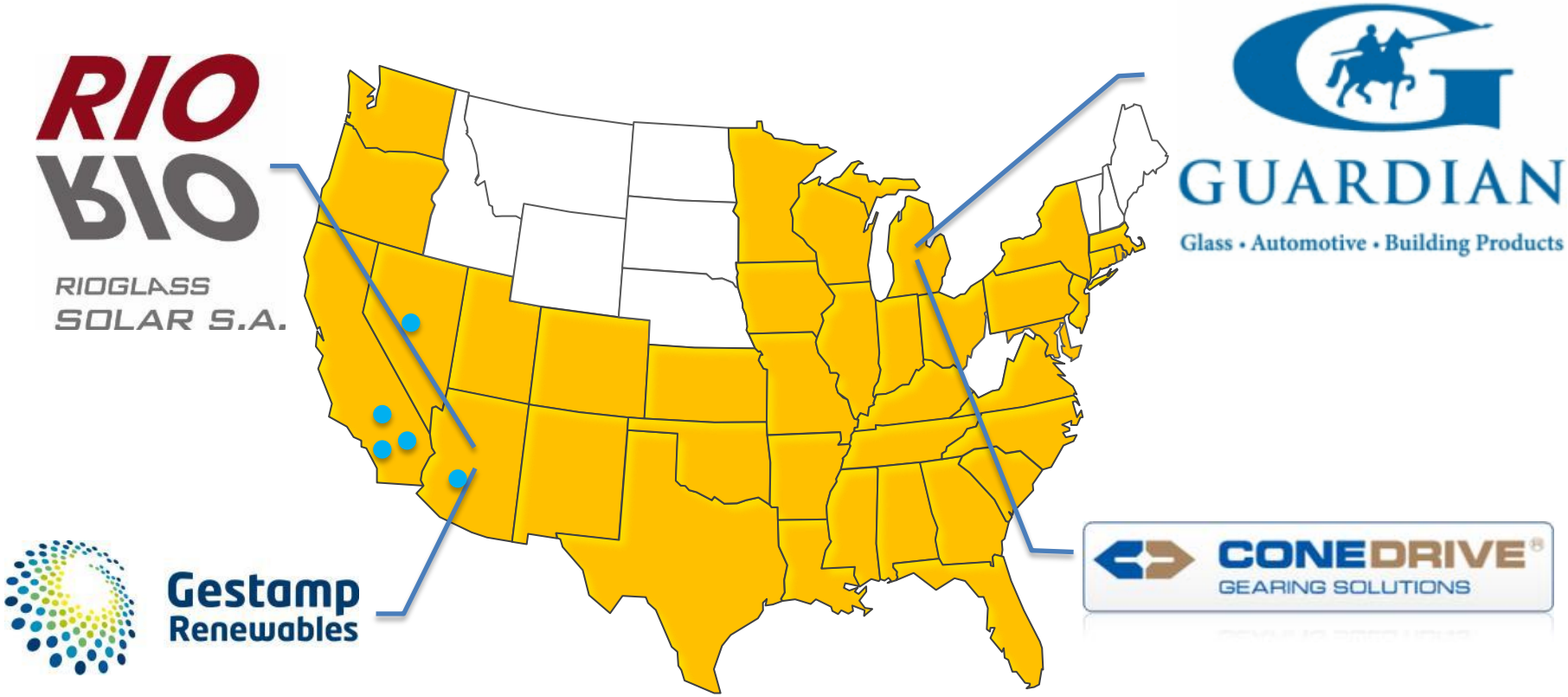


LPO Launched Utility-Scale Photovoltaic Market in the U.S.

