



The Path

How An Application Becomes A Loan

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External

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Agenda

- **What LPO Does**
- **How LPO Engages Borrowers**
- **LPO Technical & Environmental Reviews**
- **LPO's Loan Origination Considerations**
- **Questions**



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



177

ACTIVE APPLICATIONS¹

\$157.1

BILLION IN LOANS REQUESTED²

2.1

NEW APPLICATIONS PER WEEK³

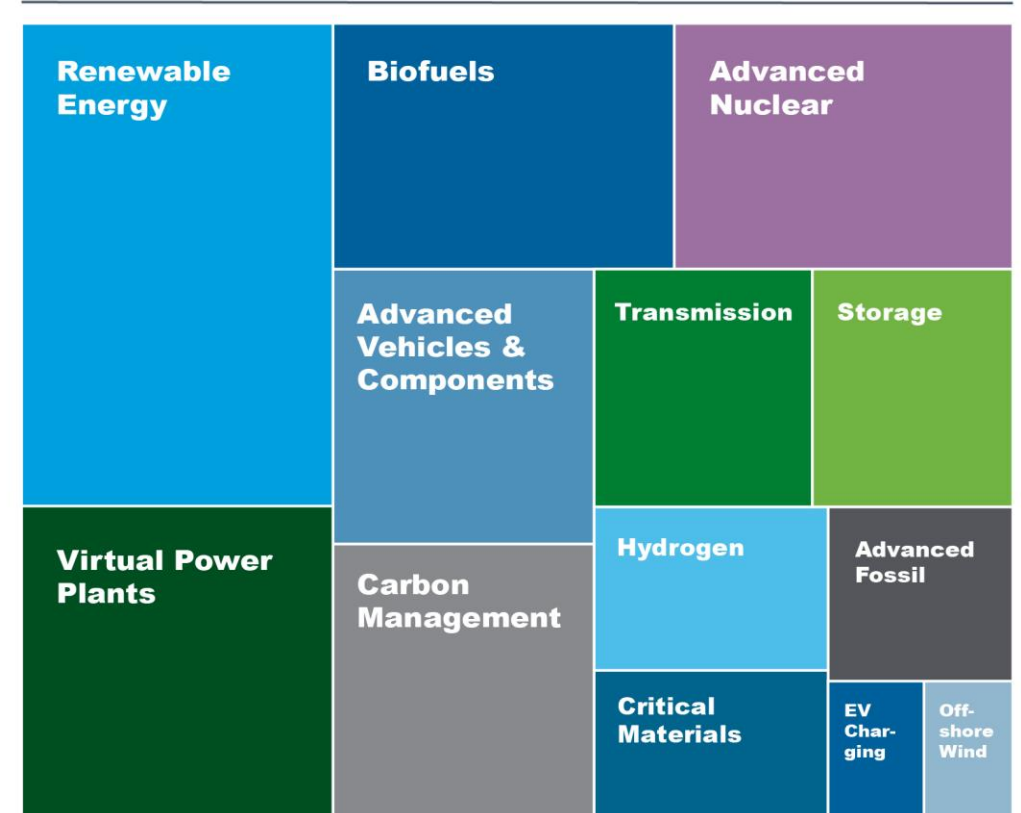
Notes

All data updated through September 30, 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)

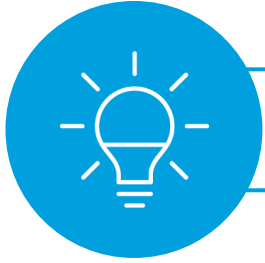
- 1) Active applications include applications that have been submitted by the project sponsor(s) through LPO's online application portal and are in different stages of active review and engagement by LPO and the applicant.
- 2) Individual requested loan amounts are estimated and potential, subject to 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.

