



# **U.S. DEPARTMENT OF ENERGY LOAN PROGRAMS OFFICE**

# FINANCING ENERGY INFRASTRUCTURE

NOW AVAILABLE: MORE THAN **\$40 BILLION** LOAN & LOAN GUARANTEE AUTHORITY

## TITLE 17 INNOVATIVE ENERGY LOAN GUARANTEE PROGRAM



### **Advanced Fossil Energy**

**\$8.5 Billion**

(\$2 Billion conditionally committed to Lake Charles Methanol)



### **Advanced Nuclear Energy**

**\$8.8 Billion** (\$2 Billion specifically for Front End)



### **Renewable Energy & Efficient Energy**

**Up to \$4.5 Billion**

## TRIBAL ENERGY LOAN GUARANTEE PROGRAM



### **All-of-the-Above Energy Projects Benefiting Tribal Economies**

**Up to \$2 Billion** in Partial Loan Guarantees

## ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM



### **Domestic Manufacturing of Light-Duty Vehicles & Eligible Components**

**\$16 Billion**

# LPO'S VALUE AS A STRATEGIC PARTNER

LPO administers three distinct loan programs, but all can provide a similar value to borrowers:

- LPO can provide first-of-a-kind projects and other high-impact energy-related ventures with **access to debt capital** that private lenders cannot or will not provide
- LPO can provide **flexible, custom financing** that helps to meet the specific needs of individual borrowers
- LPO encourages early engagement and is a **valuable partner** to applicants throughout the entire lifetime of a project

# EXPERIENCE CATALYZING NEW MARKETS

## OVER 30 PROJECTS IN 18 STATES



### Technologies Include:

- ⚡ Advanced Technology Vehicles Manufacturing
- ⚡ Advanced Nuclear Energy
- ⚡ Bioenergy & Biofuels
- ⚡ Concentrating Solar Power
- ⚡ Geothermal Power
- ⚡ Photovoltaic Solar
- ⚡ Storage & Transmission
- ⚡ Wind Energy

## OVER \$30 BILLION INVESTED

<https://www.energy.gov/lpo/portfolio>

# LOAN PROGRAMS HISTORY OF SUCCESS

DOE loan programs have a track record of catalyzing new market development:

- First 5 U.S. **photovoltaic solar** power projects larger than 100 MW
- First new **nuclear** reactors to begin construction in U.S. in 30 years
- 4 onshore **wind** farms, including one of the world's largest
- World's largest **concentrating solar power** (CSP) plant & first CSP power tower technology to incorporate **thermal energy storage**
- Revitalized **geothermal** power with projects in Nevada & Oregon
- Conditional commitment for world's first **methanol production** facility to employ **carbon capture** technology in Louisiana. The captured carbon would be utilized for **enhanced oil recovery** (EOR) in Texas.
- Domestic advanced **auto manufacturing** facilities in 8 states.





# ADVANCED FOSSIL ENERGY TECHNOLOGY AREAS OF INTEREST

## 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 industrial waste recovery
- ⚡ High-efficiency distributed fossil power systems and microgrids

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.

# ADVANCED NUCLEAR ENERGY

## TECHNOLOGY AREAS OF INTEREST

### **Advanced Nuclear Reactors**

- ⚡ Projects with state-of-the-art design improvements in fuel technology, thermal efficiency, modularized construction, and safety systems

### **Small Modular Reactors (SMRs)**

- ⚡ Utilize standardized design and are nominally 300 MW or smaller in size
- ⚡ Projects have state-of-the-art design improvements

### **Upgrades and Upgrades at Existing Facilities**

- ⚡ Improvements to an existing reactor to increase efficiency
- ⚡ Critical improvements that are requisite to current or future facility operation

### **Front-End Nuclear**

- ⚡ Uranium conversion or enrichment
- ⚡ Nuclear fuel fabrication

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.