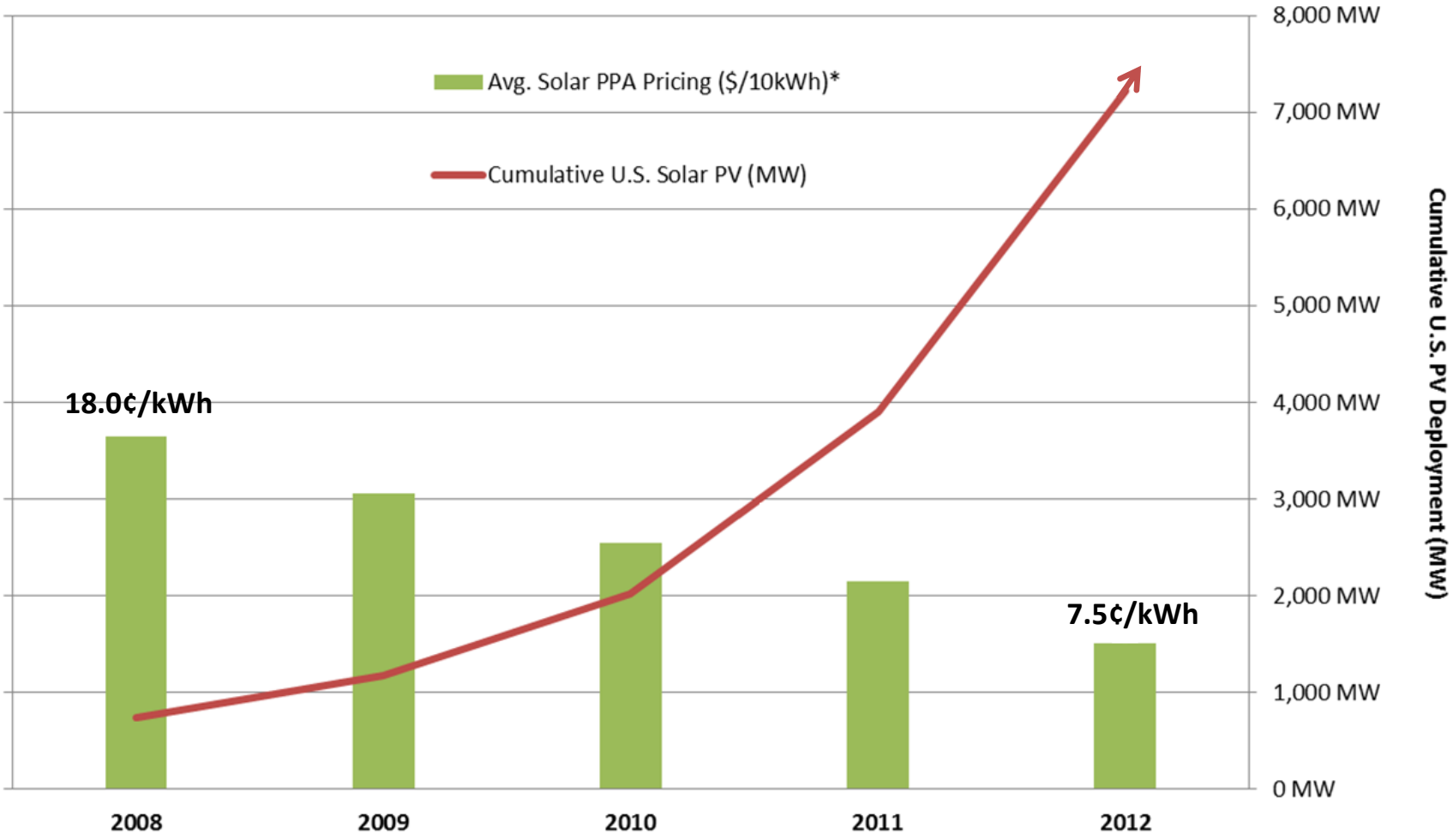


LPO Projects Supported a National Solar Energy Supply Chain

LPO provided financing for five Concentrating Solar Power (CSP) projects representing $8 billion in total project investment. These projects supported a supply chain that created jobs and economic development in 39 states.



