



# Getting to Know Us: Loan Programs Office

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How An Application Becomes A Loan

Arnab Pal  
Consultant to the Loan Programs Office

External

February 6<sup>th</sup>, 2024

# What LPO Does



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**



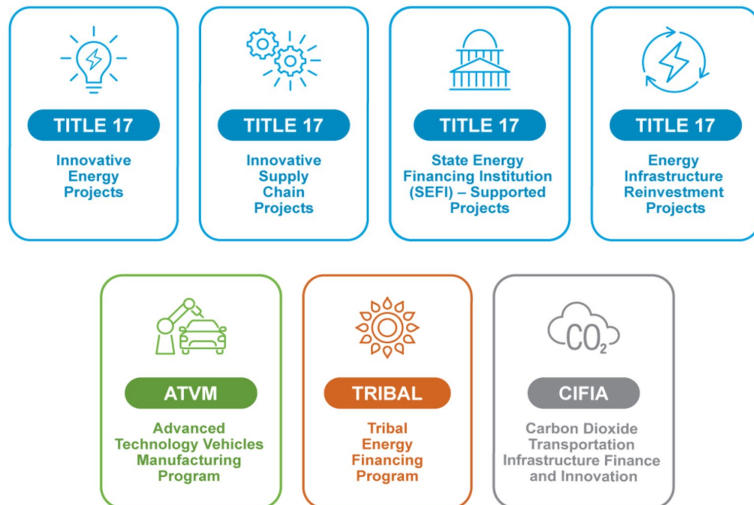
The **U.S. Department of Energy Loan Programs Office (LPO)** works with the private sector to finance the deployment and scale-up of innovative clean energy technologies, build energy infrastructure and domestic supply chains, create jobs, and reduce emissions in communities across the United States.

# What is the Loan Programs Office (LPO)?

## LPO is...

the **premier public financing partner** accelerating high-impact energy and manufacturing investments to advance America's economic future.

## How do we do it?



- ✓ By **providing attractive debt financing** for high-impact, large-scale (\$100M+) energy infrastructure projects in the U.S.
- ✓ With **tens of billions of dollars** in available loan and loan guarantee authority.
- ✓ Via **seven loan programs & project categories** supporting both innovative and commercial technologies.

