

# USA Energy Efficiency Policies and Programs Update

EGEEC -54  
Cebu, Philippines  
September 23-25, 2019

# USDOE Office of Energy Efficiency and Renewable Energy (EERE)

- U.S. Department of Energy's Office of Vehicle Technologies Announces \$US59 Million to Accelerate Advanced Vehicle Technologies Research
- The 43 projects address priorities in:
  - Advanced batteries and electric drive systems,
  - Co-optimized engine and fuel technologies,
  - Materials for more efficient powertrains, and
  - Alternative fuels and new energy efficient mobility systems
- Source: <https://www.energy.gov/articles/doe-announces-59-million-and-43-projects-accelerate-advanced-vehicle-technologies-research>

# Fiscal Year 2019 Advanced Vehicle Technologies Research (1)

- Development of material to enable solid state batteries
  - University of Maryland: Lithium dendrite-free solid electrolytes for high energy lithium batteries
  - Pennsylvania State Univ.: Developing materials for high-energy-density solid state lithium-sulfur batteries
- Solid state battery modeling development
  - University of Louisville: Predictive engineering of interfaces and cathodes for high-performance all solid-state lithium-sulfur batteries
  - Virginia Commonwealth Univ: First-Principles Modeling of cluster-based solid electrolytes

# Fiscal Year 2019 Advanced Vehicle Technologies Research (2)

- Electric motor research increasing power density
  - University of Illinois at Urbana-Champaign: Ultra-high-speed, high-temperature motor
  - Carnegie Mellon Univ.: Amorphous metal ribbons and metal amorphous nanocomposite material enabled high power density vehicle motor applications
- Energy efficient mobility systems research
  - University of California Berkeley: CIRCLES: Congestion impact reduction via CAV-in-the-loop lagrangian energy smoothing
  - Southwest Research Institute: Energy efficient maneuvering of connected autonomous vehicles with situational awareness at intersections

# Fiscal Year 2019 Advanced Vehicle Technologies Research (3)

- New materials and engine technologies for high efficiency powertrains
  - General Motors LLC: Low mass and high efficiency engine for medium-duty truck applications
  - Ford Motor Company: Next generation of high efficiency boosted engine development
- EV Data Collection
  - CALSTART, Inc: Medium and heavy-duty EV deployment-data collection
  - Akimeka, LLC(Maryland): EV-WATTS: Electric vehicle widescale analysis for tomorrow's transportation solutions

## USDOE EERE Better Buildings Initiative

- Better Buildings is an initiative of the U.S. Department of Energy (DOE) designed to improve the lives of the American people by driving leadership in energy innovation.
- Through Better Buildings, DOE partners with leaders in the public and private sectors to make the nation's homes, commercial buildings and industrial plants more energy efficient by accelerating investment and sharing of successful best practices.
- Source: <https://betterbuildingsinitiative.energy.gov/>

# Better Buildings Webinar Series

- **Energy Efficiency and Renewable Energy in Small and Rural K-12 Schools**
  - **Tuesday, October 22, 2019 | 3:00 - 4:00 PM ET**

This webinar will cover energy efficiency and renewable energy resources and strategies available to small and rural schools to help them train a robust workforce and achieve energy and cost savings. It will also showcase stories of K-12 school districts that are successfully proving that energy efficiency provides a worthwhile return on investment.
- **How Buildings of All Shapes and Sizes are Achieving Zero Energy**
  - **Tuesday, December 3, 2019 | 3:00 - 4:00 PM ET**

From affordable student housing to high-infill offices, a rapidly accelerating building trend is the proliferation of zero energy buildings. This webinar will explore the financial, technological, and design process innovations that make these projects a reality

Source: <https://betterbuildingsinitiative.energy.gov/better-buildings-webinar-series>

