Converting MSW Into Low-Cost, Low-Carbon Fuel

ISCC Stakeholder Dialogue
Technical Committee
“Waste, Residues and Advanced Low Carbon Fuels”
Shanghai, China
July 2, 2019
Fulcrum: Solving Two Global Challenges

Disposal of Municipal Solid Waste (MSW) at Landfills

Decarbonization of Transportation
Changing the way Garbage is Handled and Disposed

- Large Volumes, Ideal Locations
- Established Infrastructure
- Carbon-Rich Feedstock Ideal for Biofuel Production
- Predictable Cost
- No Competing Uses
- Resolves Waste Disposal Problems
Fulcrum – MSW to Low-Carbon Fuels

MSW Available Worldwide
Technology Performance Guaranteed
80% Carbon Emissions Reductions
Fulcrum’s Strategic Partner Model

- Feedstock Supply
- Waste to Syncrude
- Fuel Refining
- Fuel Logistics
- Customers

Partners:
- bp
- United
- ABENGOA
- Waste Connections, Inc.
- WM
- JAPAN AIRLINES
- MARATHON
- CATHAY PACIFIC
- MARUBENI
- World Fuel Services

Fulcrum BIOENERGY
Sierra BioFuels Plant
Feedstock Processing Facility

- Feedstock Processing Facility In Operations; Construction Completed on Schedule and on Budget
- Converts 350,000 Tons of Raw Waste into 175,000 Tons of Processed Feedstock per Year
- Waste Processing Capacity up to 120 Tons per Hour
• Biorefinery Under Construction

• 175,000 Tons of Processed MSW Feedstock Converted to 11 Million Gallons of Low-Carbon Transportation Fuel per Year

• Plant Operations Begin in Early 2020
Fulcrum’s Growth Program

- Chicago
- Newark
- Los Angeles
- Denver
- San Francisco
- Houston
- Seattle
- Sierra BioFuels Plant
- United Kingdom
- Australia

- Under Construction
- In Advanced Development
- In Development