\$157.1 BILLION

CURRENT AMOUNT OF LOANS REQUESTED BROKEN DOWN BY PROJECT TECHNOLOGY SECTORS



LPO Financing Programs



Title 17 Clean Energy (Title 17)

Financing for:

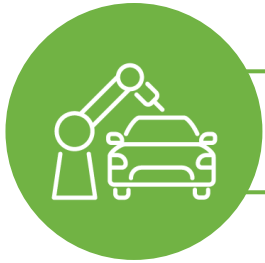
- Innovative Energy & Innovative Supply Chain (1703)
- State Energy Financing Institution (SEFI)-Supported (1703)
- Energy Infrastructure Reinvestment (EIR, 1706)



Tribal Energy (TELGP)

Financing for:

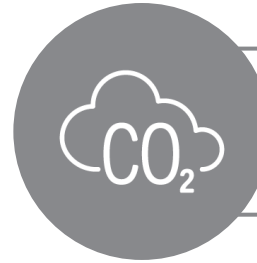
- Tribal energy development projects



Advanced Transportation (ATVM)

Financing for:

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

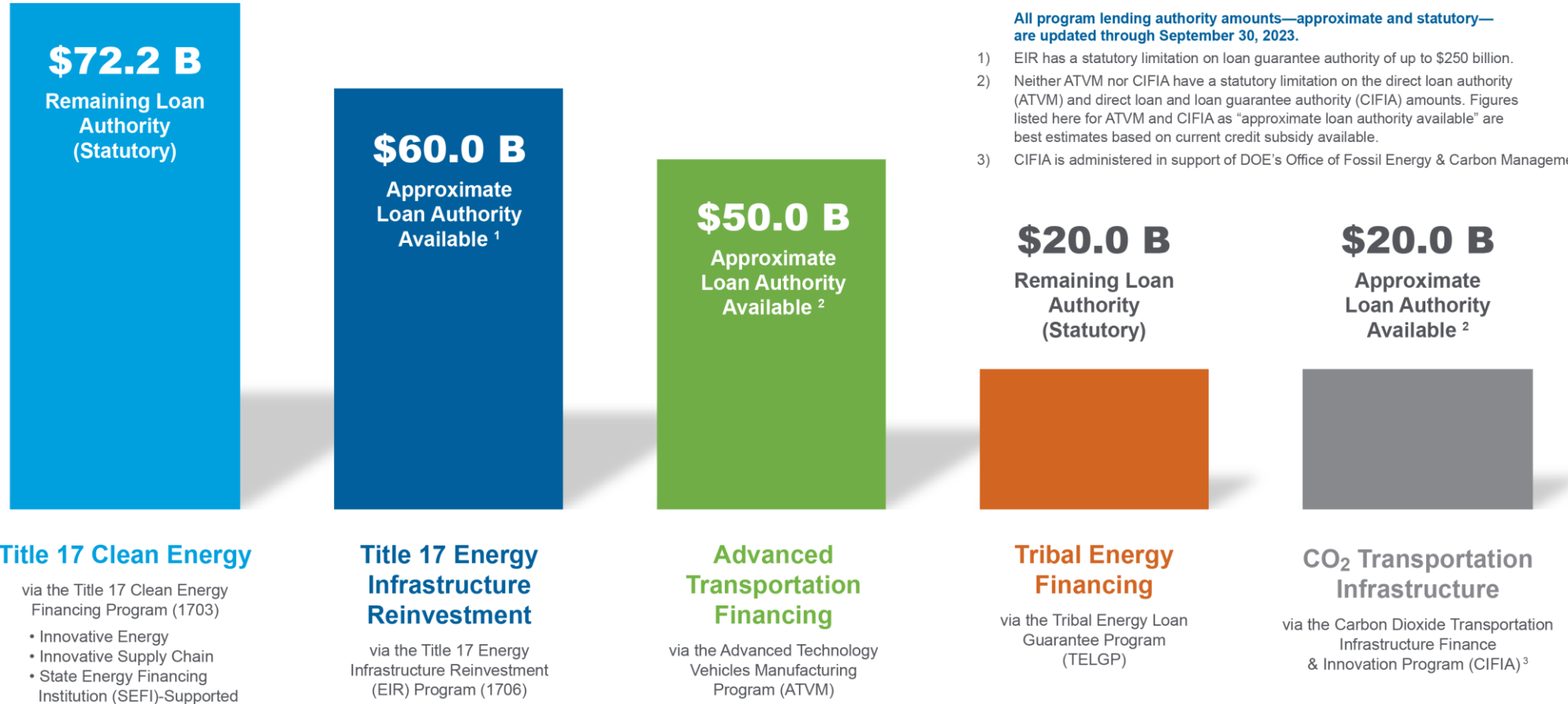


CO₂ Transportation Infrastructure (CIFIA)

Financing for:

- Large-capacity, common carrier CO₂ transportation projects

Estimated Remaining Loan Authority for LPO Financing Programs



Notes

All program lending authority amounts—approximate and statutory—are updated through September 30, 2023.

