



Renewable Energy & Energy Efficiency Projects

Draft Loan Guarantee Solicitation

June 5, 2014



U.S. DEPARTMENT OF
ENERGY

LOAN PROGRAMS OFFICE

LPO: The Financing Force for a Clean Energy Economy

LOAN PROGRAMS OFFICE

OUR PROJECTS

ALL 1703 1705 ATVM



Generation

- Solar
- Wind
- Geothermal
- Nuclear
- Distributed Solar

Manufacturing/Other

- Solar Manufacturing
- Storage/Efficiency
- Biofuels/Biomass
- Transmission
- Vehicle Manufacturing

DEPARTMENT OF ENERGY

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: LPO is a world class clean energy financing institution based within DOE - one of the largest project finance and clean energy lenders in the U.S.

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

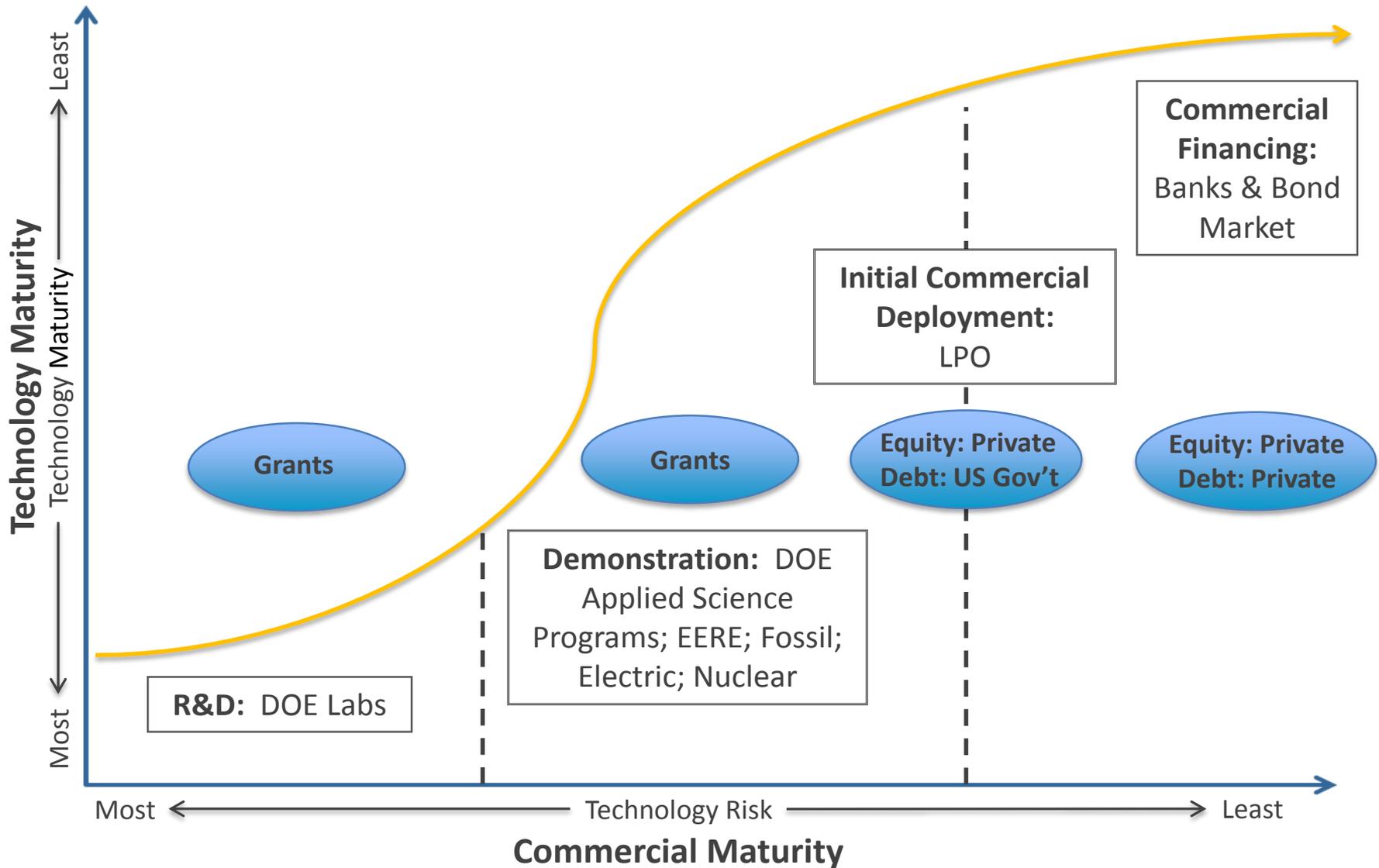


U.S. DEPARTMENT OF

ENERGY

LOAN PROGRAMS OFFICE

DOE Programs Support the Full Arc of Commercialization

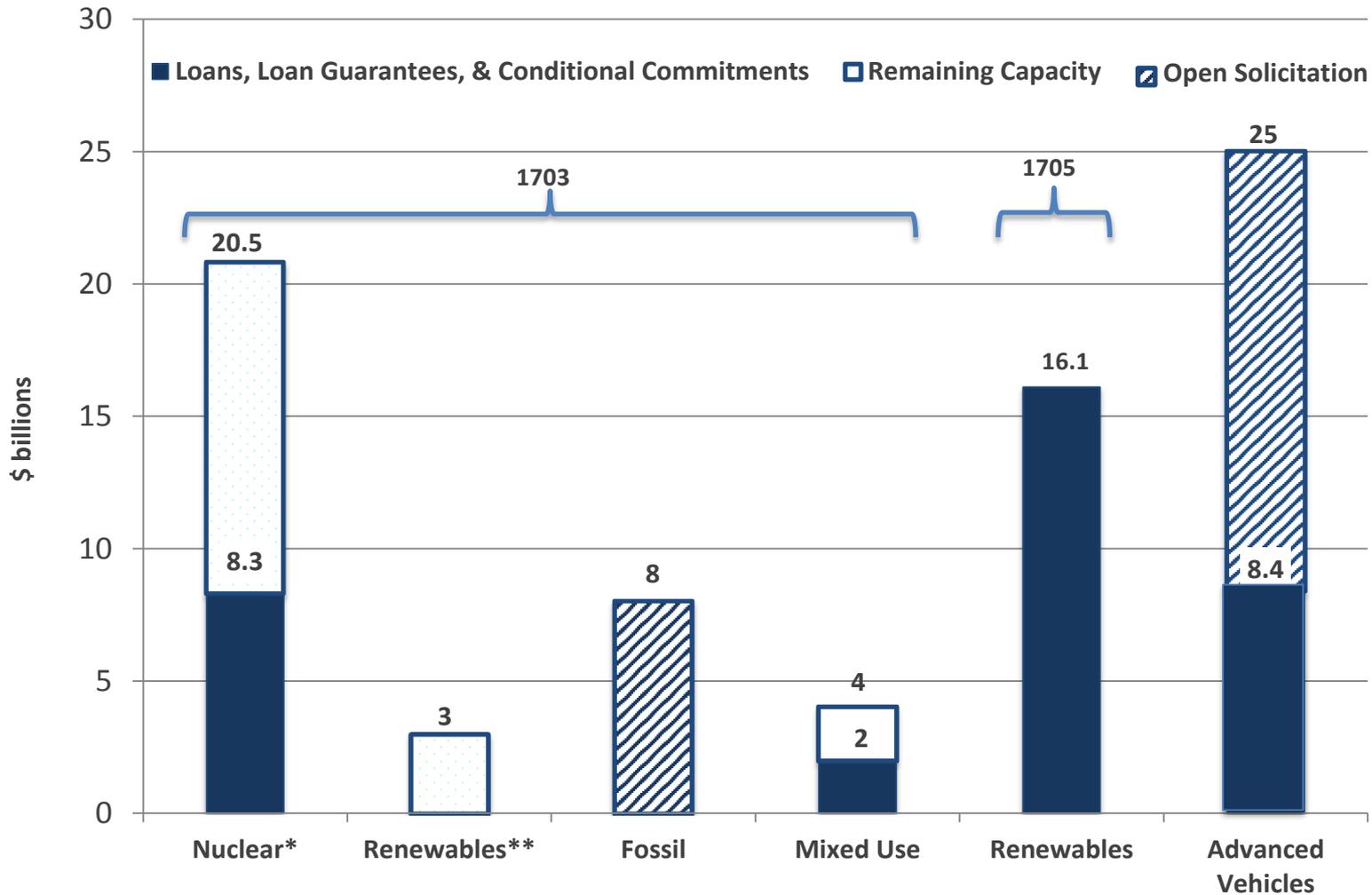


The LPO Portfolio Has Strong Financial Performance

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: <i>ATVM:</i> <i>1705:</i> <i>1703:</i>	\$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 PORTFOLIO CREDIT RATING <i>2014:</i> <i>2010:</i>	BB+ B



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.



