U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

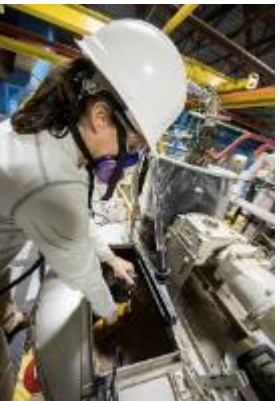
Bioenergy Technologies Office Overview

Valerie Reed, Acting Director

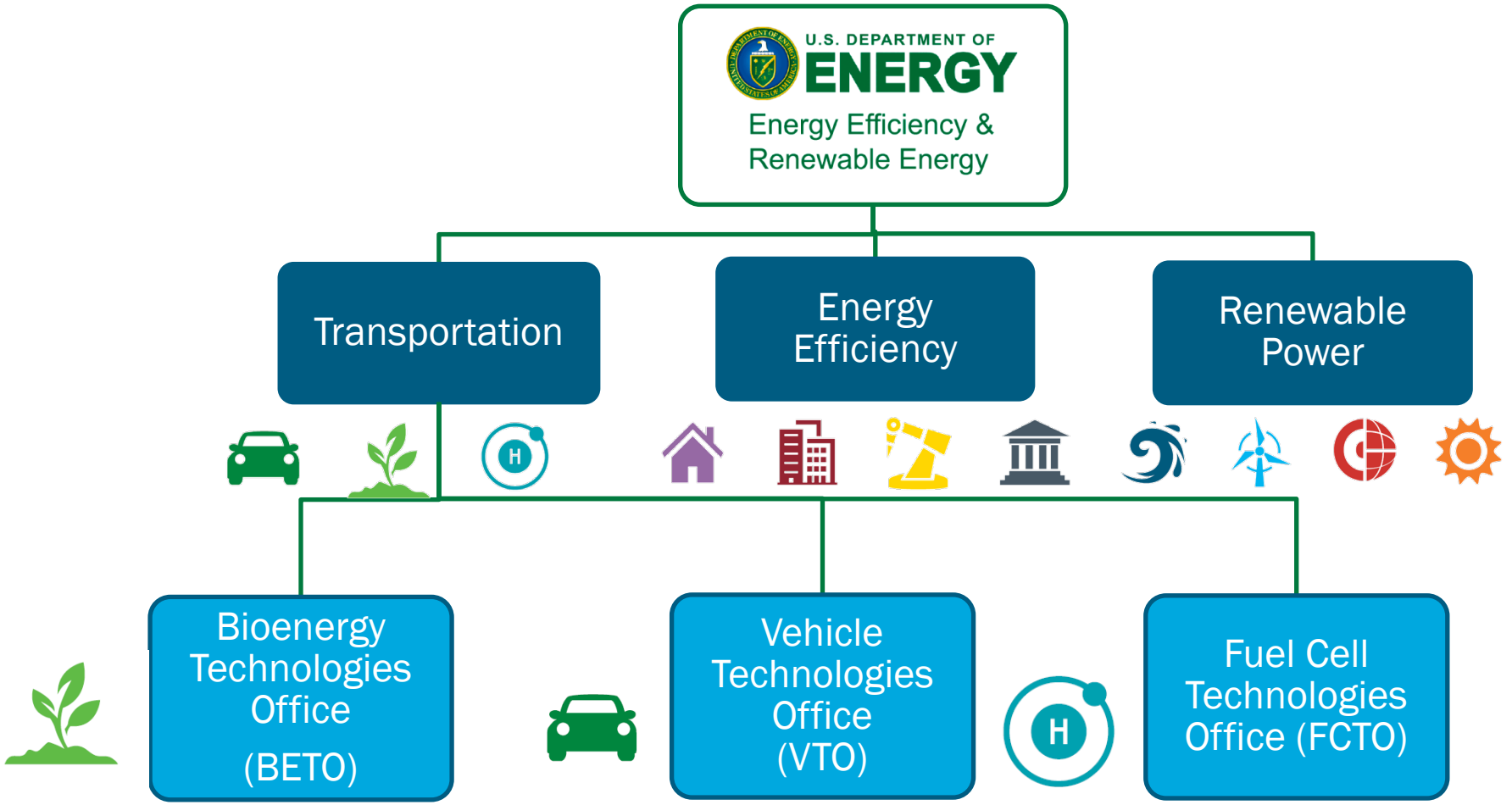
April 20, 2021



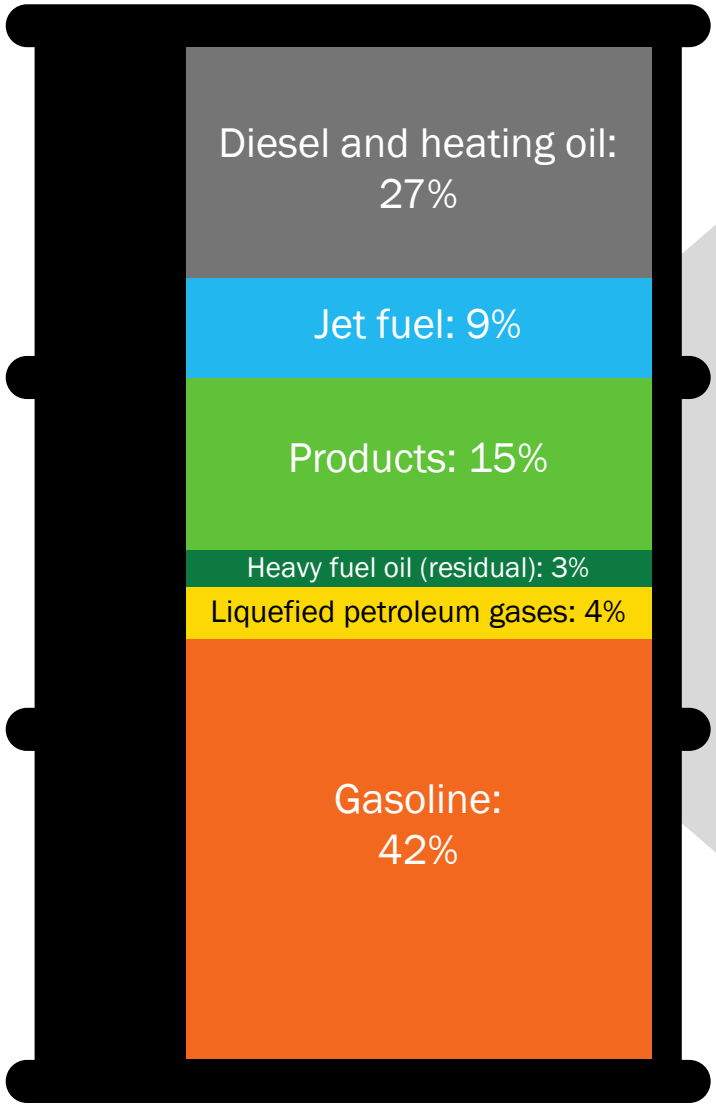