- 1) EIR has a statutory limitation on loan guarantee authority of up to \$250 billion.
- 2) Neither ATVM nor CIFIA have a statutory limitation on the direct loan authority (ATVM) and direct loan and loan guarantee authority (CIFIA) amounts. Figures listed here for ATVM and CIFIA as “approximate loan authority available” are best estimates based on current credit subsidy available.
- 3) CIFIA is administered in support of DOE’s Office of Fossil Energy & Carbon Management.

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.

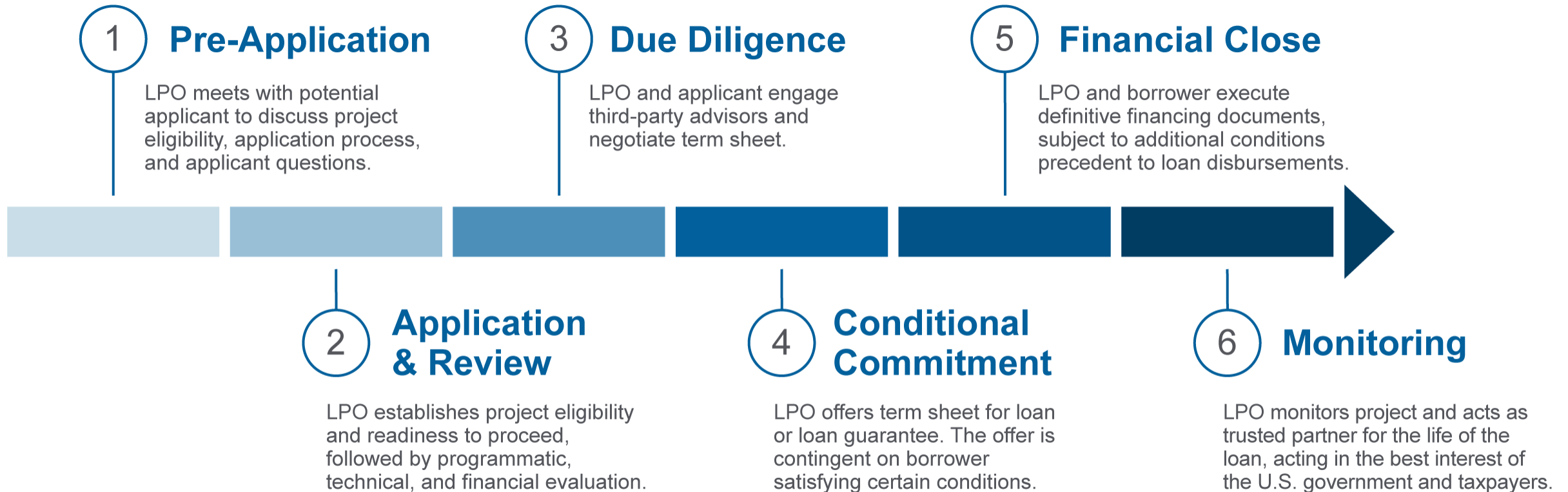


Committed DOE Partnership

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

The LPO Loan Transaction Process

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



Application and Review

Part I Application Review

Determine if the project is ready to proceed and meets eligibility requirements, including the following:

- Qualifies as an eligible technology
- Avoids/Reduces GHG
- Is located in the USA
- Is part of comprehensive business plan
- Meets technical eligibility requirements

→ If eligible: then applicant is invited into Part II

Part II Application Review

Determine if the project meets the reasonable prospect of repayment, in light of:

- Strength of the contractual terms
- Forecasted cashflows
- Financial strength of the borrower
- Financial strength of the investors
- Attention to management of risks (including through community benefits plans)
- Other financial metrics and analyses

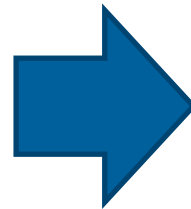
→ If viable: then applicant is invited into Due Diligence

