



LPO
Loan Programs Office

LPO Overview & Title 17 Clean Energy Financing

Webinar: Capacity Building for Energy Assets

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Senior Consultant

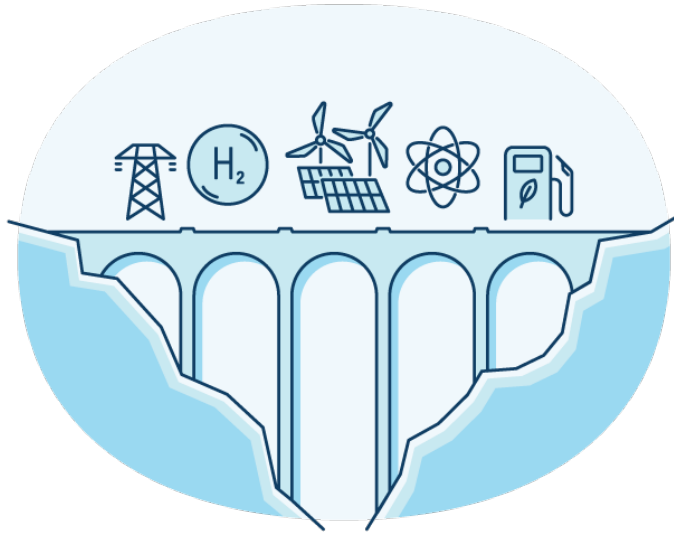
November 14, 2024



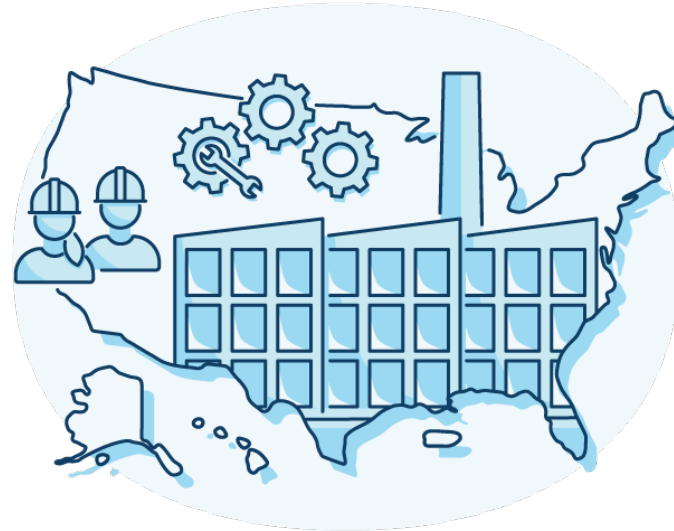
LPO
Loan Programs Office

Updated 22 January 2024

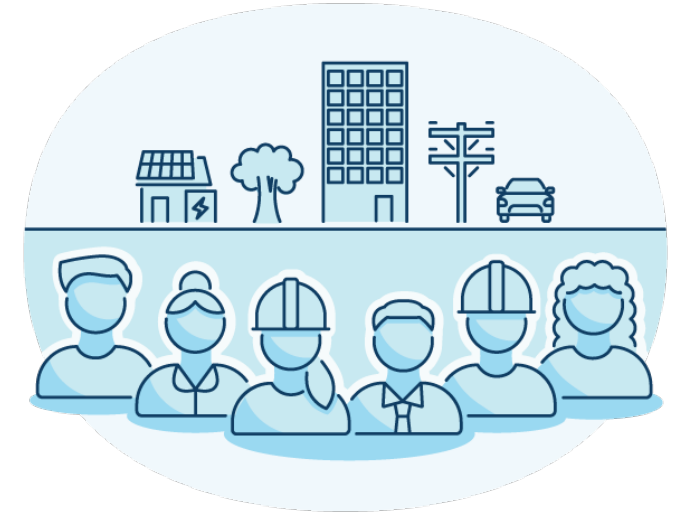
LPO Administers Loan Programs that:



