



Building a Bridge to Bankability

How LPO helps finance innovative clean energy, advanced transportation, and tribal energy projects in the U.S.

Agenda

- **What LPO Does** | Building a Bridge to Bankability • Application Activity
- **What LPO Offers** | The Value of Working with LPO
- **LPO Financing** | Innovative Clean Energy • Advanced Transportation • Tribal Energy
- **LPO's Portfolio** | A Record of Success at Derisking Clean Energy Technologies
- **LPO's Impact** | Catalyzing Markets • Reducing Emissions • Creating Jobs
- **Open for Business** | The Next Generation of LPO Financing
- **Working with LPO** | The Loan Transaction Process





There are many areas that are mature from a technology standpoint but not mature from an access to capital standpoint — **that's a nexus where there's a clear mandate for LPO to participate.**

— LPO Director Jigar Shah



The **U.S. Department of Energy Loan Programs Office (LPO)** finances innovative clean energy, advanced transportation, and tribal energy projects, **servicing as a bridge to bankability for breakthrough projects and technologies**, derisking them at early stages of commercialization so they can reach full market acceptance.

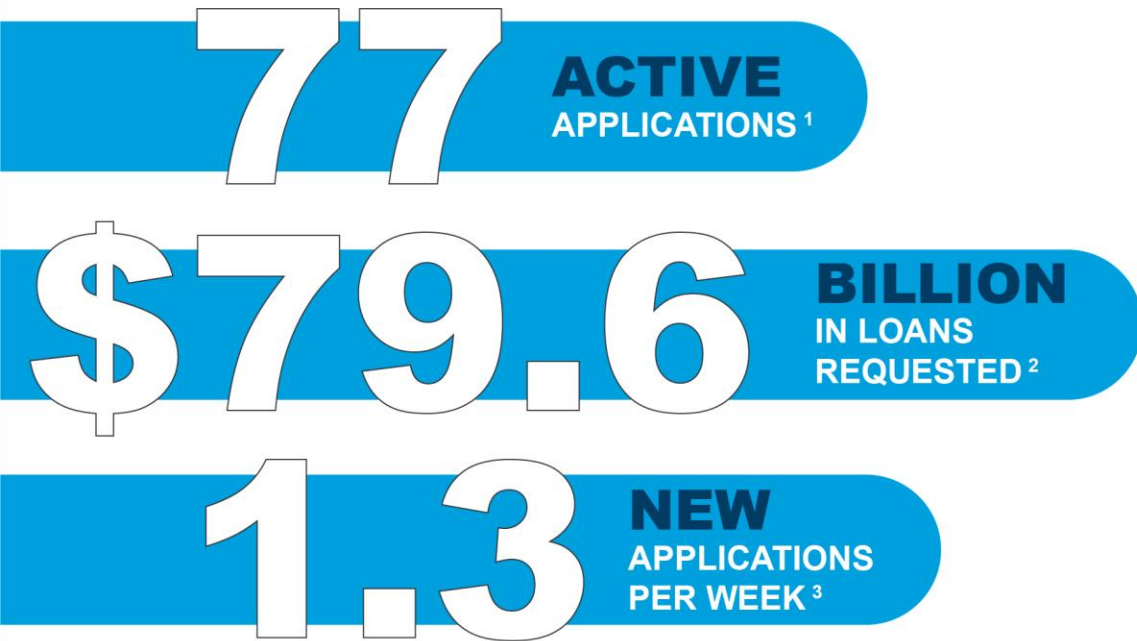
The Bridge to Bankability

Providing financing for technologies to go the last mile to reach full market acceptance