U.S. DOE Office of Energy Efficiency and Renewable Energy, Transportation Sector



Our Economy Is Built on Carbon



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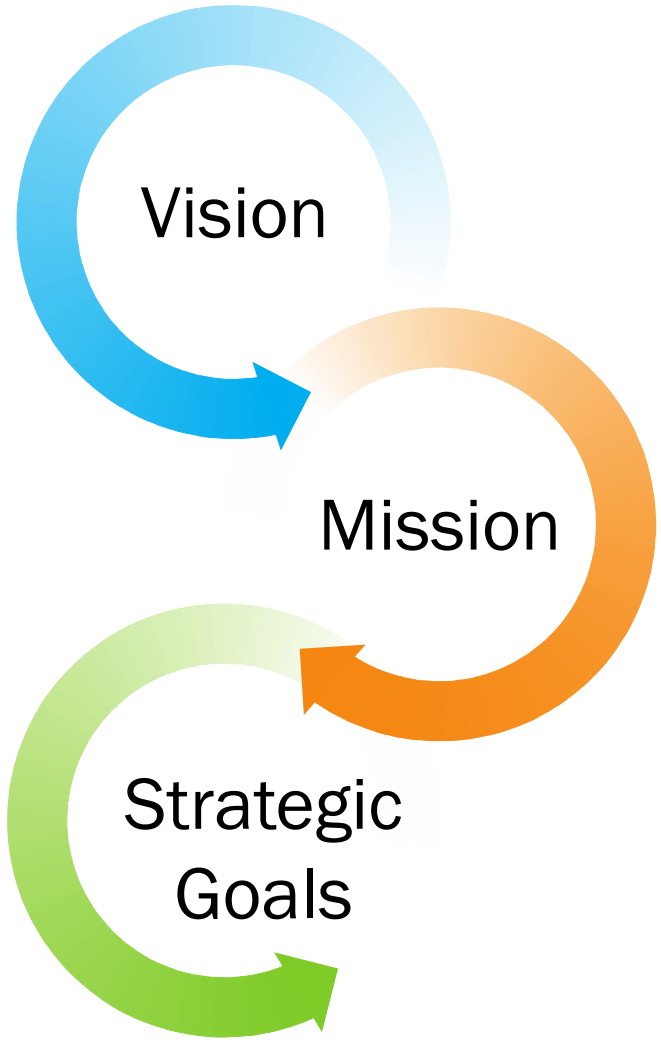
BETO Mission, Vision, and Strategic Goals