Provide a bridge to bankability for emerging clean energy and decarbonization technologies on a path to commercial liftoff



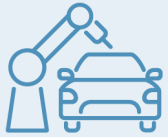
Enable the expansion of domestic manufacturing and supply chains to support a cleaner and stronger energy economy



Make the clean energy transformation affordable and achievable for workers, consumers, and communities who stand to benefit from LPO support

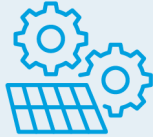
The Next Generation of LPO Financing

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



Advanced Vehicles & Components

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



Clean Energy Supply Chain

- Solar Manufacturing Supply Chain •



Clean Fuels & Products

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



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 •



Renewables Deployment

- Geothermal • Hydrokinetics • Hydropower • Repowering Onshore Wind • Other Renewables Deployment •



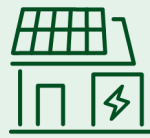
Storage

- 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 •



Virtual Power Plants

- Connected Distributed Energy Resources (DERs) •



Advanced Fossil

- Carbon Feedstock Waste Conversion • Fossil Infrastructure Repurposing & Reinvestment • Hybrid Generation • Hydrogen Generated From Fossil Sources • Synfuel •



Carbon Management

- Carbon Capture & Storage (CCS) • Carbon Dioxide Removal (CDR) • Direct Air Capture (DAC) • Industrial Decarbonization • CO₂ Transportation Infrastructure •



Advanced Nuclear

- Advanced Nuclear Reactors • Micro Reactors • Nuclear Fuel Cycle • Nuclear Supply Chain • Nuclear Upgrades & Upgrades • Small Modular Reactors (SMRs) •



Tribal Energy

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



LPO Recent Loan Activity: Over \$37.3 Billion in Deals

Conditional Commitments & Financial Closings (1 Jan 2021 – 31 Oct 2024)

Since January 2021, 28 projects have reached financial close (solid banners) or conditional commitment.¹

Title 17 Clean Energy Financing

	Monolith	\$1,040 MM • Dec 2021 • (1703)
	ACES	\$504.4 MM • Jun 2022 • (1703)
	Eos	\$398.6 MM • Aug 2023 • (1703)
	Hestia	\$3,000 MM • Sep 2023 • (1703)
	Plug Power	\$1,660 MM • May 2024 • (1703)
	Bioforge	\$213.6 MM • Jun 2024 • (1703)
	IRG Erie	\$182.6 MM • Jul 2024 • (1703)
	Qcells	\$1,450 MM • Aug 2024 • (1703)
	Wabash	\$1,559 MM • Sep 2024 • (1703)
	Palisades	\$1,520 MM • Sep 2024 • (1706/EIR)
	EVgo	\$1,050 MM • Oct 2024 • (1703)
	Marahu	\$861.3 MM • Oct 2024 • (1706/EIR)
	GEVO NZ-1	\$1,460 MM • Oct 2024 • (1703)
	Montana	\$1,440 MM • Oct 2024 • (1706/EIR)
	LongPath	\$189.0 MM • Oct 2024 • (1703)

Over
\$16.5 Billion
in Committed
Title 17
Project
Financing²

Over
\$20.7 Billion
in Committed
ATVM Project
Financing²

Advanced Transportation Financing (ATVM)

Syrach Vidalia	\$102.1 MM • Jul 2022	
Ultium Cells	\$2,500 MM • Dec 2022	
Rhyolite Ridge	\$700 MM • Jan 2023	
Redwood Materials	\$2,000 MM • Feb 2023	
Li-Cycle	\$375 MM • Feb 2023	
KORE Power	\$850 MM • Jun 2023	
BlueOval SK	\$9,200 MM • Jun 2023	
SK Siltron	\$544 MM • Feb 2024	
Cellink	\$362 MM • Apr 2024	
ENTEK	\$1,200 MM • Jul 2024	
Aspen Aerogels	\$670.6 MM • Oct 2024	
Thacker Pass	\$2,260 MM • Oct 2024	