U.S. DEPARTMENT OF

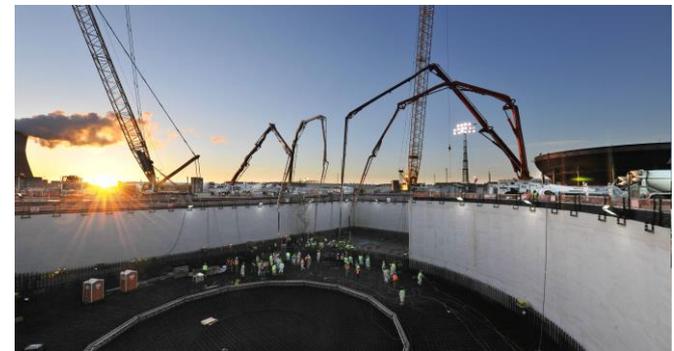
ENERGY

LOAN PROGRAMS OFFICE

LPO Has Financed Deployment of Groundbreaking Projects

LPO is one of the largest project finance teams in the world with a variety of projects that support the President's "all of the above" energy strategy:

- Several of the world's largest solar generation facilities and nighttime solar storage systems:
 - Photovoltaic generation: Agua Caliente, Desert Sunlight, CVSR
 - Large concentrating solar power plants with innovative thermal energy storage: Solana, Solar Reserve Tonopah
 - Largest solar thermal plant: Ivanpah
- Retooled three electric vehicle manufacturing facilities: Tesla, Nissan & Ford
- One of the world's largest wind farms: Shepherds Flat
- 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



Abengoa Bioenergy Biomass of Kansas, LLC (ABBK)

Hugoton, Kansas

- BIOMASS
- CONSTRUCTION

Project Summary: Using innovative enzymatic hydrolysis process, ABBK's plant will convert approximately 300,000 metric tons of corn stover (stalks and husks) into about 23 million gallons of cellulosic ethanol per year and includes a 20 MW gross co-generation plant that produces steam and electricity for the plant.

Project Owner	Abengoa Bioenergy U.S. Holding, Inc.
Total Project Cost	\$520.9 M
DOE Loan Amount	\$132.4 M
Loan Close	Sept. 28, 2011
COD	Sept. 28, 2014
Generation Capacity	23 MGY cellulosic ethanol
Off-taker	Abengoa Bioenergy Trading U.S., LLC



Status: The ABBK Project is 32 months into a 36 month construction schedule and is behind the planned EPC completion date at financial close. The co-gen plant began operating in late December 2013 and has operated monthly. The ethanol plant will begin commissioning in the summer 2014.



U.S. DEPARTMENT OF

ENERGY

LOAN PROGRAMS OFFICE

Draft 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-000____
OMB Control Number: 1910-5134; OMB Expiration Date 11/30/2016
Announcement Type: Initial



U.S. DEPARTMENT OF

ENERGY

LOAN PROGRAMS OFFICE

Draft Solicitation Can Provide Long-Term Project Financing

Loan Guarantee Authority

- \$2.5 billion in loan guarantee authority.
- \$169 million in credit subsidy.
- If issued, solicitation could support approximately \$4 billion in loan guarantees.

Loan Guarantee Terms

- Long-term, debt-financing available based on U.S. Treasury rates plus spread.
- Requirements for equity investment.
- Co-lending is encouraged but not required.
- Each loan guarantee is based on individual terms.



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



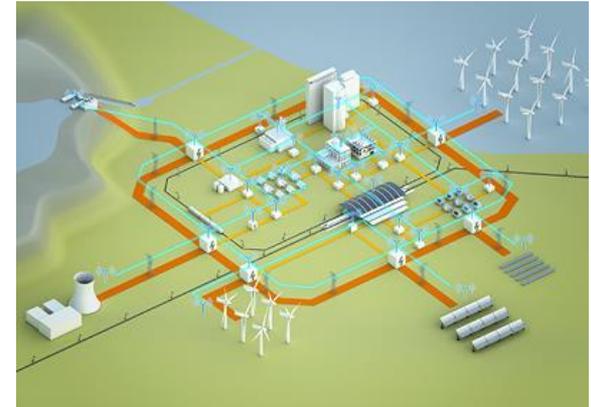
Technology Area 1: Advanced Grid Integration & Storage

Why Now?