# Building a Bridge to Bankability

## Deployment Milestones

Demonstrated  
Innovative  
Technology

1

First  
Commercial  
Deployments

2

Follow-On  
Commercial  
Deployments

3

Commercial  
Scale-Up

4

Commercial  
Debt Market  
Education

Full Market  
Acceptance

Scale-Up & Liftoff to Full Commercialization



# What LPO Offers Borrowers

**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.



# 202

**ACTIVE**  
APPLICATIONS <sup>1</sup>

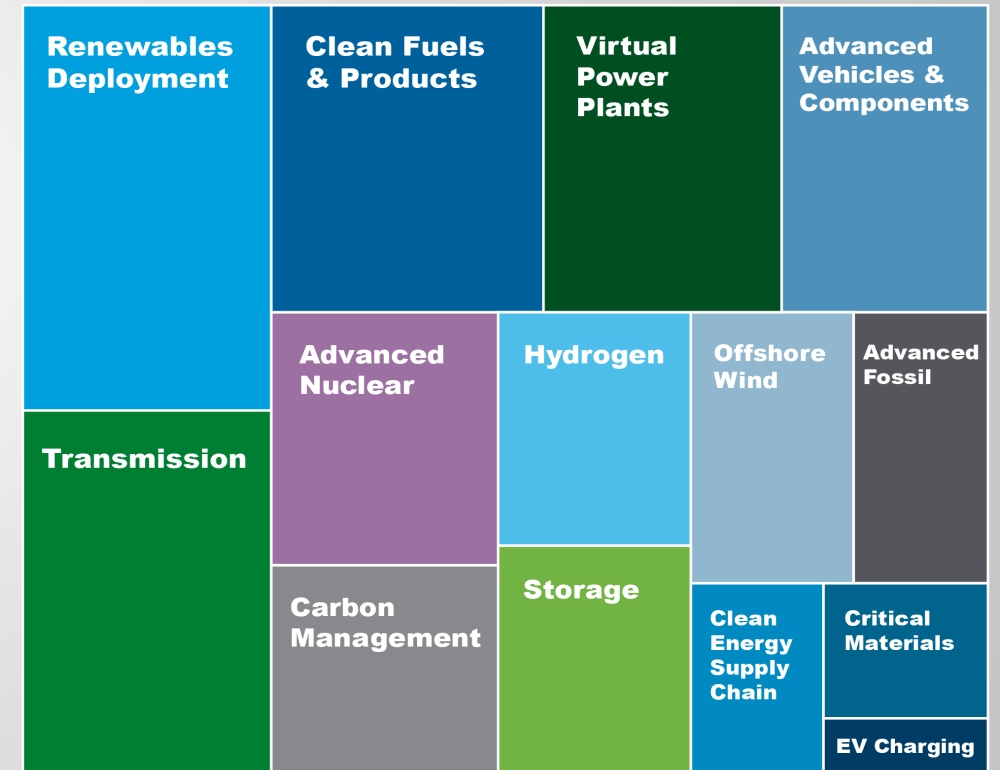
# \$214.8

**BILLION**  
IN LOANS REQUESTED <sup>2</sup>

# 2.3

**NEW**  
APPLICATIONS PER WEEK <sup>3</sup>

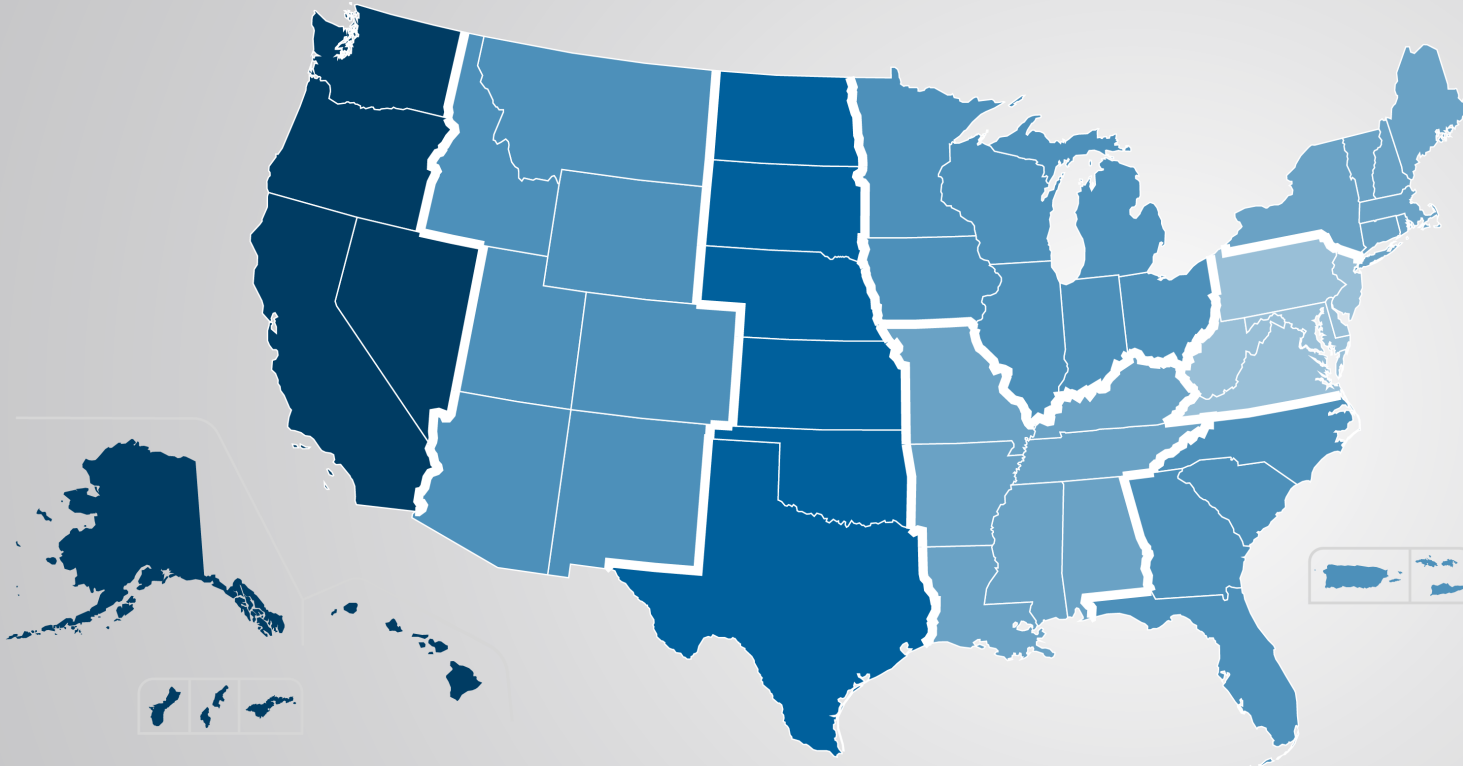
## \$214.8 BILLION CURRENT AMOUNT OF LOANS REQUESTED BROKEN DOWN BY PROJECT TECHNOLOGY SECTORS