LPO Application Activity

April 2022

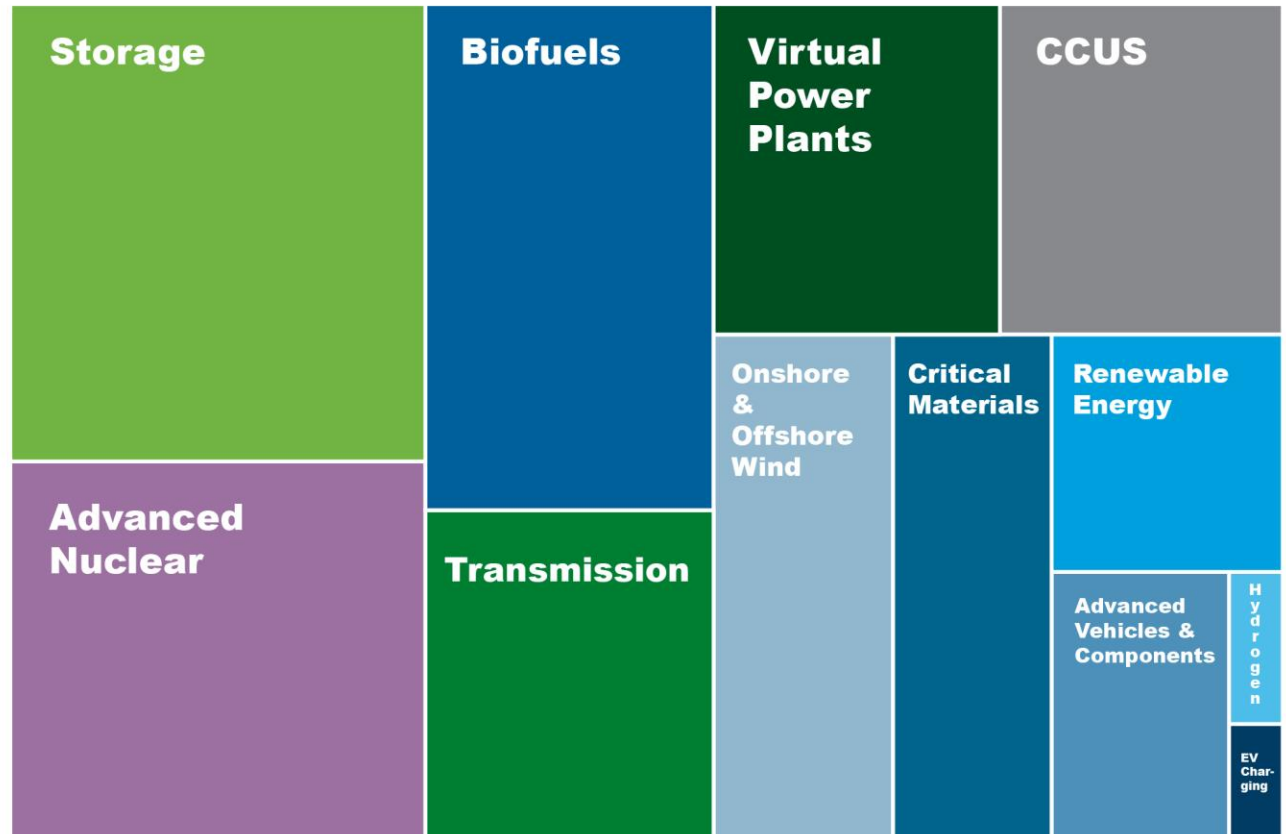


Notes:

* All data updated through April 30, 2022.

- 1) Active applications are defined as completed submissions through LPO's online application portal.
- 2) Individual requested loan amounts are estimated and potential, subject to change, and not necessarily representative of final financing terms. **Requested loan amounts in current active applications do not affect available LPO loan authority.** Figure rounded down to the nearest \$0.1 billion.
- 3) Current rolling average of new active applications per week over the previous 24 weeks. Figure rounded down to the nearest 0.1 application.

TOTAL AMOUNT OF LOANS REQUESTED BROKEN DOWN BY TECHNOLOGY AREA



The unique value of working with LPO for clean energy technology financing

LPO loans and loan guarantees are differentiated in the clean energy debt capital marketplace in **three primary ways:**



Access to Patient Capital

that private lenders cannot or will not provide.



Flexible Financing

customized for the specific needs of individual borrowers.



Committed DOE Partnership

offering specialized expertise to borrowers for the lifetime of the project.