Vision

A thriving and sustainable bioeconomy fueled by innovative technologies

Mission

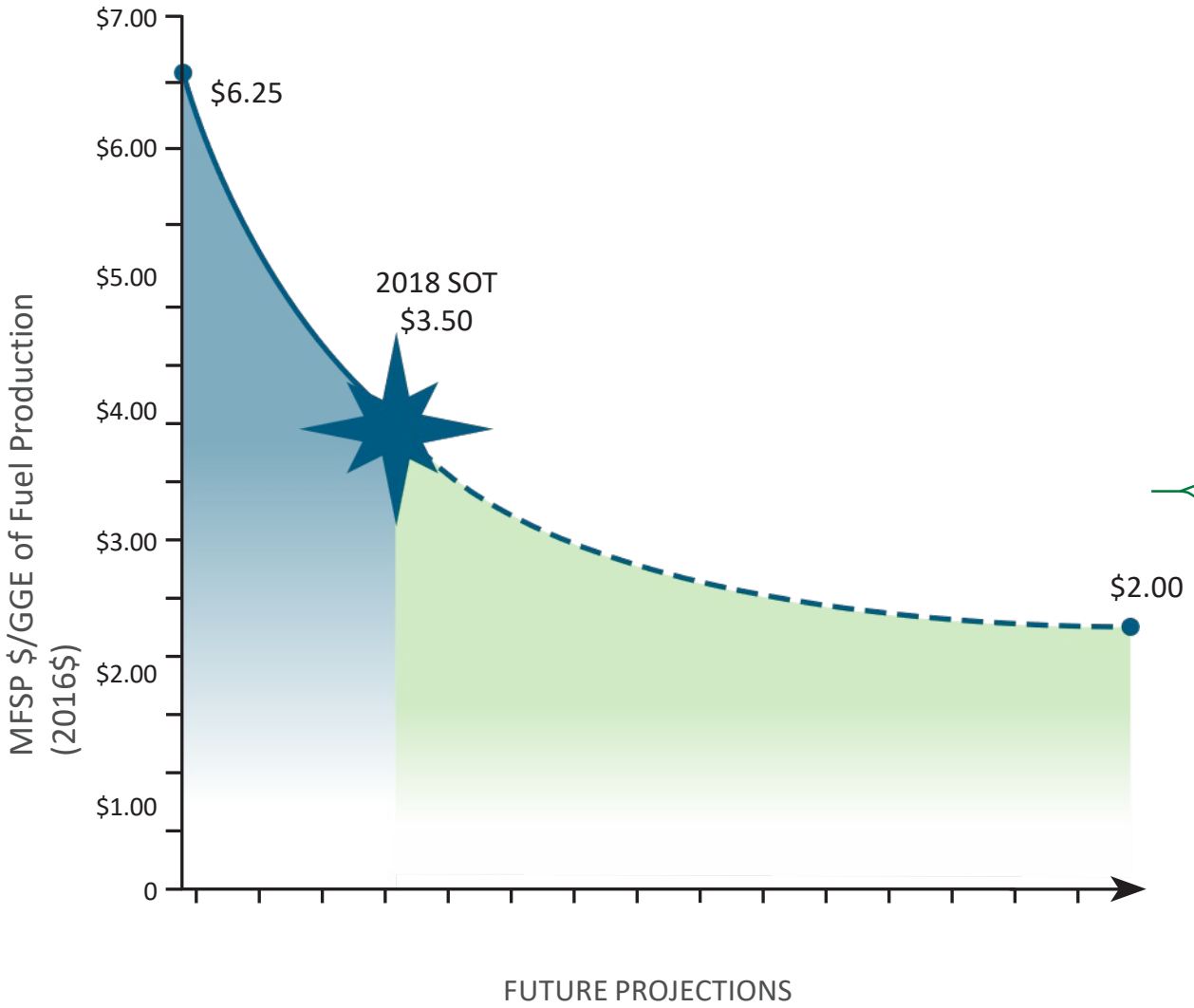
Developing transformative and revolutionary sustainable bioenergy and coproduct technologies for a prosperous nation