**Notes**

All data updated through December 31, 2023. For more details and a list of technology areas of interest within each LPO tech sector, see: [Energy.gov/LPO/MAAR](https://www.energy.gov/LPO/MAAR)

- 1) Active applications include applications that have been submitted by the project sponsor(s) through LPO's online application portal and are in different stages of active review and engagement by LPO and the applicant.
- 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 per week.



**202** ACTIVE APPLICATIONS <sup>1</sup> WITH  
**242** PROPOSED PROJECT LOCATIONS  
ACROSS ALL REGIONS OF THE U.S. <sup>2</sup>

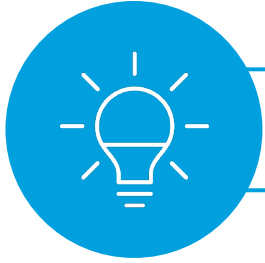
<b>WEST</b>	AK, CA, HI, NV, OR, WA (AS, GU, MP)	<b>53</b>
<b>PLAINS</b>	KS, ND, NE, OK, SD, TX	<b>37</b>
<b>MOUNTAIN</b>	AZ, CO, ID, MT, NM, UT, WY	<b>27</b>
<b>MIDWEST</b>	IA, IL, IN, MI, MN, OH, WI	<b>26</b>
<b>SOUTHEAST</b>	FL, GA, NC, SC (PR, VI)	<b>26</b>
<b>NORTHEAST</b>	CT, MA, ME, NH, NY, RI, VT	<b>25</b>
<b>SOUTH</b>	AL, AR, KY, LA, MO, MS, TN	<b>25</b>
<b>MID-ATLANTIC</b>	DE, MD, NJ, PA, VA, WV (DC)	<b>23</b>

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- Regions depicted are for representation purposes only and are not meant to denote LPO consideration of regional variation in project evaluation.

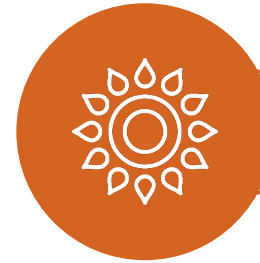
# LPO Financing Programs



## Title 17 Clean Energy (Title 17)

### Financing for:

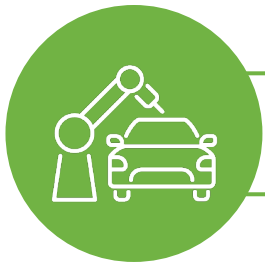
- Innovative Energy & Innovative Supply Chain (1703)
- State Energy Financing Institution (SEFI)-Supported (1703)
- Energy Infrastructure Reinvestment (EIR, 1706)



## Tribal Energy (TELGP)

### Financing for:

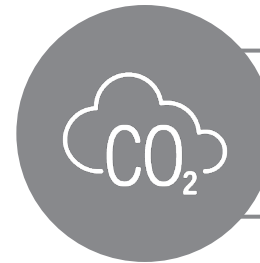
- Tribal energy development projects



## Advanced Transportation (ATVM)

### Financing for:

- Manufacturing of advanced technology vehicles, several modes of ATVs, components, and EV charging infrastructure



## CO<sub>2</sub> Transportation Infrastructure (CIFIA)

### Financing for:

- Large-capacity, common carrier CO<sub>2</sub> transportation projects



# Community Benefits Plans

## A New Title 17 Project Application Requirement

- ✓ **A Community Benefits Plan (CBP) is now considered in the evaluation of Title 17 project applications.**
  - LPO can discuss and provide feedback during pre-application consultations.
  - CBPs will be preliminarily evaluated during the Part II evaluation.
  - Applications with inadequate CBPs may not be invited to proceed to due diligence.
- ✓ **LPO considers the quality of a CBP among the factors that indicate the prospect of loan repayment.**
- ✓ **LPO is leveraging commitments made for state and city incentives, and IRA Incentives**
- ✓ **Borrowers will report on their fulfillment of goals and activities included in the CBP.**

## The Four Priorities

- 1) Justice 40**
- 2) Diversity, Equity, Inclusion, and Accessibility**
- 3) Quality Jobs**
- 4) Community & Labor Engagement**



# Community Benefits Plans

## More About the Four Priorities

### 1. Justice40

Contribute to the goal that 40 percent of the overall benefits of clean energy investment flow to disadvantaged communities.

