

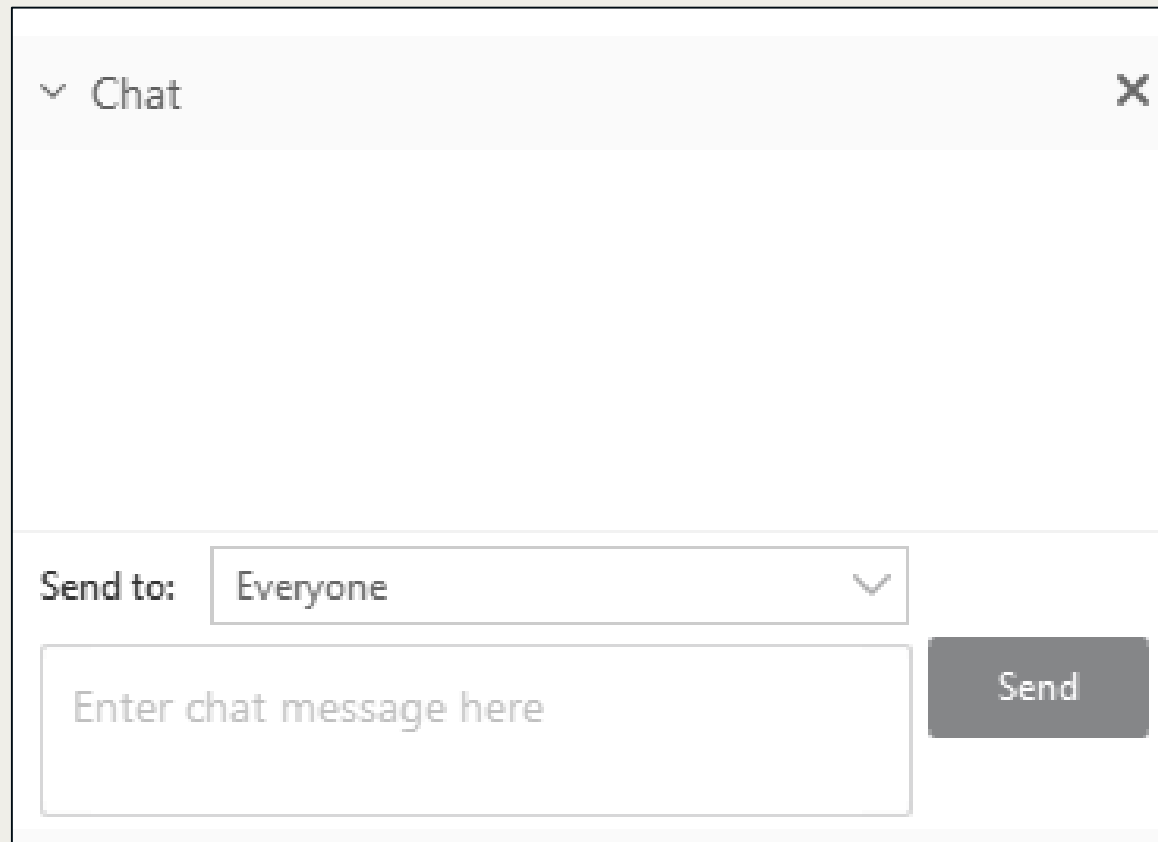


U.S. DEPARTMENT OF ENERGY **LOAN PROGRAMS OFFICE**

Michael C Reed
Director / Chief Engineer
Technical and Project Management Division
Loan Programs Office

Question and Answer

Please type your questions to the chat box. Send to: (HOST)