LPO Projects Have Helped Reduce the Cost of Solar Energy

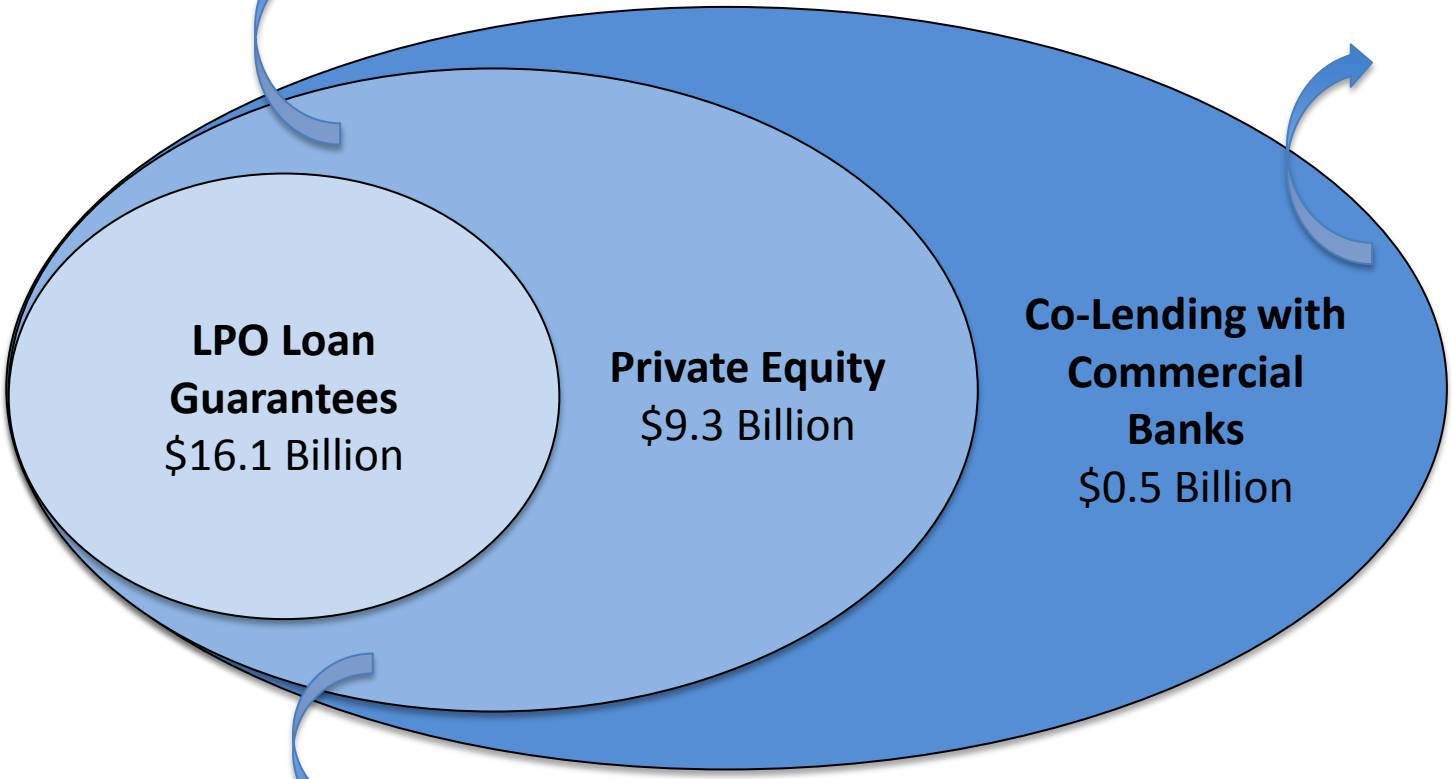


* PPA pricing data represents a levelized generation-weighted average of publicly available data for independent large-scale solar generators (PV & CSP).

Public-Private Partnerships Expanded Total Project Investment

$26 Billion in Total Project Investment

Developers: NRG, Abengoa, Exelon, etc.



Tax Equity: Google, Mid-American, Liberty Media

Bank of America

BBVA

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Renewable Energy & Efficient Energy Projects Solicitation

LOAN GUARANTEE
SOLICITATION ANNOUNCEMENT

U.S. Department of Energy
Loan Programs Office

FEDERAL LOAN GUARANTEES FOR RENEWABLE ENERGY PROJECTS AND EFFICIENT ENERGY PROJECTS

Solicitation Number: DE-SOL-0007154
OMB Control Number: 1910-5134; OMB Expiration Date 11/30/2016
Announcement Type: Initial

Issue Date:	July 3, 2014
First Part I Submission Due Date:	October 1, 2014[1]
First Part II Submission Due Date:	January 14, 2015[2]
Last Part I Submission Due Date:	December 2, 2015
Last Part II Submission Due Date:	March 2, 2016

Supports as much as <u>$4 billion in loan guarantees</u>:

- *$2.5 billion: Loan guarantee authority*
- *$169 million: Appropriated credit subsidy*

Solicitation Can Provide Long-Term Project Financing

What is a Loan Guarantee?	• Loan guarantee can support debt from a commercial lender or the Department of Treasury.
Loan Tenure	• Long term financing is available based on the useful life of the asset – up to 30 years.
Interest Rates	• Interest rates set based on equivalent U.S. Treasury rate plus a credit-based liquidity spread (~0.5-1.5%).
Equity	• LPO can only guarantee 80% of the total project cost. Most projects have at least 35% equity.
Co-Lending	• Co-lending with commercial lenders is encouraged but not required.

LPO Will Consider All Eligible Projects Under Title XVII

Renewable Energy Projects

Energy Efficiency Projects

Innovative Technology
Eligible projects must utilize an innovative technology or system.

Greenhouse Gas Benefits
Eligible projects must reduce, avoid, or sequester greenhouse gases. Supports the President's Climate Action Plan.

Located in the U.S.
Eligible projects must be located in the U.S. but may be foreign-owned.

Reasonable Prospect of Repayment
Eligible projects must be able to repay loan principal and interest.

The Solicitation Identifies Five Key Technology Areas

LPO is seeking to finance areas that are catalytic, replicable, and market ready.

Advanced Grid Integration & Storage

Drop-In Biofuels

Waste-to-Energy

Enhancement of Existing Facilities

Efficiency Improvements

How Does LPO Define an 'Innovative' Project?