LPO provides **loans and loan guarantees** to projects that have demonstrated potential to **accelerate the decarbonization** of the U.S. economy, focusing on those that combine **clean energy technology** with **effective financial models**.

Innovative Clean Energy

Loan Guarantees

Title 17 Program

- **Innovative Clean Energy | \$3.0 Billion**
- **Innovative Fossil Energy | \$8.5 Billion**
- **Innovative Nuclear Energy | \$10.9 Billion**

Advanced Transportation

Loans & Loan Guarantees

ATVM & Title 17 Programs

- **Manufacturing | \$17.7 Billion** in ATVM loans
- **Deployment | Eligible for the same \$3.0 Billion** in Innovative Clean Energy loan guarantees as above

Tribal Energy

Loans & Loan Guarantees

TELG Program

- **Tribal Energy Projects | Up to \$2.0 Billion**

Loan guarantees for the deployment of innovative energy projects at commercial scale

Eligibility

The Title 17 program can consider innovative clean energy projects that:

1. Use innovative technology.
2. Reduce, avoid, or sequester greenhouse gas emissions or air pollutants.
3. Are located in the U.S.
4. Provide reasonable prospect of repayment.

Loan Guarantee Features

- LPO can offer 100% guarantee of U.S. Treasury's Federal Finance Bank (FFB) loans or partial guarantees of commercial loans.
- Senior secured debt priced competitively with commercial rates.
- DOE can serve as sole lender or as a co-lender.
- Structures may include project finance, structured corporate, corporate or warehousing lines.

Manufacturing and deployment of advanced vehicles, components, and infrastructure

Manufacturing (ATVM)

Access to affordable capital via Advanced Technology Vehicles Manufacturing (ATVM) program loans to build:

- New facilities or reequip/modernize/expand existing facilities in the U.S. and/or related engineering integration for eligible vehicles
- Light-duty vehicles that meet specified fuel economy requirements or ultra-efficient vehicles.*
- Applicable across the value chain including materials, components, suppliers, OEMs, EV charging or alternative fueling infrastructure.

Deployment (TITLE 17)

Access to capital for projects using innovative technology:

- Must meet all eligibility requirements of Title 17 Innovative Clean Energy Projects.
- Examples may include:
 - Deploying EV charging or alternative fueling infrastructure.
 - Deploying fleets of innovative vehicles.

* NOTE: Manufacturing lending authority to be expanded to the manufacturing of medium- and heavy-duty vehicles, aviation, and marine vessels, pending appropriations.

Energy development projects via the Tribal Energy Loan Guarantee Program (TELGP)

Eligibility

TELGP can consider tribal energy projects that:

1. Are owned by a tribe or entity that is majority tribally owned and controlled.
2. Are seeking direct loans (through FY 2022) or partial guarantees of commercial loans.
3. Are located in the U.S. (Tribal or non-tribal land, single site or distributed).
4. Are financially viable. TELGP is not a grant program and the borrower will be required to invest equity in the project.
5. No innovation requirement.

Technologies

Projects employing commercial technology are preferred.

Technology areas of interest include, but are not limited to:

- Renewable Energy
- Transmission Infrastructure & Energy Storage
- Fossil Energy
- Transportation of Fuels

LPO's Portfolio

Derisking Across Sectors

Over \$36.5 billion in innovative clean energy & advanced transportation commitments and loans

Innovative Nuclear Energy

\$12 Billion

First AP1000 reactor in the U.S. (Vogtle)

Innovative Fossil Energy

\$3 Billion

Two CCUS conditional commitments. (Lake Charles Methanol, Monolith)

Wind Energy

\$1.7 Billion

Four onshore farms, including one of the world's largest. (Shepherds Flat)

Transmission

\$343 Million

Advanced transmission lines for improved grid reliability. (One Nevada Line)

Advanced Vehicles Manufacturing

\$7.92 Billion

Accelerated domestic electric vehicles manufacturing. (Nissan, Tesla)

Concentrating Solar Power

\$5.8 Billion

Five CSP plants utilizing diverse technologies.