Chat

Send to: Everyone

Enter chat message here

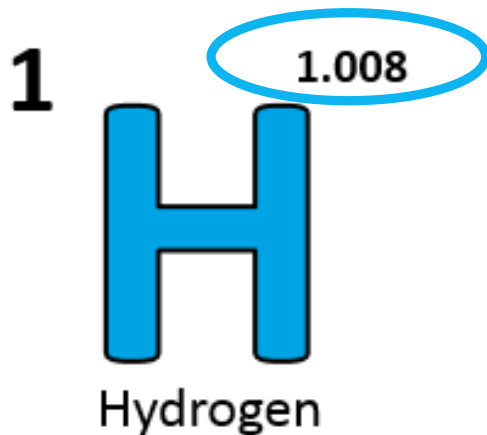
Send

Celebrate Hydrogen & Fuel Cell Day

October 8 or 10/8

(Held on its very own atomic- weight-day)

Ways you can get involved:

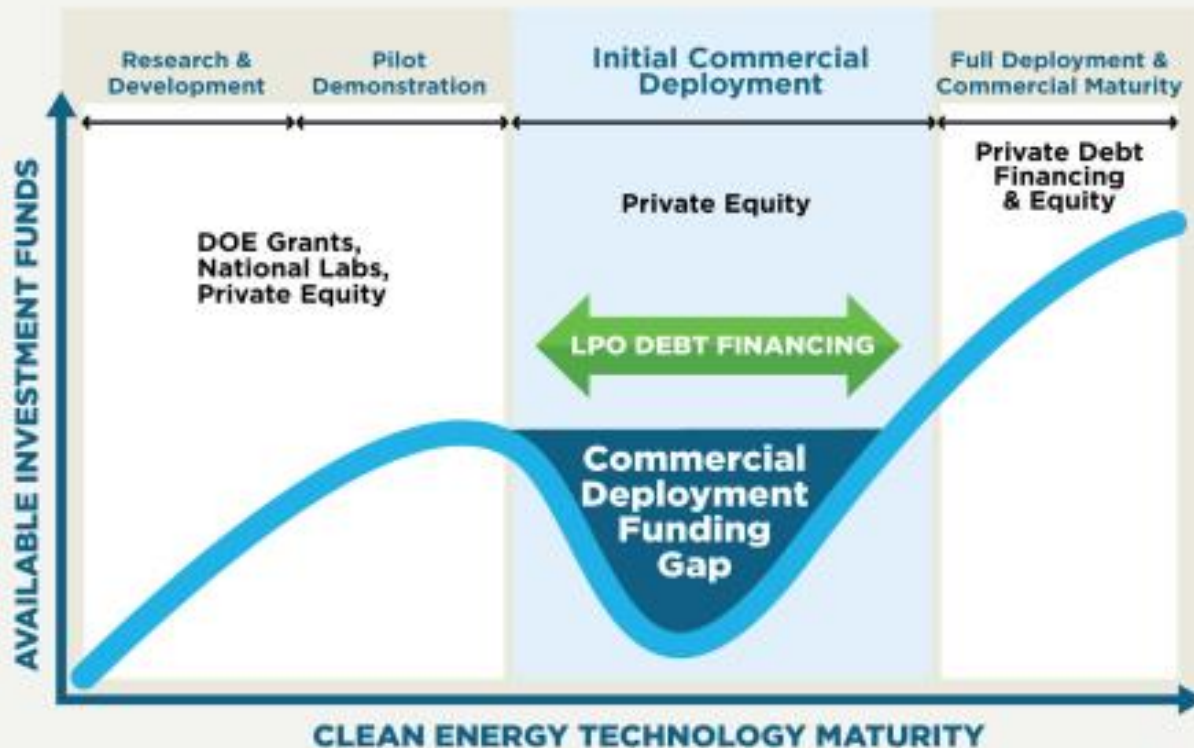


- Download our [Increase your H2IQ](https://www.energy.gov/eere/fuelcells/downloads/increase-your-h2iq-training-resource) training resource and share hydrogen and fuel cells information (visit: <https://www.energy.gov/eere/fuelcells/downloads/increase-your-h2iq-training-resource>)
- Use hashtags **#FuelCellsNow** and **#HydrogenNow** for social media activity
- Host a **1.008 mile educational walk**
- Visit **H2Tools.org** to learn more about hydrogen safety