1) Project must employ a new or significantly improved technology that is <u>not</u> a commercial technology.

2) A commercial technology means a technology in general use in the commercial marketplace in the U.S. at the time the term sheet is issued by the Department of Energy.

3) A technology is in general use if it has been installed in and is being used in three or more commercial projects in the U.S. in the same general application as in the proposed project, and has been in operation in each such commercial project for a period of at least five years by the time the term sheet is issued

LPO Application and Underwriting Process

Part I Application

- Basic Project Details
- Initial Greenhouse Gas Analysis
- Project Readiness to Proceed
- $50,000 Fee

Part II Application

- All Documents Required to Continue Due Diligence
- Initiate Loan Guarantee Underwriting
- Hire Independent Engineer and Legal Counsel
- $350,000 or $100,000 fee *(Loan Guarantee < $150 million)*

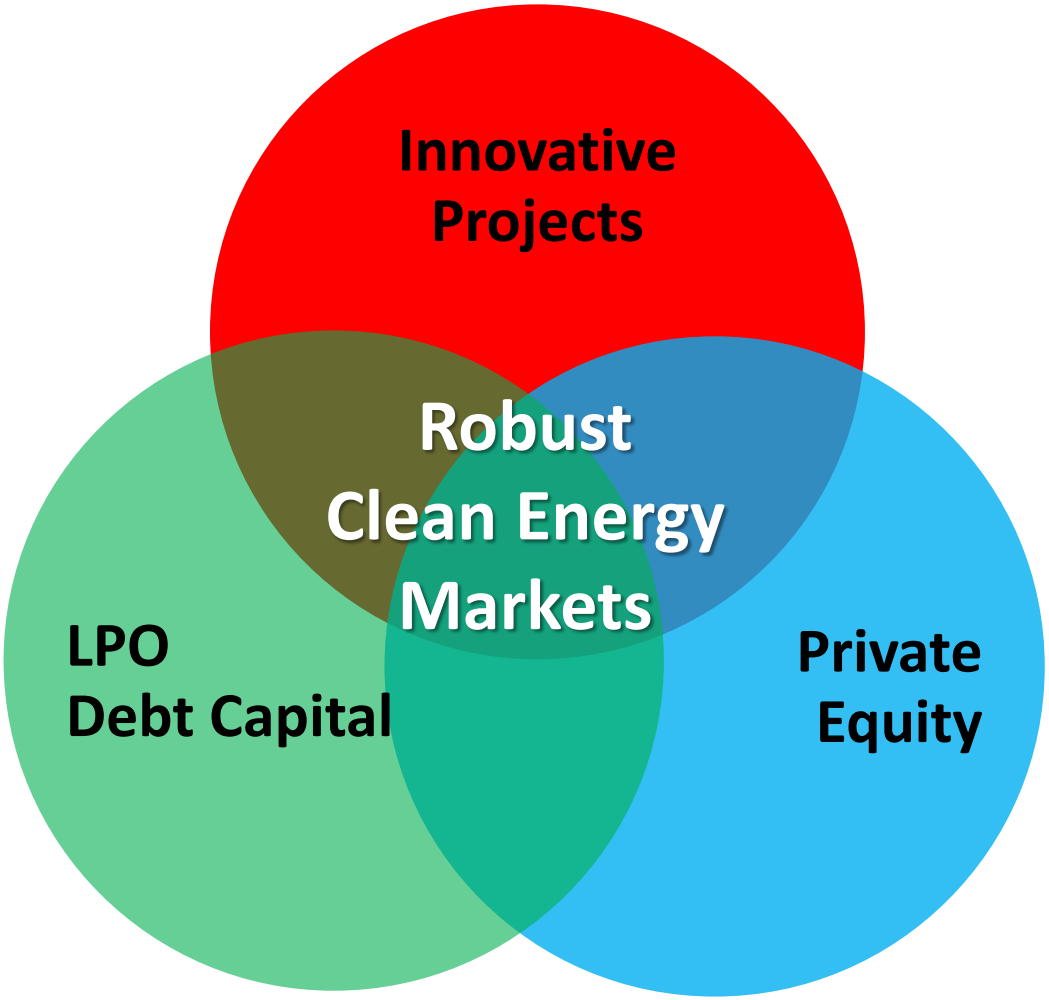
Conditional Commitment

- Negotiation of Conditional Commitment
- Issue Conditional Commitment
- 25% of Facility Fee

Loan Guarantee

- Negotiate Final Loan Agreements
- Initial Funding
- Remaining Facility Fee, Credit Subsidy Cost, Annual Maintenance Fee
- Ongoing Project Management

LPO: Accelerating U.S. Clean Energy Deployment



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