Strategic Goals

Develop industrially relevant technologies to enable domestically produced biofuels, biopower, and coproducts

Opportunities to Reach BETO Price Goals

BETO completed analysis of strategies to reduce biofuel costs toward $2/GGE



Key Strategies for Price Reduction

- Developing Efficient Biorefineries
- Intensifying Process Designs
- Increasing Feedstock Value
- Utilizing Existing Infrastructure
- Developing High-Value Products

BETO Critical Program Areas

Production and Harvesting

Feedstock Technologies

Lower cost, improve quality, and increase types of renewable carbon feedstock intermediates available for conversion.

Advanced Algal Systems

Increase algae productivity through algal strain improvement and efficient cultivation.

Conversion and Refining

Conversion Technologies

Reduce costs of deconstructing feedstock into intermediate products (such as sugars, intermediate chemicals, bio-oils, or gaseous mixtures)

Upgrading intermediates into liquid biofuels, bioproducts, and biopower

Distribution and End Use

Systems Development and Integration

Systems research to combine tech components, unit operations, or subsystems developed by R&D programs into integrated processes.

Integrated processes tested (pre-pilot to demo scale) to identify further R&D needs or verify readiness for scale-up and commercialization.

Crosscutting

Data, Modeling, and Analysis

Track technology progress and identify opportunities and challenges related to economic/environmental impact of advanced bioenergy systems.

BETO Budget by Program Area

Program	FY19*	FY20*	FY21*
Advanced Algal Systems	32,000	40,000	40,000
Feedstock Technologies	30,500	40,000	40,000
Conversion Technologies	96,000	110,000	110,000
Systems Development & Integration	57,500	60,000	55,500
Data, Modeling & Analysis	10,000	9,500	9,500
Total	226,000	259,500	255,000

*dollars in thousands

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Learn more about BETO: energy.gov/bioenergy

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BIOENERGY TECHNOLOGIES OFFICE