Learn more at: [energy.gov/eere/fuelcells](https://www.energy.gov/eere/fuelcells)

LPO's Value in the Commercialization of Innovative Technologies

BRIDGING THE GAP



LOAN PROGRAMS

TITLE XVII

INNOVATIVE CLEAN ENERGY PROJECTS



- Loan Guarantees
- Open Technology-Specific Solicitations

ATVM

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING



- Direct Loans
- Rolling Application Deadlines

TELGP

TRIBAL ENERGY LOAN GUARANTEE PROGRAM

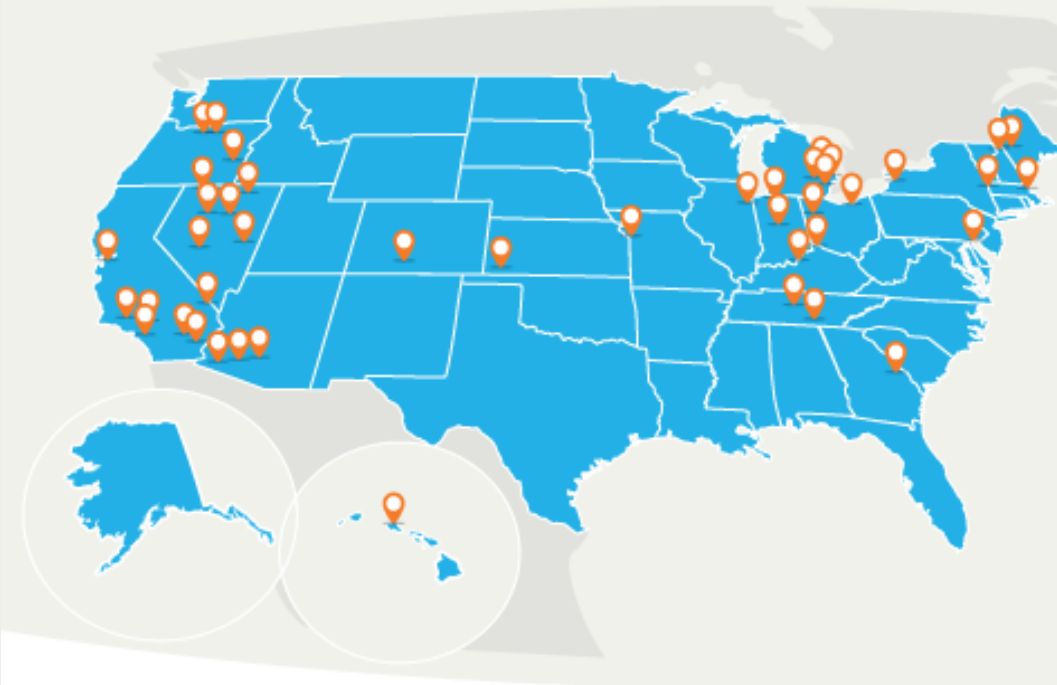


- Partial Loan Guarantees
- Open Solicitation

The Loan Programs Office (LPO) was created by Congress in 2005 to assist with the *deployment* of innovative, commercially ready technologies by providing loans or loan guarantees where they might otherwise not be available.

Current Portfolio

OVER 30 PROJECTS BUILT IN 18 STATES



CURRENT PORTFOLIO TECHNOLOGIES

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

OVER \$30 BILLION IN LOANS ALREADY COMMITTED
OVER \$40B IN REMAINING LOAN AUTHORITY AVAILABLE

Financing Energy Infrastructure

MORE THAN \$40 BILLION IN AVAILABLE LOAN & LOAN GUARANTEE AUTHORITY



Advanced Fossil Energy

\$8.5 Billion

-- \$2 Billion is conditionally committed



Advanced Nuclear Energy

\$12.5 Billion (\$2 Billion specifically for Front End)

-- \$3.7 Billion is conditionally committed



Renewable Energy & Efficient Energy

Up to \$4.5 Billion



Tribal Energy

Up to \$2 Billion



Advanced Technology Vehicles Manufacturing

\$16 Billion

LPO's Value as a Strategic Partner

DOE Understands Innovation: Innovative technologies, that may cause hesitancy with private sector lenders, are a requirement for LPO loans and loan guarantees.