### 2. Diversity, Equity, Inclusion, and Accessibility

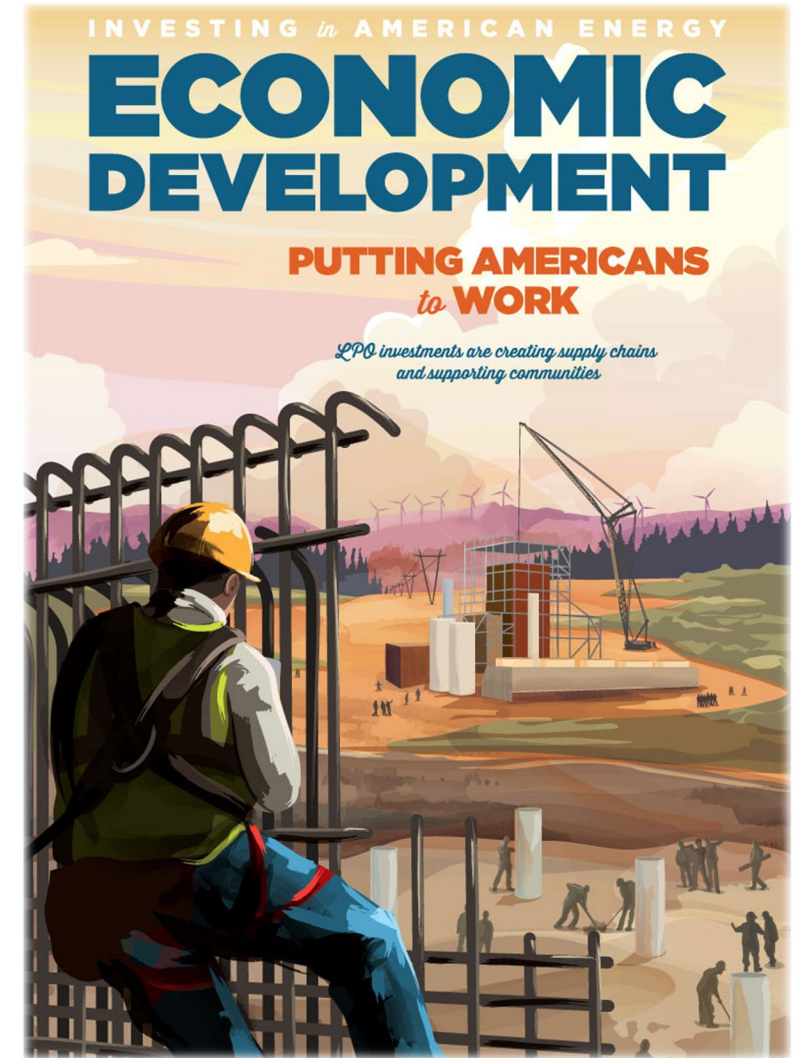
Equitable access to wealth building opportunities, strengthening ties with the community, diversifying supply chains, and contributing to the health and robustness of the surrounding community.

### 3. Quality Jobs

Ensuring jobs are of sufficient quality to attract and retain skilled workers in the industry with wages and benefits and worker supports, investing in workforce education and training, and supporting strong labor standards with the free and fair choice to join a union.

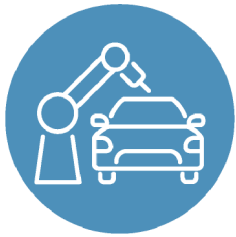
### 4. Community & Labor Engagement

Support meaningful engagement with labor unions and community stakeholders, such as local governments, Tribal governments, and community-based organizations, leading to formal agreements.