\$72.8 MM
in Committed
Tribal Energy
Project
Financing²



Tribal Energy Financing

Viejas Microgrid \$72.8 MM • Sep 2024

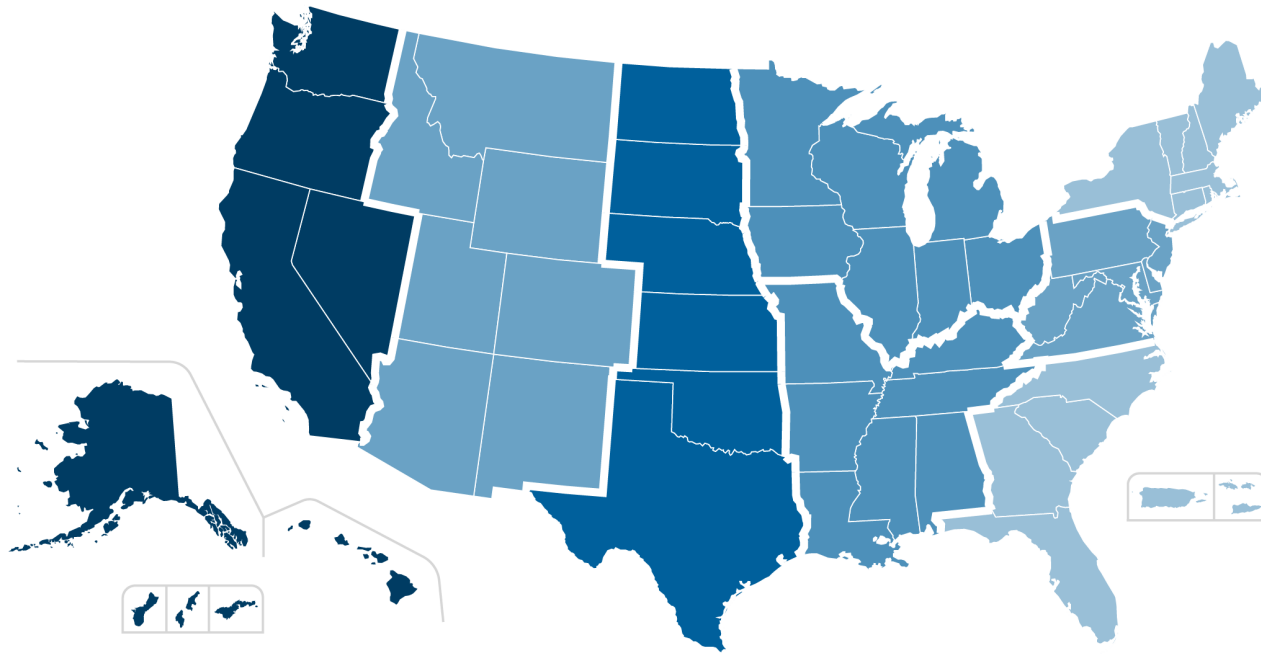
Notes

All data updated as of October 31, 2024. For more details and a list of LPO's entire project portfolio, including conditional commitments, see: [Energy.gov/LPO/Projects](https://www.energy.gov/LPO/Projects)

- All figures are exclusive of discontinued projects, inactive conditional commitments, and projects that closed on loans but received no disbursement.
- Totals include capitalized interest where applicable. Note that in making an obligation of use of loan authority, DOE does not include capitalized interest in those amounts.



