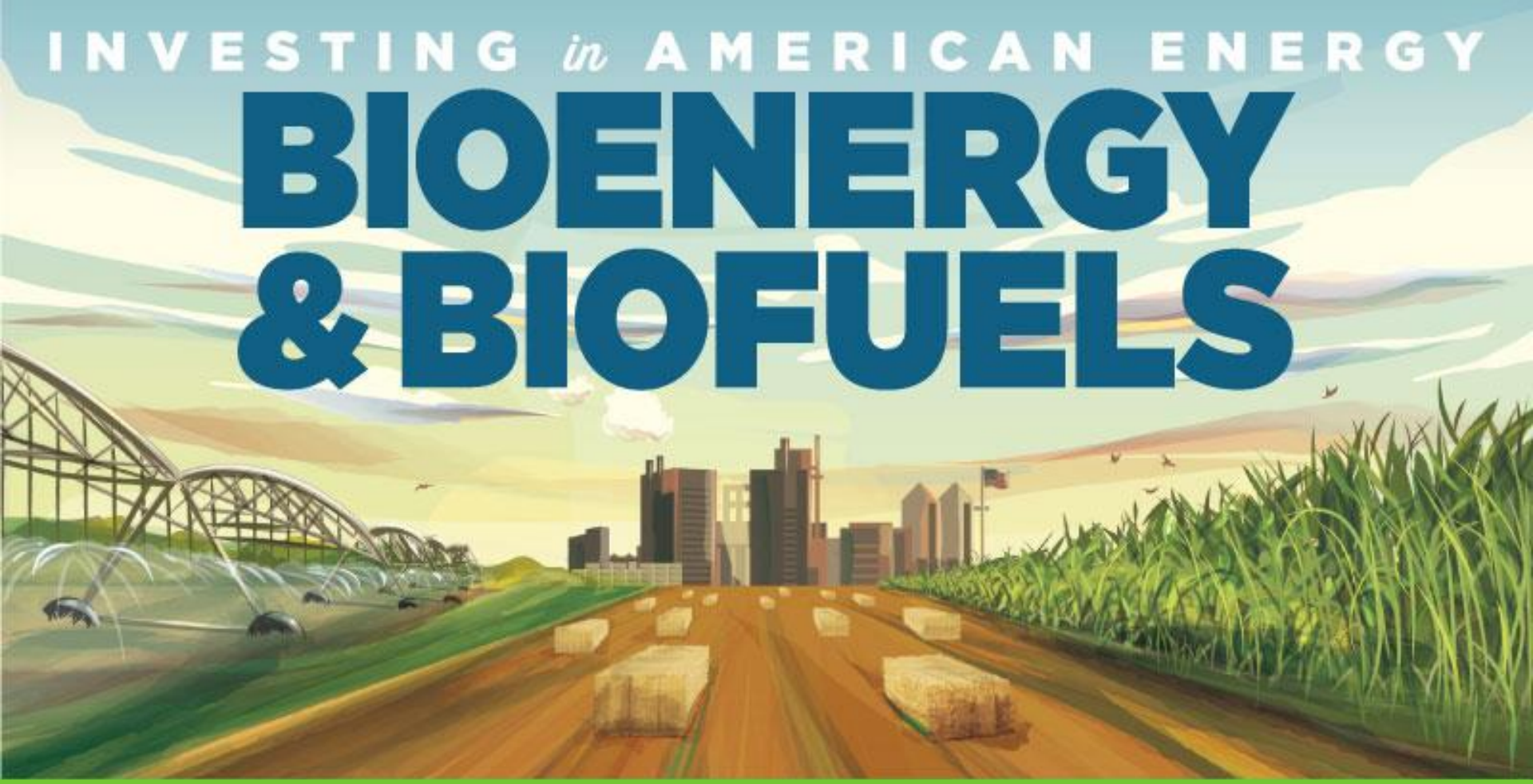
INVESTING *in* AMERICAN ENERGY

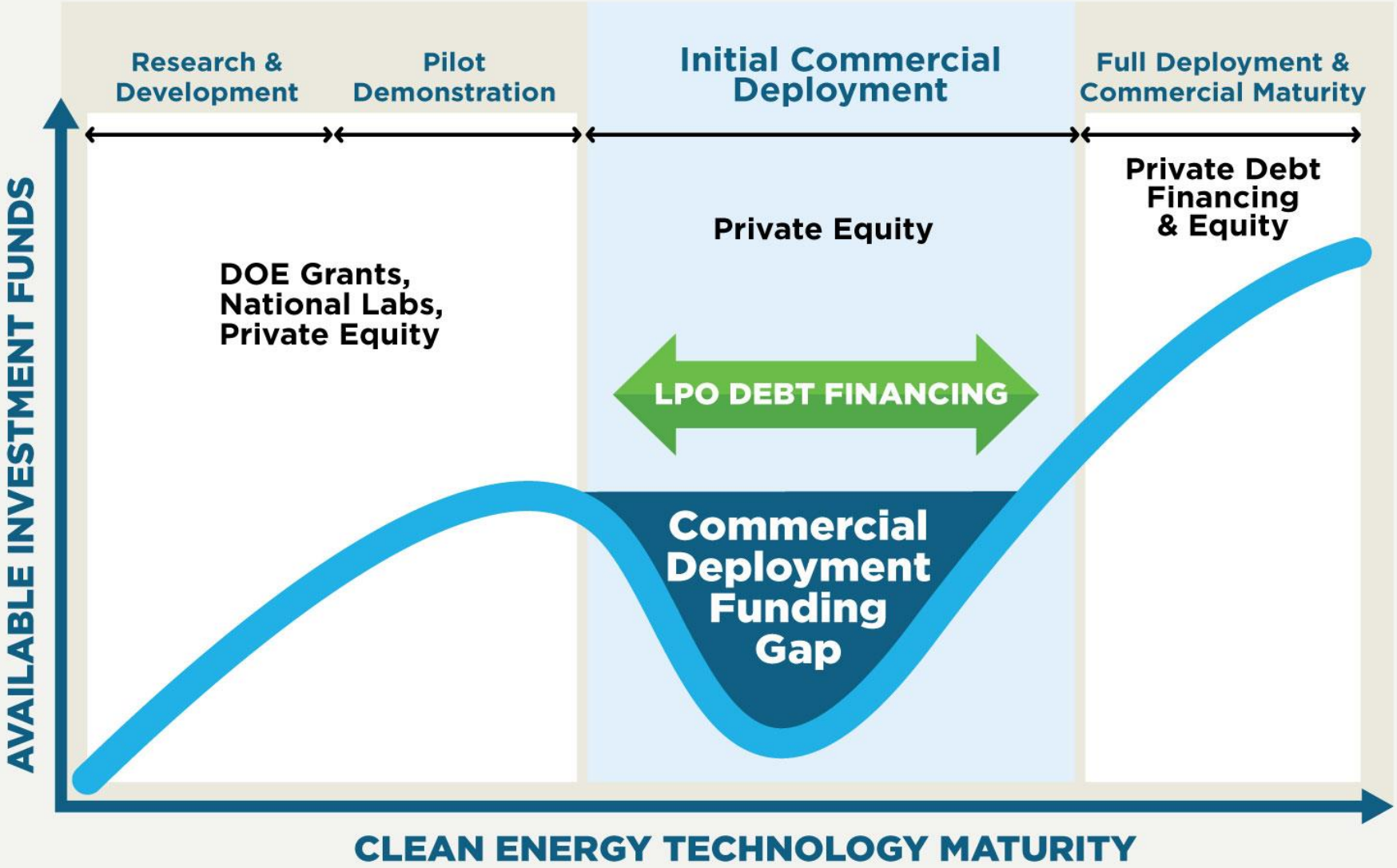
BIOENERGY & BIOFUELS



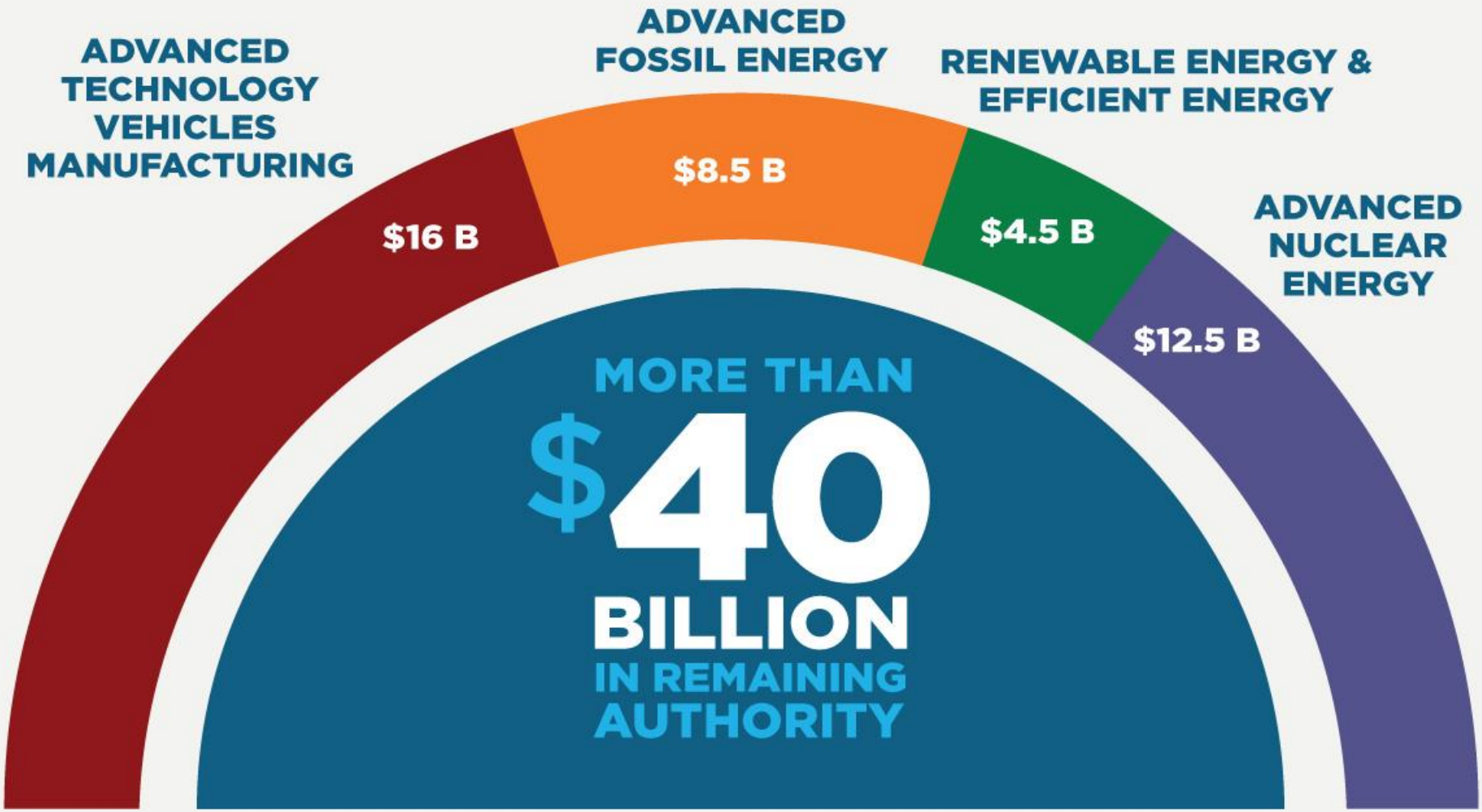
U.S. DEPARTMENT OF ENERGY

LOAN PROGRAMS OFFICE

BRIDGING THE GAP



INNOVATION CONTINUES



AS OF OCTOBER 2015

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 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

OUTPUTS LPO CAN SUPPORT

- Bioenergy
- Biofuels
- Biochemicals
- Bio-products

Qualifying projects are not limited to these technologies.
Projects must utilize an innovative technology to be eligible under Title XII.

FINANCIAL TERMS

TITLE XVII CLEAN ENERGY PROJECTS

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

ITEMS TO CONSIDER FOR APPLICANTS

- Security, duration & pricing of feedstock arrangement.
- Equity contribution from sponsor must be at least 20% of total project cost. Typically has ranged between 20-40%.
- Duration & pricing for offtake product arrangements.

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

REMAINING RENEWABLE SOLICITATION DEADLINES

PART I

11/18/2015
12/30/2015
1/13/2016
3/16/2016
5/18/2016
7/13/2016

PART II

12/16/2015
2/17/2016
4/13/2016
6/15/2016
8/17/2016
10/19/2016

Apply *at* energy.gov/lpo/apply

NOTE: ADDITIONAL ROUNDS MAY BE ANNOUNCED IN A SUPPLEMENT TO THE RENEWABLE ENERGY AND EFFICIENT ENERGY PROJECTS SOLICITATION.