# The Next Generation of LPO Financing

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



## Advanced Vehicles & Components

Vehicles • Components • Lightweighting  
• Manufacturing • Electric Vehicle (EV)  
Battery Manufacturing



## Biofuels

Advanced Biofuels • Biodiesel •  
Cellulosic Biofuels • Renewable  
Diesel • Renewable Natural Gas  
(RNG) • Sustainable Aviation  
Fuel (SAF)



## Critical Materials

Extraction • Manufacturing • Mining •  
Processing • Recovery • Recycling



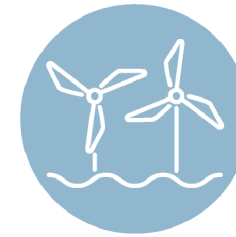
## EV Charging

Deployment • Manufacturing



## Hydrogen

Generation • Infrastructure •  
Transportation



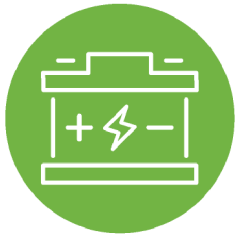
## Offshore Wind

Offshore Wind Generation • Offshore  
Wind Supply Chain & Vessels



## Renewable Energy

Electrification • Geothermal •  
Hydrokinetics • Hydropower •  
Repowering Onshore Wind • Solar  
Supply Chain • Waste Conversion



## Storage

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



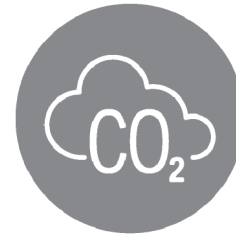
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Connected Distributed Energy  
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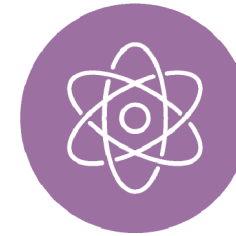
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Fossil Infrastructure Repurposing &  
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Small Modular Reactors • Micro  
Reactors • Nuclear Supply Chain •  
Nuclear Front-End



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Energy Development Projects •  
Energy Storage • Fossil Energy •  
Renewable Energy • Transmission  
Infrastructure • Transportation of Fuels



# APPENDIX

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# What LPO Does



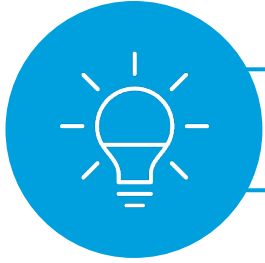
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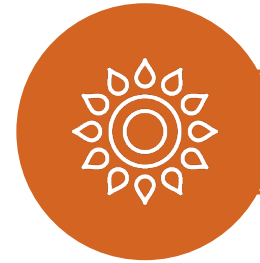
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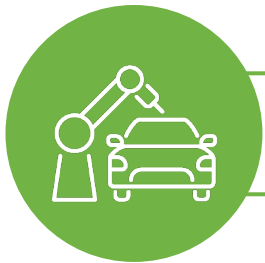
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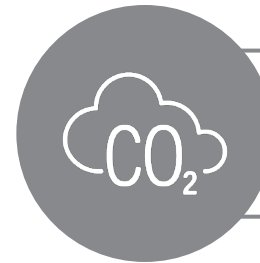
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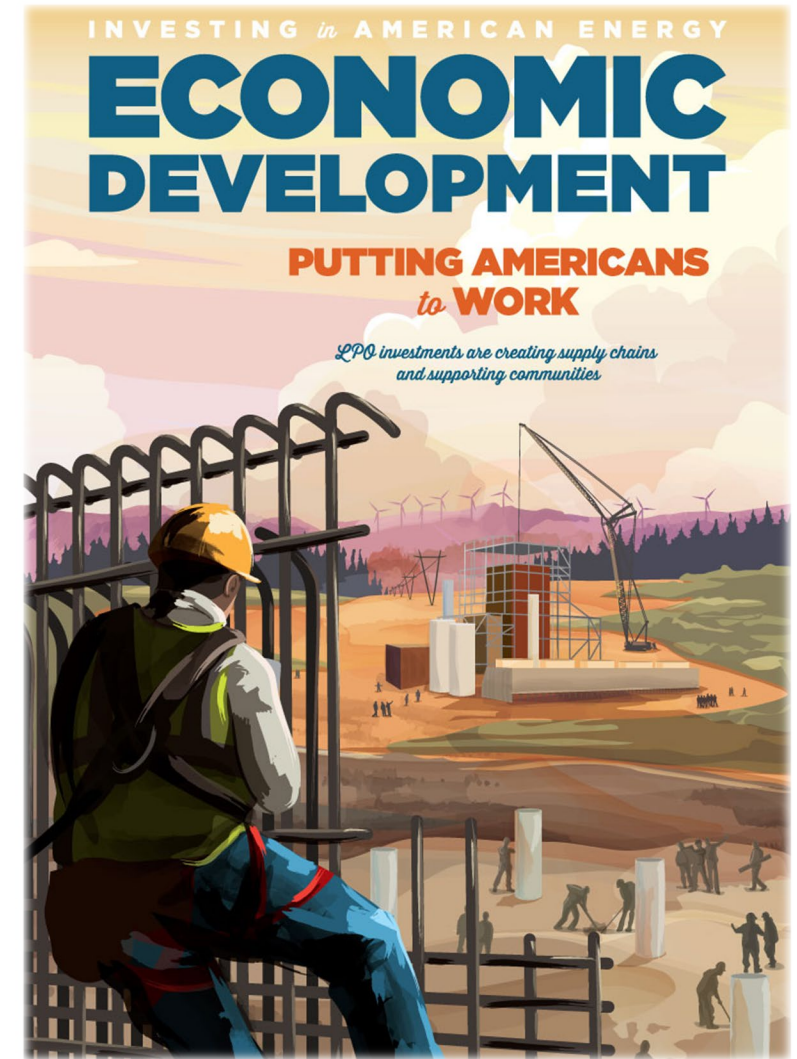
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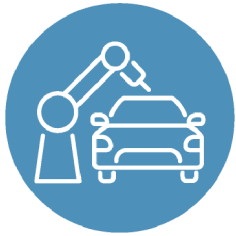
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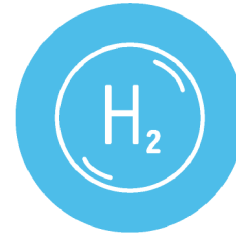
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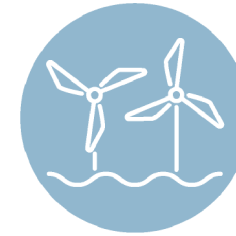
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Deployment • Manufacturing