- ⚡ LPO's Technical Team employs experienced and dedicated engineers and scientists that undertake technical due diligence of innovative technologies.
 - » With access to experts across DOE's various technology offices and national labs, providing further technical breadth and depth capable of addressing the full range of innovative technologies.
- ⚡ LPO's Loan Origination Team has experience with a variety of deal structures and will work with applicants (and other lenders) on what can often be a first-of-a-kind project.
- ⚡ The private sector can use what LPO learns to finance future deals.

Collaborating Throughout the Life of the Project:

- ⚡ After closing, LPO's Technical and Portfolio Management teams actively monitor the project and work with the owner to help ensure its success throughout the life of the loan.

Favorable Loan Terms:

- ⚡ LPO can offer interest rates that are competitive with the private sector, but the real value is in the ability to offer loans of larger size and longer tenor than is typically available.

ELIGIBILITY REQUIREMENTS

TITLE XVII CLEAN ENERGY PROJECTS



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



EIGHTH SUPPLEMENT TO LOAN GUARANTEE SOLICITATION ANNOUNCEMENT

FEDERAL LOAN GUARANTEES FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY PROJECTS

Solicitation Number: DE-SOL-0007154

OMB Control Number: 1910-5134;

OMB Expiration Date 11/30/2019

Announcement Type: Supplemental

Supplement Date: January 9, 2017

The above-referenced Loan Guarantee Solicitation Announcement (the “Solicitation”) as previously supplemented is further supplemented as set forth below (capitalized terms used herein and not otherwise defined have the meanings ascribed thereto in the Solicitation).

The following is inserted at the end of Section II.D.3 “Illustrative Distributed Energy Project Technologies”:

*Alternative Vehicle Fuel Distribution Facilities Under the Loan Guarantee Solicitation Announcement regarding Federal Loan Guarantees for Renewable Energy and Energy Efficiency Projects, among other types of facilities, **distributed energy technology facilities may include, in appropriate cases, fuel distribution facilities, including associated hardware and software, for alternative vehicle fuels, including hydrogen, liquefied natural gas (LNG), compressed natural gas (CNG), and biofuel, provided that such facilities otherwise satisfy all eligibility requirements.** Alternative vehicle fuel distribution facilities may properly be characterized as a Renewable Energy Project within the meaning of that term as used in Section II.A.1.a) of the Solicitation.*

INNOVATIVE ENERGY LOAN GUARANTEE APPLICATION PROCESS

Application Part I

- Determine basic eligibility
- \$50,000 application fee
- DOE aims to complete Part I review within 30 days
- Eligible applicants invited to submit Part II application

Application Part II

- Evaluate creditworthiness, technical relevance & merit, technical approach, work plan, and construction plan, and legal, environmental & regulatory factors.
- Balance of application fee (\$350,000 or \$100,000 for loan guarantee requests less than \$150 million)
- Eligible applicants invited into due diligence

Part I Due Dates

- July 18, 2018
- September 19, 2018
- November 14, 2018
- January 16, 2019
- March 13, 2019
- May 15, 2019
- July 17, 2019
- September 18, 2019
- November 1, 2019

Part II Due Dates

- August 15, 2018
- October 17, 2018
- December 19, 2018
- February 13, 2019
- April 17, 2019
- June 19, 2019
- August 14, 2019
- October 16, 2019
- November 30, 2019

APPLICATION PROCESS

01

APPLICATION-PART I

- Determine basic eligibility
- \$50,000 fee (Fee does not apply to ATVM)

02

APPLICATION-PART II

- Confirmatory due diligence
- Balance of application fee (\$100,000/\$350,000)
(Fee does not apply to ATVM)