- Expanding renewable energy production has exacerbated grid integration and management issues.
- The lack of energy storage has limited the dispatchability of renewable energy.
- Increasing policy and regulatory debates at the state level.

What Can We Accomplish?

- Increase the technical potential for renewable generation through enhanced grid integration and storage.
- Demonstrate that energy storage and grid compatibility can improve the dispatchability of renewable energy and increase its market value.



Technology Area 2: Drop-In Biofuels

Why Now?

- U.S. oil dependence remains a key climate change and energy security issue.
- U.S. ethanol consumption increasingly at the blend wall triggering robust policy debates.
- Cost competitiveness versus increasingly domestic sourced transportation fuels.



What Can We Accomplish?

- Increase biofuels use beyond current blend wall limitations.
- Expand biofuels to cover multiple fuel types including diesel, jet fuel, & fuel oil.
- Demonstrate market viability.
- Reduce GHG and environmental impact from transportation bio-fuel production.



Technology Area 3: Waste-to-Energy

Why Now?

- Significant renewable energy resource that has been underutilized.
- A lack of project replication and scale limit industry growth.
- Landfill decay and incineration are significant source of GHG emissions.



What Can We Accomplish?

- Create a new commercial scale renewable energy resource in the U.S.
- Utilize an urban renewable energy resource.
- Reduce GHG emissions from landfills and waste.
- Provide ancillary environmental benefits.



Technology Area 4: Enhancement of Existing Facilities

Why Now?

- Older renewable energy facilities are not maximizing energy production due to outdated technology.
- New technology could enable existing facilities to increase capacity factors (i.e. low wind resource wind farms).
- Existing infrastructure is being modified to include renewable energy production (i.e. existing dams).



What Can We Accomplish?

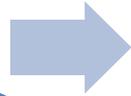
- Increase renewable energy output at existing facilities.
- Accelerate the deployment of next generation renewable energy components.
- Encourage incorporation of innovative technology into proposed projects.
- Demonstrate market viability for renewable energy facility retrofits.



Technology Area 5: Efficiency Improvements

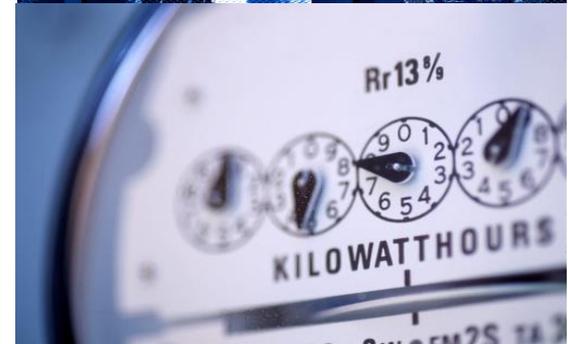
Why Now?

- Innovative Technology Options Exist for Energy Efficiency.
- Large-scale deployments may face financing constraints.