OCTOBER 2024



210 ACTIVE APPLICATIONS¹ WITH
263 PROPOSED PROJECT LOCATIONS
 ACROSS ALL REGIONS OF THE U.S.²

WEST	AK, CA, HI, NV, OR, WA (AS, GU, MP)	58
PLAINS	KS, ND, NE, OK, SD, TX	39
MIDWEST	IA, IL, IN, MI, MN, OH, WI	32
SOUTH	AL, AR, KY, LA, MO, MS, TN	31
MID-ATLANTIC	DE, MD, NJ, PA, VA, WV (DC)	29
MOUNTAIN	AZ, CO, ID, MT, NM, UT, WY	27
NORTHEAST	CT, MA, ME, NH, NY, RI, VT	24
SOUTHEAST	FL, GA, NC, SC (PR, VI)	23

Notes

All data updated as of October 31, 2024. 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. Active application count does not include publicly announced conditional commitments.
- 2) Regions depicted are for representation purposes only and are not meant to denote LPO consideration of regional variation in project evaluation.



**TITLE 17
CLEAN ENERGY
FINANCING
(1703 & 1706)**

Title 17 Clean Energy Financing Program

- **Innovative Energy Projects**
- **Innovative Supply Chain Projects**
- **State Energy Financing Institution (SEFI)-Supported Projects**
- **Energy Infrastructure Reinvestment (EIR) Projects**

Title 17 Program Eligibility

All Projects Must:

1. Be located in the United States, territories, or possessions.
2. Be an energy-related 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.
7. Not benefit from prohibited federal support.

Category-Specific Requirements:

Projects must also meet additional requirements specific to their category:



Innovative Energy (1703)



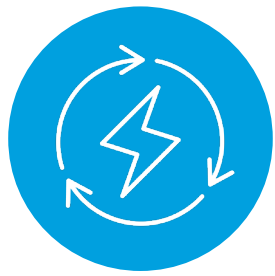
Innovative Supply Chain (1703)



State Energy Financing Institutions (1703)



Energy Infrastructure Reinvestment (1706)



Energy Infrastructure Reinvestment (NEW)1706

Financing to leverage existing U.S. energy infrastructure for the clean energy future

Project Eligibility

In addition to meeting the common Title 17 eligibility requirements, EIR projects must:

1. Retool, repower, repurpose, or replace energy infrastructure that has ceased operations, **OR**
2. Enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases.

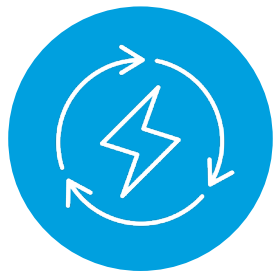
What is “Energy Infrastructure”?

A facility, and associated equipment, used for:

- The generation or transmission of electric energy;
- OR**
- The production, processing, and delivery of fossil fuels, fuels derived from petroleum, or petrochemical feedstocks.

Notes

- EIR projects **DO NOT** have an innovation requirement.
- Conditional commitments must be issued by **September 30, 2026**.
- **Environmental remediation costs and refinancing outstanding indebtedness directly relevant to the energy infrastructure** can be eligible for EIR financing as part of a larger reinvestment plan.



Energy Infrastructure Reinvestment

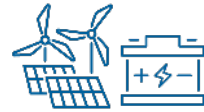
1706

Financing to leverage existing U.S. energy infrastructure for the clean energy future

Example Projects

Power plant (or associated infrastructure) retooled, repowered, repurposed or replaced with:

- Renewable energy (and storage)
- Distributed energy (e.g., VPPs)
- Transmission interconnection to off-site clean energy
- New manufacturing facilities for clean energy products or services
- Nuclear generation



- Reconductoring transmission lines and upgrading voltage
- Installing emissions control technologies, including carbon capture and sequestration (CCS)
- Repurposing oil and gas pipelines (e.g., for H₂, CO₂)
- Upgrading refineries for biofuels or hydrogen
- Upgrading or uprating existing generation facilities (with emissions control technologies for projects involving fossil generation)



Title 17 Lending Overview

Loan Guarantee Features

- No minimum or maximum loan size
- Total loan amount up to 80% of eligible project costs.
- Loan guarantees (up to 100%) of U.S. Treasury's Federal Financing Bank (FFB) loans, or partial guarantees (up to 90%) of commercial loans
- Applicants **do not** apply directly to FFB; Title 17 loan applications are managed through LPO
- Typically structured as project financing, but LPO can accommodate other structures.