03

CONDITIONAL COMMITMENT

- Negotiate term sheet

04

LOAN GUARANTEE

- Negotiate final agreements
- Remaining fees

**ADVANCED TECHNOLOGY VEHICLE MANUFACTURING
(ATVM)**

EXPANDING U.S. ADVANCED VEHICLE & COMPONENT MANUFACTURING

\$25 BILLION DIRECT LOAN PROGRAM

Advanced Technology Vehicles Manufacturing (ATVM) loans can finance domestic manufacturing of advanced technology vehicles and associated components



Achieving Rising Fuel Economy Standards



Creating & Preserving American Manufacturing Jobs



Expanding Domestic Manufacturing



Deploying New Technology

WHERE WE HAVE BEEN:

\$8 BILLION INVESTED IN AMERICAN AUTO MANUFACTURING



TESLA

- \$465 million loan issued in 2010
- Financed the engineering and design of the all-electric Model S, battery manufacturing, and the renovation and modernization of a shuttered auto plant in California.



FORD

- \$5.9 billion loan issued in 2009
- Modernized 13 facilities in 6 states to manufacture fuel-efficient vehicles and components, including the EcoBoost™ engine.



NISSAN

- \$1.45 billion loan issued in 2010
- Financed the construction of Nissan's new all-electric Leaf vehicle assembly line, a battery facility, and electric motor manufacturing facility in Tennessee.

WHERE WE ARE GOING: DEPLOYING REMAINING LOAN AUTHORITY



LOW INTEREST RATES

Interest rates on loans are set at U.S. Treasury rates.

LONG TENOR

Loans are set at the useful life of the asset, as determined by DOE, and can extend up to 25 years.

FEES & COSTS

The program does not charge application fees. Applicant pays for costs of DOE's external advisors. At closing, applicant pays a closing fee of 0.1% of loan principal amount.

BROAD APPLICABILITY

Eligible projects can include vehicle and component manufacturing, as well as engineering integration.



ELIGIBLE PROJECTS

ATVM can provide loans for eligible vehicle and component manufacturing projects in the U.S. that can include:

- ✓ Building new facilities in the U.S.
- ✓ Reequipping, modernizing, or expanding existing facilities in the U.S.
- ✓ Engineering integration

ADVANCED TECHNOLOGY VEHICLES ELIGIBLE LIGHT-DUTY VEHICLES

MY2005

MY2015+



LIGHT-DUTY

25%

MORE FUEL EFFICIENT

COMPARED TO MODEL YEAR
2005 BASELINE



ADVANCED TECHNOLOGY VEHICLES ELIGIBLE ULTRA-EFFICIENT VEHICLES



ULTRA-
EFFICIENT

75MPG

MINIMUM EQUIVALENT

AND CARRY AT LEAST
2 PASSENGERS



ELIGIBLE COMPONENTS INSTALLED IN ADVANCED TECHNOLOGY VEHICLES TO INCREASE FUEL ECONOMY PERFORMANCE

Advanced Engine Technologies

- Variable Valvetrain Control
- Direct Injection
- Turbocharging
- Start/Stop

Electronics

- Advanced EV Controllers
- Electric Power Steering
- Power Electronics
- Battery Systems

Fuel Efficient Tires

Advanced Powertrain Technologies

- Increased Number of Gear Ratios
- Hybrid / EV Powertrain Integration

Light-Weighting Technologies

- Advanced High Strength Steels
- Aluminum, Magnesium, or Other Alloys
- Plastics, Carbon Fiber, & Composite Materials

Improved Aerodynamics



Qualifying projects may include—but are not limited to—these technologies

APPLICATION PROCESS

01

PRE-APPLICATION CONSULTATIONS

- Non-Binding

02

SUBMIT APPLICATION

- Eligibility Determination
- Due Diligence & Underwriting

03

CONDITIONAL COMMITMENT

04

LOAN ISSUANCE

Apply online *at* energy.gov/lpo/apply

Pre-Application Consultations with Potential Applicants are Highly Encouraged



U.S. DEPARTMENT OF ENERGY

LOAN PROGRAMS OFFICE

Schedule a pre-application consultation:

atvmloan@hq.doe.gov

Questions?