# RENEWABLE ENERGY & EFFICIENCY

## TECHNOLOGY AREAS OF INTEREST

### Advanced Grid Integration & Storage

- ⚡ Renewable energy generation, including distributed generation, incorporating storage
- ⚡ Smart grid systems incorporating demand response

### Drop-in Biofuels

- ⚡ New bio-refineries or bio-crude refining processes
- ⚡ Modifications to existing ethanol facilities to produce drop-in molecules

### Waste-to-Energy

- ⚡ Methane from landfills or ranches via biodigesters
- ⚡ Utilizing municipal solid waste, crop waste, or forestry waste

### Enhancement of Existing Facilities

- ⚡ Powering non-powered dams or upgrading existing hydro facilities
- ⚡ Retrofitting existing renewable facilities with innovative technology (e.g. wind turbine retrofits)

### Efficiency Improvements

- ⚡ Improve or reduce energy usage in residential, institutional, and commercial facilities, buildings, and/or processes
- ⚡ Recover, store, or dispatch waste energy or underutilized renewable energy sources

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.



# ELIGIBILITY REQUIREMENTS

## TITLE 17 INNOVATIVE ENERGY LOAN GUARANTEE PROGRAM



### INNOVATIVE TECHNOLOGY

Eligible projects must utilize new or significantly improved technology or systems



### GREENHOUSE GAS BENEFITS

Eligible projects must reduce, avoid, or sequester greenhouse gases



### LOCATED IN THE U.S.

Eligible projects must be located in the United States but may be foreign-owned



### REASONABLE PROSPECT OF REPAYMENT

Eligible projects must be able to repay loan principal and interest. LPO conducts due diligence and underwrites each loan similar to a commercial lender

# FINANCIAL TERMS

## TITLE 17 INNOVATIVE ENERGY LOAN GUARANTEE PROGRAM

**LOAN GUARANTEE:** A loan guarantee can support debt from a commercial lender or the U.S. Treasury

**LOAN TENOR:** 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 spread (~0.5-1.5%)

**EQUITY:** LPO can only guarantee up to 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

# ADVANCED VEHICLE MANUFACTURING

## TECHNOLOGY AREAS OF INTEREST

### **Advanced Technology Vehicles Manufacturing**

- ⚡ Building new facilities in U.S.
- ⚡ Reequipping, modernizing, or expanding existing facilities in U.S.

### **Qualified Component Manufacturing**

- ⚡ Building new facilities in U.S.
- ⚡ Reequipping, modernizing, or expanding existing facilities in U.S.

### **Engineering Integration**

- ⚡ Engineering integration performed in U.S. for ATVs or qualifying components

<https://www.energy.gov/lpo/atvm>

QUALIFYING PROJECTS ARE NOT LIMITED TO THESE TECHNOLOGIES.



# TRIBAL ENERGY LOAN GUARANTEE PROGRAM

## AREAS OF INTEREST

### **Key Eligibility Requirement**

- ⚡ Tribe or 100 percent tribally owned entity is the borrower.

### **No Restriction On Type Of Project/Technology**

- ⚡ Provide or expand electricity or other energy services such as generation, transmission, energy storage projects, or enhance energy resource extraction or processing (e.g. mining, oil & gas, biofuels, chemicals).

### **No Requirement For Innovation**

- ⚡ Projects employing commercial technology preferred and may use renewable or fossil energy sources.

### **No Specific Location Requirement**

- ⚡ On tribal land, traversing or connecting tribal land and nontribal land, or outside of tribal land, but otherwise benefiting the tribe. Can involve a single site or distributed portfolio.

### **Limited To Partial Loan Guarantees Only, Requiring Non-federal Lenders**



# APPLICATION PROCESS

## Pre-Application Consultation

- Start of a conversation directly with LPO staff about the project and about LPO's process

## Application Part I

- Determine basic eligibility
- Pay application fee (not applicable to ATVM)
- DOE aims to complete Part I review within 30 days
- Eligible applicants invited to submit Part II application

## Part I Due Dates

- May 15, 2019
- July 17, 2019
- September 18, 2019
- November 1, 2019
- ATVM applications accepted on a rolling basis

## Application Part II

- Evaluate creditworthiness, technical relevance & merit, technical approach, work plan, and construction plan, and legal, environmental & regulatory factors.
- Balance of application fee
- Eligible applicants invited into due diligence



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## WORKING WITH LPO

Interested in applying or learning more? Visit our website: <https://www.energy.gov/lpo>

Potential applicants are encouraged to contact DOE staff for a **pre-application consultation** to learn more about our process and requirements. To request a pre-application consultation:

- Email [lpo@hq.doe.gov](mailto:lpo@hq.doe.gov)
- Call **202-586-8336**