Due Diligence - Process

- Gates to get to Due Diligence:
 - Part 1: Does this application meet the statutory requirements of the program?
 - Part 2: How well does this application meet the technical objectives of the program; is it commercially viable and is it ready to proceed to due diligence?
- Due Diligence: Analysis and modeling of the technical and commercial aspects of the project by LPO and our advisors; Negotiation and structuring of the loan terms;

Diligence analyses includes:

- Clear understanding of:
 - Technology (innovative but commercially viable)
 - Market (contracted or uncontracted)
 - Major parties involved (sponsor, construction, suppliers, customers, other lenders...)
 - Environmental and community plans
 - Policy considerations;
- Detailed description of project
- Equity plan
- Risks and mitigants

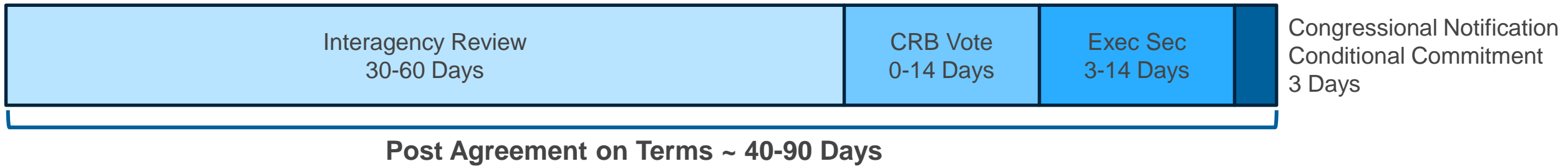


Completed Due Diligence result in:

Shared with applicant

- Financial model (base case and sensitivities)
 - Term Sheet
 - Final Rating agency rating based on final structure
- Internal to DOE / Interagency
- Third-Party Reports where applicable
 - Risk and Recovery Matrices
 - Credit Subsidy Calculation
 - Credit Paper
 - Transaction Summary (Power Point Slides)

Due Diligence – Completion to Conditional Commitment



Completed diligence goes through a series of approvals inside and outside of LPO

- Signoff to launch interagency by the Credit Review Board (CRB). Interagency review involves:
 - OMB - focused on adequacy of credit subsidy calculation and compliance with statutes and law
 - Treasury – focused on terms and conditions
 - Submission of material and briefing to both agencies
 - Written Q&A from both agencies
- CRB vote → Exec Sec process → Congressional Notification
- Conditional Commitment signed by the Secretary
 - Public announcement coordinated with applicant
 - Cost of loan to the government obligated

Conditional Commitment to Financial Close

Closing

- The Conditional Commitment term sheet needs to become a loan agreement. This is a legal undertaking with input from applicant and LPO deal team to properly capture implementation of terms.
- Completion and review of all agreements identified in the term sheet.
- Receipt of final rating agency rating based on agreed term sheet
- Detailed requirements for close and first advance
 - DOE approval of subsequent advances and changes
 - Sponsor support for delays, overruns, performance variances and what constitutes project completion
 - Required reporting, other lender rights
- Revisit interagency process to confirm changes, establish note with Federal Finance Bank, final Exec Sec signoff

The closing process can be as short as 60 days or much longer

First Advance

- Based on achieving the agreed upon CPs. Can be concurrent with Close or at a significantly later date. Must always be after completion of NEPA.

Applicants

What contributes to an application that is likely to move quickly and effectively through DD

- Measurable technical innovation and GHG reduction
- A clear plan
 - For equipment sourcing, material sourcing, construction, ownership and equity sourcing, contract negotiation, permitting, offtake or marketing, future expansion or other higher likelihood changes
- Experienced and complete management team
 - Advisors as necessary (outside counsel familiar with this type of debt, financial advisor with debt and modeling experience, borrowers engineer to competently support the Part 2 with a report and the project through DD)
- Responsiveness
 - Efficiently turning around DOE and advisor questions, models, documents
- Trust in DOE – we are looking for a way to fund the projects that meet our policy objectives
- Establishing trust from DOE – be transparent and forthright, both to get to close and for the 7 to 30 years of construction and repayment

The due diligence process with a well prepared applicant can be as short as 6 months or less to interagency launch and without can be a year or longer