atvmloan@hq.doe.gov

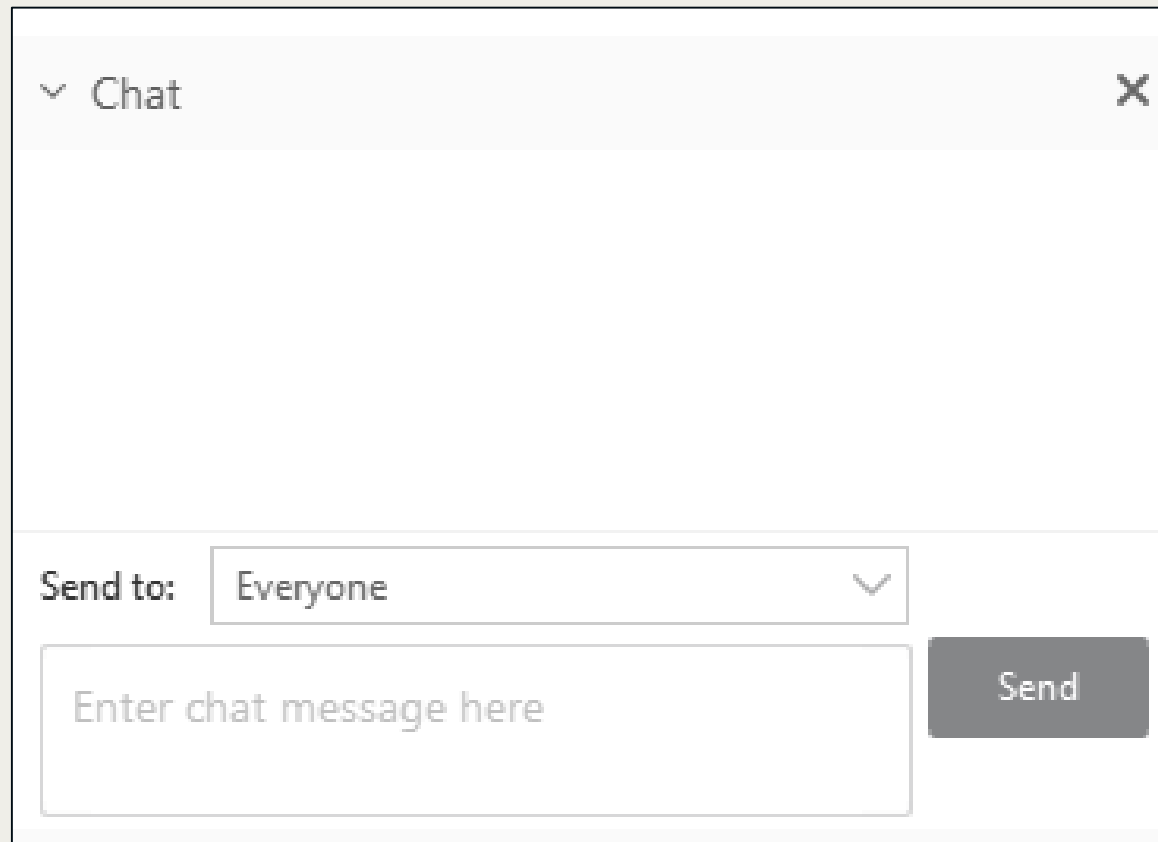
For more information,
and to apply online,
please visit:

PHONE 202-586-8146 | **FAX** 202-586-7366 | **EMAIL** atvmloan@hq.doe.gov

energy.gov/lpo

Question and Answer

Please type your questions to the chat box. Send to: (HOST)



Chat

Send to: Everyone

Enter chat message here

Send

Thank you

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