Loan Products

- Direct loan from FFB backed by 100% "full faith and credit" DOE guarantee
- DOE partial guarantee of commercial debt from Eligible Lenders

Interest Rates and Fees

Interest Rate (for FFB loans)

- Treasury + 3/8ths (0.375%) + risk-based charge
- Treasury rate is fixed according to loan tenor (maximum 30 years)

No Application Fees

Transaction Costs

- External advisor fees

Fees

- Facility fee (0.6% on first \$2.0bn, 0.1% for excess; required at financial close)
- Maintenance fee (required annually post-closing)



Community Benefits Plans

Four Priorities for Every Plan

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

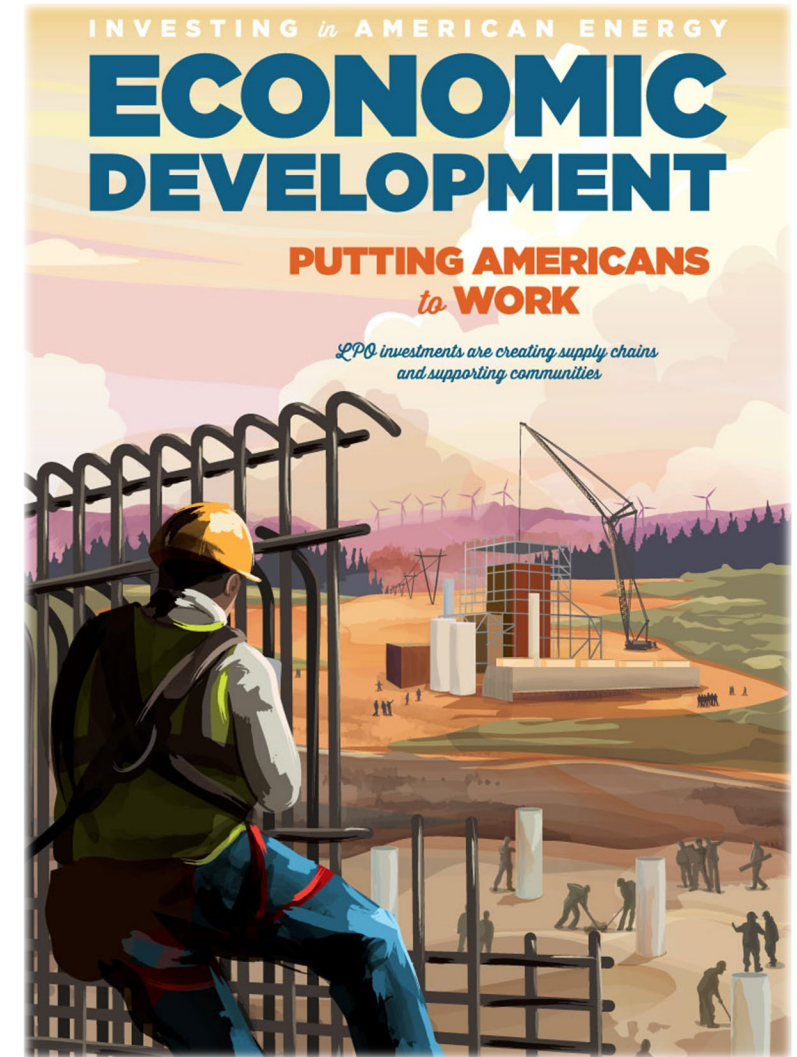
Equitable access to wealth building opportunities, strengthening ties with the community, diversifying supply chains, and contributing to the health and robustness of the surrounding community.

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.