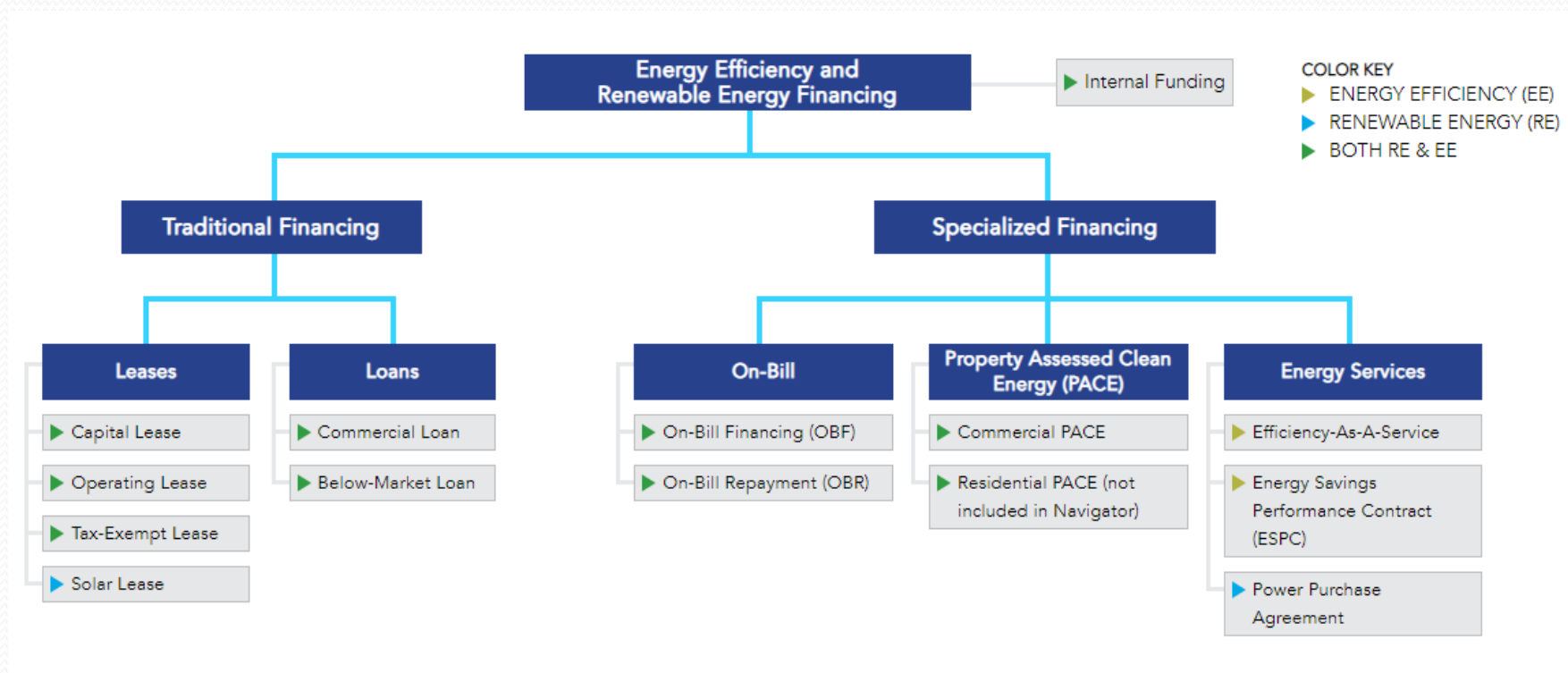
# Better Buildings Financing Navigator

- Sector Energy Financing Prmers
  - Commercial Energy Financing
  - Healthcare Energy Financing
  - Higher Education Energy Financing
  - Industrial Energy Financing
  - Multifamily Energy Financing
  - Public Sector Energy Financing

Source: <https://betterbuildingsinitiative.energy.gov/financing-navigator/explore>



# Better Buildings Financing Navigator: Financing Landscape



Source: <https://betterbuildingsinitiative.energy.gov/financing-navigator/explore>



# Questions?