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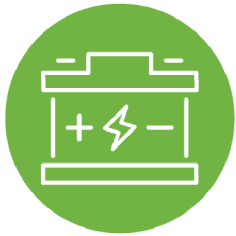
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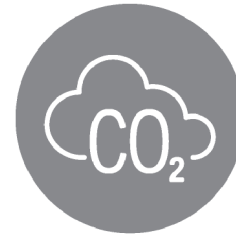
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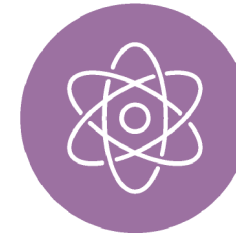
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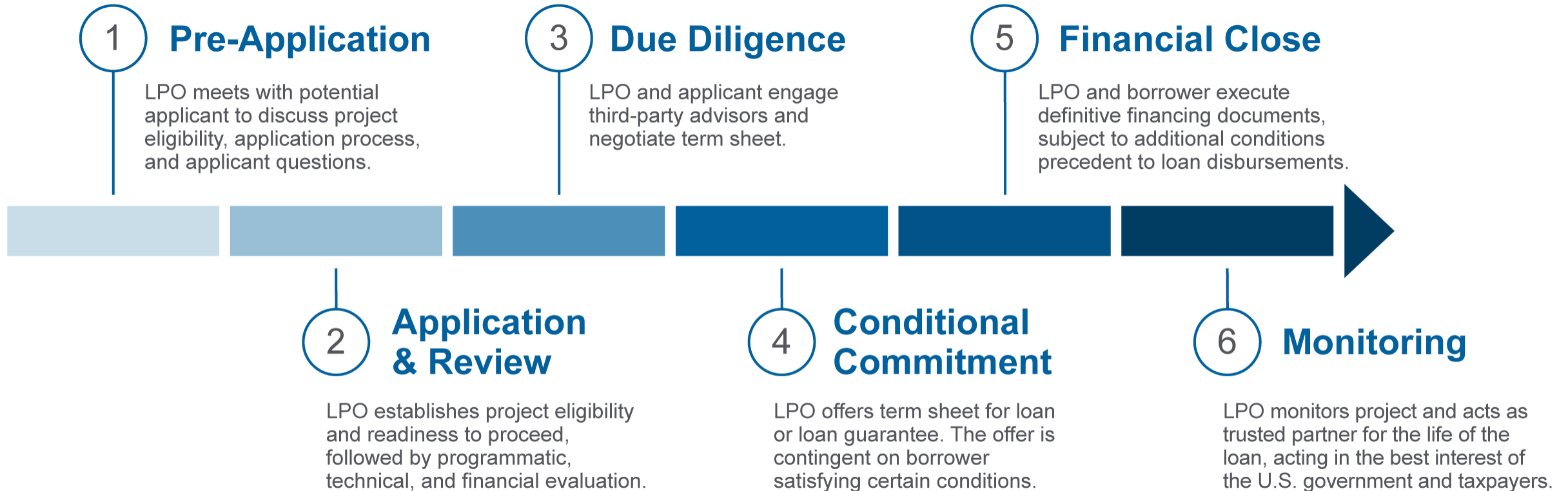