Geothermal Energy

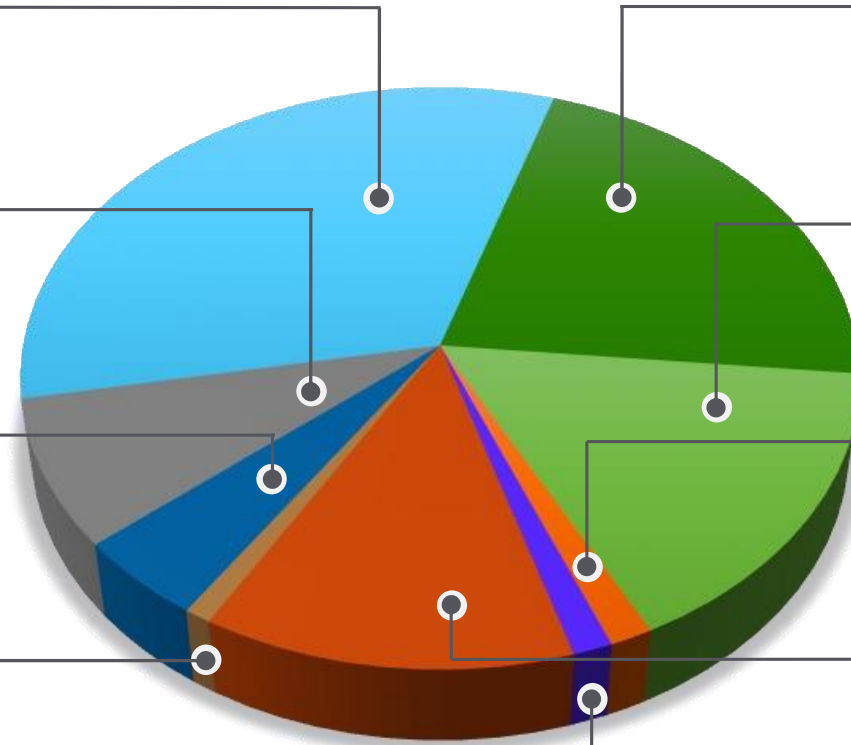
\$546 Million

State-of-the-art thermal extraction, revitalizing the sector.

Photovoltaic Solar

\$4.7 Billion

First five utility-scale PV solar projects larger than 100 MW in the U.S.



\$504 Million

Hydrogen

Conditional commitment for first-of-its-kind clean hydrogen production and storage facility. (Advanced Clean Energy Storage)



Over a decade of success in building a bridge to clean energy commercialization

Renewables Innovation

Financed large-scale, innovative wind, geothermal, and transmission projects across the West.

Advanced Auto Manufacturing

Financed the upgrade of advanced auto manufacturing facilities across the Midwest, creating tens of thousands of jobs.

Utility-Scale Solar

Financed 11 utility-scale solar projects across the Southwest, catalyzing the industry in the U.S.


Advanced Nuclear Energy

Financed the construction of the first new nuclear reactor in the U.S. in 30 years.



LPO-supported projects reduce greenhouse gas emissions and create American jobs


CLIMATE & JOB IMPACTS Attributable to LPO-Supported Projects*

OVER  **9 MILLION** MWh
OF CLEAN ENERGY PRODUCED

EQUIVALENT TO:

 OVER **1 MILLION**
HOMES POWERED

 **4 MILLION**
TONS CO₂ DISPLACED

 **562,500**
ADVANCED TECHNOLOGY
VEHICLES PRODUCED

EQUIVALENT TO:

 **8.5 MILLION**
GALLONS GASOLINE DISPLACED

 **11.2 MILLION**
TONS CO₂ DISPLACED



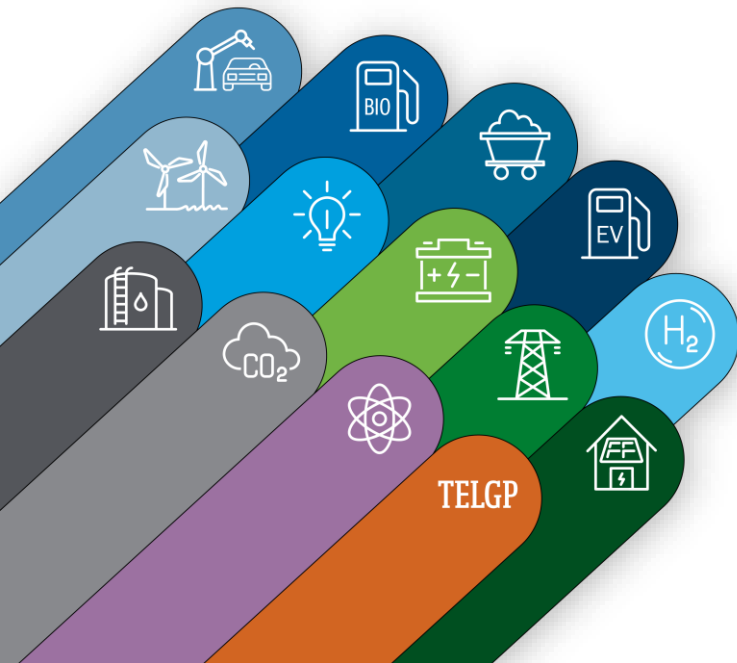
37,000
PERMANENT JOBS
CREATED



* Realized through FY2021

The Next Generation of LPO Financing

LPO is working with stakeholders across innovative clean energy and advanced transportation sectors



Major Technology Sectors

Technology Areas of Interest

Include, but are not limited to, the following:

Advanced Vehicles & Components	• Vehicles • Components • Lightweighting • Manufacturing
Biofuels	• Advanced Biofuels • Biodiesel • Cellulosic Biofuels • Renewable Diesel • Sustainable Aviation Fuel (SAF)
Critical Materials	• Extraction • Manufacturing • Mining • Processing • Recovery • Recycling
EV Charging	• Electric Vehicle (EV) Charging Infrastructure Manufacturing & Deployment
Hydrogen	• Generation • Infrastructure • Transportation
Onshore & Offshore Wind	• Offshore Wind • Onshore Wind Infrastructure
Renewable Energy	• Electrification • Geothermal • Hydrokinetics • Hydropower • Solar • Waste Conversion
Storage	• Electric Vehicle (EV) Battery Manufacturing • EV Bidirectional Storage • Newer Battery Chemistries & Flow Batteries • Compressed Air Energy Storage • Pumped Storage Hydropower • Thermal Energy Storage
Transmission	• Grid Efficiency • Grid Reliability • High Voltage Direct Current (HVDC) Systems • Offshore Wind Transmission • Systems Sited Along Rail & Highway Routes
Virtual Power Plants	• Grid Connected Distributed Energy Resources (DERs)
Advanced Fossil	• Carbon Feedstock Waste Conversion • Fossil Infrastructure Repurposed/Hybrid • Hydrogen Generated From Fossil Sources • Industrial Decarbonization • Synfuel
CCUS	• Carbon Capture, Utilization & Storage (CCUS) • Carbon Dioxide Removal (CDR)
Advanced Nuclear	• Small Modular Reactors • Micro Reactors • Nuclear Supply Chain • Nuclear Front-End
Tribal Energy	• Energy Storage • Fossil Energy • Renewable Energy • Transmission Infrastructure • Transportation of Fuels



The LPO Loan Transaction Process

LPO engages early with applicants and remains a partner throughout the lifetime of the loan



More Variable Timing
Lengths of these stages vary greatly, depending on project complexity and readiness.

Less Variable Timing
Timing for these stages is largely fixed, with targeted timelines.





Let's Talk About Your Project

Contact LPO to see what financing options may be available for your project



Call or write to schedule a no-fee, pre-application consultation: **202-287-5900** | **LPO@hq.doe.gov**



Learn more about LPO and all of its financing programs at: **Energy.gov/LPO**

Energy.gov/LPO