LPO Under IRA and BIL

LPO requirements and areas of focus

- Projects that are impactful and catalytic
- Strong community benefits plan
- Must have NEPA complete by first advance (ideally sooner)
- Must have Davis Bacon for wages during construction
- Must transport foreign sourced capital equipment compliant with Cargo Preference Act

LPO goals and applicant misconceptions

- We can take diligenced market / merchant risk
- Timing of equity
- Planned flexibility
- Not horse trading
- Skin in the game and alignment of interests
- Risk Based Charge and Credit subsidy costs
- What LPO pays for and what the applicant pays for
- Purpose of rating agency preliminary and final rating





Let's Talk About Your Project

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



Schedule a no-fee, pre-application consultation:
[Energy.gov/LPO/Pre-App](https://www.energy.gov/LPO/Pre-App)



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

Questions? Call: **202-287-5900** or Email: **LPO@hq.doe.gov**

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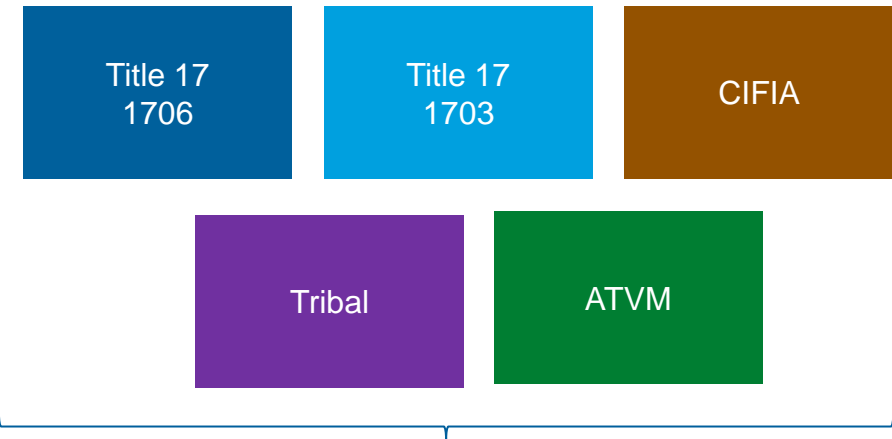


APPENDIX

Pre-Application Consultation to Loan Application

During pre-application consultations, LPO will:

- Discuss project eligibility, including the appropriate Title 17 project category;
- Assess whether the project is ready to proceed with a Title 17 application;
- Discuss the phases of the process to obtain a Title 17 loan guarantee; and
- Answer questions that the potential applicant may have.



Each program has slightly different requirements and features. OBD will help applicants understand these nuances and provide consultation on how to apply.

Working Through Technical & Environmental Reviews

Technical

Eligibility | Construction/Operational Risks



- Clear case and understanding of eligibility
- Pace of review depends on project scope definition quality
- GHG LCA (Title XVII): "Cradle-to-grave" emission analyses
- Risks/mitigations to assess reasonable prospect of repayment
- Project construction, operation management plans