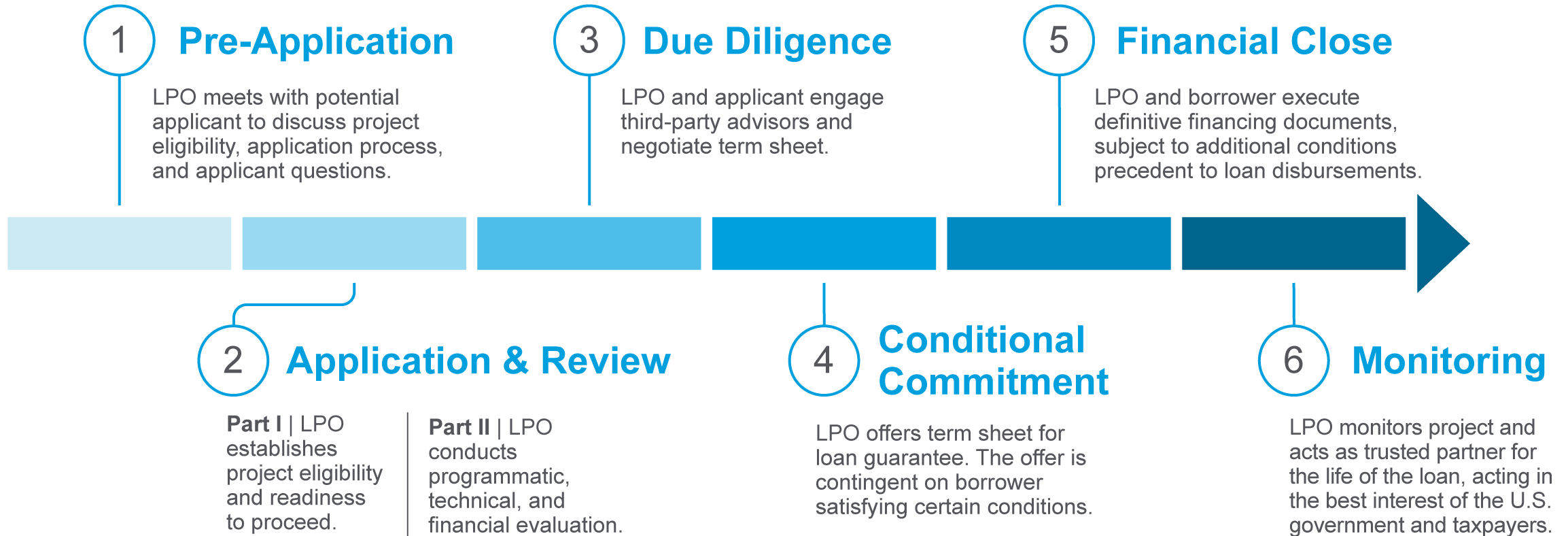
4. Community & Labor Engagement

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



Title 17 Loan Transaction Process

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



Before Applying for LPO Financing

Top 10 Questions

All Applicants Should Ask Before Applying to LPO

- ✓ Adequate project size?
- ✓ Offtake commitments?
- ✓ Development capital & project equity?
- ✓ Technological readiness?
- ✓ Commercial readiness?
- ✓ Environmental review?
- ✓ Site control & regulatory approval?
- ✓ Experience level of management?
- ✓ Emissions analysis?
- ✓ Projected community benefits?

Let's Talk About Your Project

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

Questions?



To **schedule** a no-fee, pre-application consultation, go to:
[Energy.gov/LPO/Pre-App](https://www.energy.gov/LPO/Pre-App)

Call or **write** the LPO Team: **202-287-5900** | LPO@hq.doe.gov



Download the full Title 17 Guidance document at: [Energy.gov/LPO/Clean-Energy](https://www.energy.gov/LPO/Clean-Energy)

Learn more about LPO and all of its financing programs at: [Energy.gov/LPO](https://www.energy.gov/LPO)