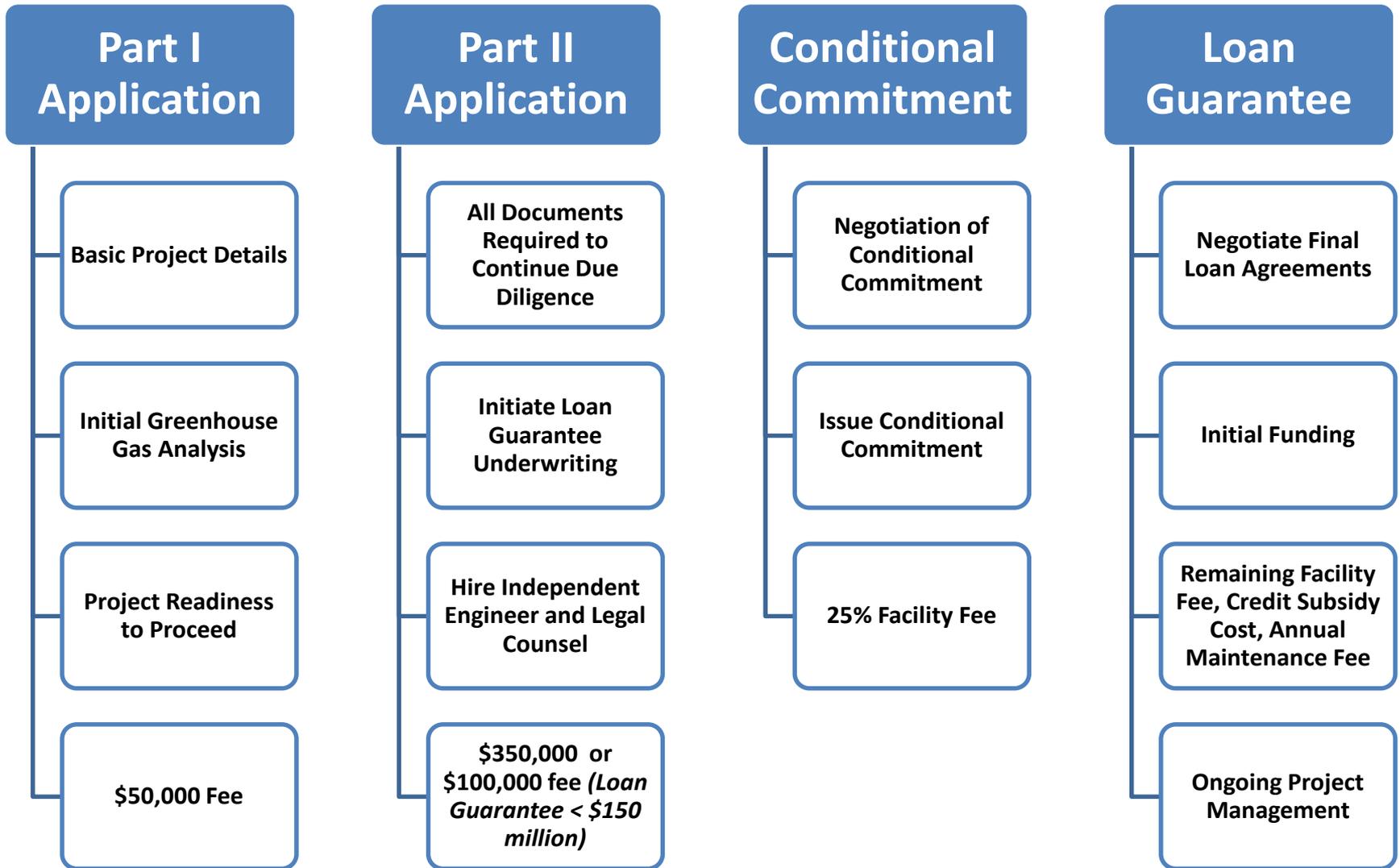


What Can We Accomplish?

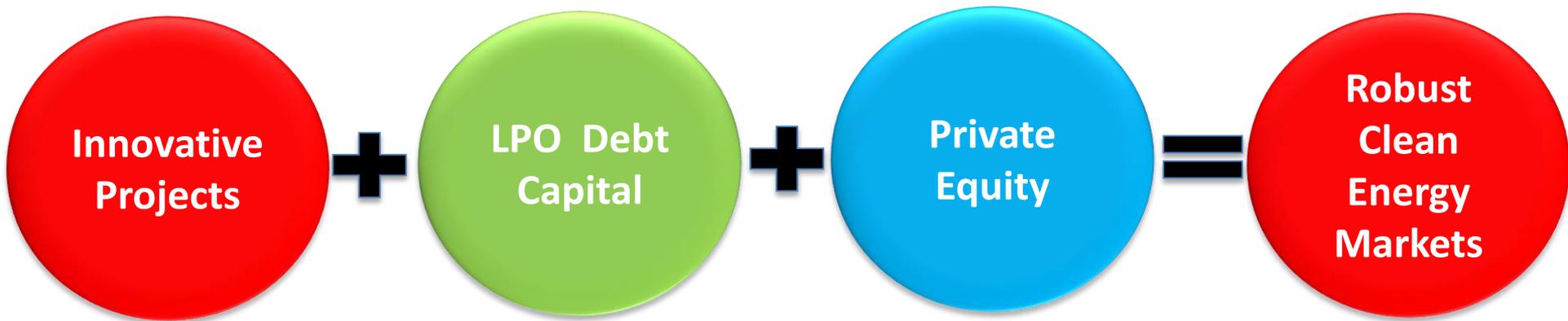
- Support large-scale deployments of innovative technology.
- Finance initial deployments of new energy efficiency technology.
- Supplement existing financing mechanisms that may be unable to support innovative projects.



LPO Application and Underwriting Process



LPO: Accelerating U.S. Clean Energy Deployment



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