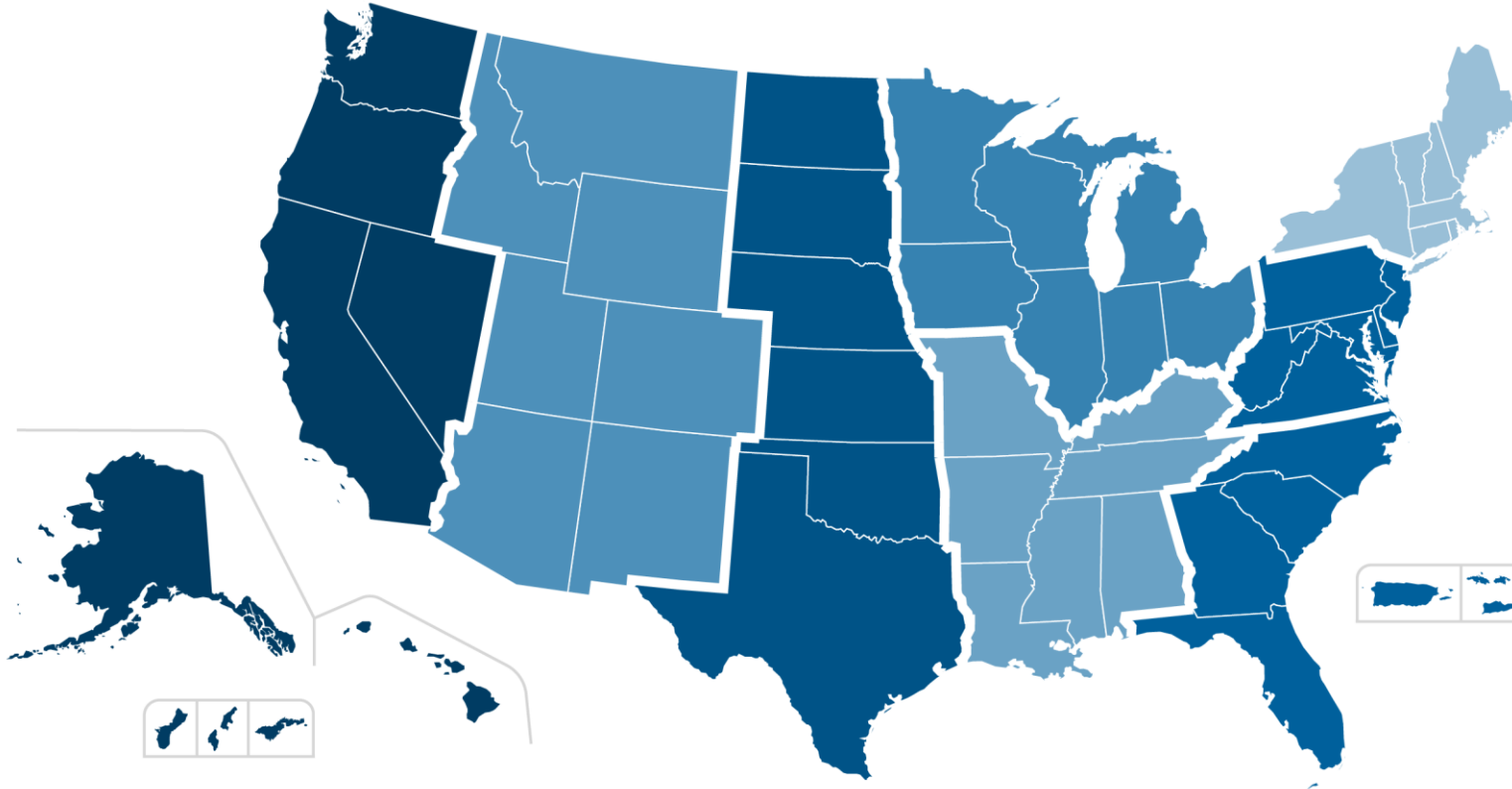
We will be working with you from intake → final repayment

Environmental

- The National Environmental Policy Act (NEPA) is a statutory process that must be completed prior to loan closing
- Keys to applicant success:
 - Well-defined project scope
 - Permitting
 - Take the time to read LPO's guidance on NEPA

Ongoing Portfolio Monitoring

- The Portfolio Management Division (PMD) leads LPO's loan monitoring process from hand-off from Origination after closing through the end of a loan term.
- PMD serves as the **principal liaison** between the borrower and LPO post-close.
- PMD **collaborates** with in-house technical, environmental, risk management, and legal experts as well as outside advisors with the goal of ensuring project success throughout its operating life.
- PMD is a **long-term partner** with its borrowers; with the objective of maximizing the return to the U.S. taxpayer while ensuring project success.
- PMD conducts proactive **surveillance** on the loan portfolio and routinely assesses the credit risk of its borrowers.
- When borrowers present warning signs of distress, PMD **acts** by leading **workout and remediation efforts** to maximize recoveries.



