Our Economy Is Built on Carbon

Diesel and heating oil: 27%
Jet fuel: 9%
Products: 15%
Heavy fuel oil (residual): 3%
Liquefied petroleum gases: 4%
Gasoline: 42%
Bioenergy Delivers Unique Value

BETO research and development (R&D) enables:

- National security
- Jobs
- Economic growth
- Investment
- Competitiveness
- Resources
- Quality of life
BETO Mission, Vision, and Strategic Goals

**Vision**
A thriving and sustainable bioeconomy fueled by innovative technologies

**Mission**
Developing transformative and revolutionary sustainable bioenergy and coproduct technologies for a prosperous nation

**Strategic Goals**
Develop industrially relevant technologies to enable domestically produced biofuels, biopower, and coproducts
BETO completed analysis of strategies to reduce biofuel costs toward $2/GGE.
BETO Program Areas

**Production & Harvesting**

**Feedstock Technologies**
- Lower costs of production
- Improve biomass quality
- Increase the volume of sustainable feedstocks for conversion

**Advanced Algal Systems**
- Lower costs of production
- Improve biomass quality
- Increase the volume of sustainable feedstocks for conversion

**Conversion & Refining**

**Conversion**
- Develops technologies to convert non-food feedstocks into biofuels, bioproducts, and biopower
- Achieve top research impacts by conducting:
  - Feedstock blend testing
  - Separation and materials compatibility evaluations
  - Techno-economic analysis

**Data, Modeling & Analysis**
- Supports program decision-making
- Develops strategies to understand and enhance the economic and environmental benefits of advanced bioenergy

**Systems Development & Integration**
- Reduce technology uncertainty in bioenergy by:
  - Integrating technologies into a system/process
  - Provide vital knowledge fed back to research programs
## BETO Budget by Program Area

<table>
<thead>
<tr>
<th>Program</th>
<th>FY19*</th>
<th>FY20*</th>
<th>FY21*</th>
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<td><strong>Total</strong></td>
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*dollars in thousands*
• BETO Price Goals require to transform renewable carbon sources cost effectively into high quality, sustainable, energy-dense feedstocks for biofuels and bioproducts.

By 2030, develop science-based strategies and technologies to cost-effectively transform carbon sources into sustainable, energy-dense, and conversion-ready feedstocks at 90% operating effectiveness that meet a delivered cost of $71/dry ton.

• Feedstock cost target of $71/ dry ton is essential for cost-effective biofuels.

• Utilization of “Cost-advantaged” feedstocks, such as MSW, offers Economic, Environmental, and Social Sustainability Benefits.
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Learn more about BETO: energy.gov/bioenergy