## Tribal Energy

Energy Development Projects •  
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





# Title 17 Clean Energy Financing

(Title 17)

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

## Four Project Categories

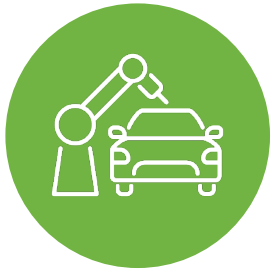
1. Innovative Energy (1703)
2. Innovative Supply Chain (1703)
3. State Energy Financing Institution (SEFI)-Supported (1703)
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## Project Eligibility

1. Project located in the United States.
2. Be an energy project.
3. Achieve significant and credible GHG or air pollution reductions.
4. Have a reasonable prospect of repayment.
5. Involve technically viable and commercially ready technology.
6. Include a Community Benefits Plan.

## Loan Guarantee Features

- LPO can offer 100% guarantee of U.S. Treasury's Federal Financing 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 or structured corporate financing.



# Advanced Transportation Financing (ATVM)

Manufacturing of vehicles, components, and EV charging infrastructure

## Project Eligibility

1. New facilities or reequip/modernize/expand existing facilities in the U.S. and/or related engineering integration for eligible vehicles
2. Light-duty vehicles that meet specified fuel economy requirements or ultra-efficient vehicles.
3. Manufacturing lending authority has been expanded to the manufacturing of medium- and heavy-duty vehicles, locomotives, maritime vessels including offshore wind vessels, aviation, and hyperloop.
4. Applicable across the value chain including materials, components, suppliers, OEMs, EV charging or alternative fueling infrastructure.

## Direct Loan Features

- Direct loan from U.S. Treasury's Federal Financing Bank (FFB).
- Senior secured, fixed rate debt.
- Pricing equal to U.S. Treasury-equivalent yield curve with zero credit spread.
- Debt amount based on credit profile, business plan, market risk, technology, cash flows, project risk allocation and other relevant factors.
- Tenor of up to 25 years or useful life of the assets financed.
- DOE can serve as sole lender or as a co-lender.
- Structures may include corporate, structured corporate or project finance loans.



# Tribal Energy Financing

(TELGP)

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

## Project Eligibility

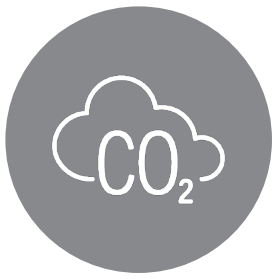
**TELGP can consider tribal energy projects that:**

1. Are owned by a tribe or entity that is majority tribally owned and controlled.
2. Are seeking direct loans 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 of Interest

**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



# CO<sub>2</sub> Transportation Infrastructure Financing (CIFIA)

Financing via the CO<sub>2</sub> Transportation Infrastructure Finance & Innovation Program

## Summary

- Enacted under the Bipartisan Infrastructure Law
- CIFIA program offers access to capital for large-capacity, common-carrier carbon dioxide (CO<sub>2</sub>) transport projects, such as pipelines, rail, shipping, and other transport methods.
- Administered in partnership with DOE's Office of Fossil Energy and Carbon Management (FECM).
- Builds on other CCUS provisions of the BIL with up to \$2.1 billion to support loans, loan guarantees, grants, and administrative expenses to enable deployment of common carrier CO<sub>2</sub> transportation infrastructure.

## Example Projects

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

- Carbon capture, utilization, and storage (CCUS)
- Direct air capture (DAC)