177 ACTIVE APPLICATIONS¹ WITH
216 PROPOSED PROJECT LOCATIONS
 ACROSS ALL REGIONS OF THE U.S.²

WEST	AK, CA, HI, NV, OR, WA (AS, GU, MP)	54
PLAINS	KS, ND, NE, OK, SD, TX	31
MID-ATLANTIC	DE, MD, NJ, PA, VA, WV (DC)	24
SOUTHEAST	FL, GA, NC, SC (PR, VI)	24
MIDWEST	IA, IL, IN, MI, MN, OH, WI	23
MOUNTAIN	AZ, CO, ID, MT, NM, UT, WY	22
SOUTH	AL, AR, KY, LA, MO, MS, TN	20
NORTHEAST	CT, MA, ME, NH, NY, RI, VT	18

Notes

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- 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.
- 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

(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)
4. Energy Infrastructure Reinvestment (EIR) (1706)

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

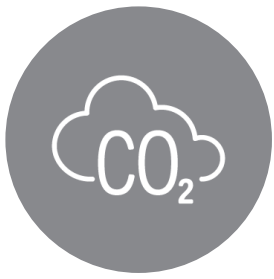
TELGP can consider tribal energy projects that:

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



CO₂ Transportation Infrastructure Financing (CIFIA)

Financing via the CO₂ 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 (CO₂) 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 CO₂ transportation infrastructure.

Example Projects

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

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

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

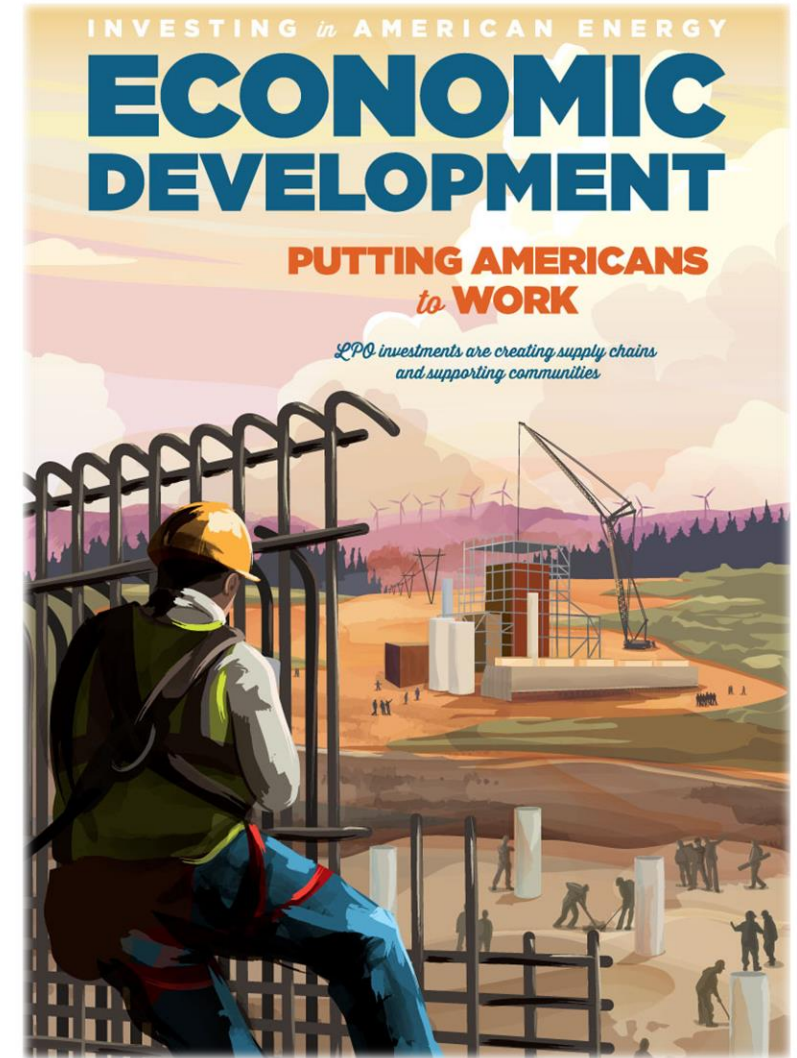
Equitable access to wealth building opportunities, strengthening ties with the community, diversifying supply chains, and contributing to the health and robustness of the surrounding community.

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



Virtual Power Plants

Connected Distributed Energy
Resources (DERs)



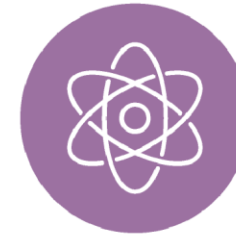
Advanced Fossil

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

Small Modular Reactors • Micro
Reactors • Nuclear Supply Chain •
Nuclear Front-End



Tribal Energy

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