# RENEWABLE FUELS CAPABILITIES

Koch Engineered Solutions, LLC ("KES") can deliver a renewable fuels plant in less time and at a lower cost on a lump sum turnkey basis than our competitors. Additionally, KES can provide a secure, reliable source of feedstocks, offtake services, logistical coordination, and renewable fuels marketing via its affiliate companies. By bringing our capabilities to bear across our affiliate companies and acting as a single counterparty, KES offers a unique, comprehensive solution that offers favorable returns over a third-party solution.



## **Feedstock**

Through our sister Koch company,

Georgia Pacific ("GP"), we can act as the supplier of feedstocks needed to operate the facility.

GP purchases and manages 60mm tons of woodchips which can be used as feedstocks in certain plants.



## **Facility Construction**

KES-led project management, lump sum turnkey EPC, and engineered equipment services can deliver a renewable fuel plant faster and at lower cost than your next best alternative.

KES projects typically realize:

20% in schedule savings

10% in cost savings



### **Product**

**FHR can offer** the following services related to the management of end products produced at the plant:

- Placement of any remaining merchant volumes
- Blending monitoring
- Pipeline and rail car management
- RIN credit management

# **Partner of Choice**

#### **GLOBAL SCALE**

KES is an affiliate of Koch Industries who has \$100+ billion¹ in revenues, global presence, investment grade credit

<sup>1</sup> As estimated by Forbes

#### **DECISIVE ACTION**

Unrivaled ability to marshal resources to move decisively and with certainty when the right opportunities present themselves

#### **PRIVATE**

KES' status as a private company and management philosophy allows partners to focus on capturing opportunity long-term

#### **MUTUAL BENEFIT**

True partnership mentality. Expectation that KES will work to make partnerships as successful as possible

#### **KOCH LABS**

**Experts:** Engage KES' internal subject matter experts to help better understand market and customer opportunities as well as solving technical challenges

**Develop:** Use KES and Koch-affiliate facilities and businesses as a test-bed for product development and proof of concept, allowing for quicker time to market and product design cycles

**Engage:** Opportunity to engage KES and Koch affiliates as a partner, customer, and a supplier



# **Favorable Economics with KES** as an Execution Partner

Assuming a 10,000 BPD (155 mmpgy), Soybean Oil to Renewable Diesel plant and the market assumptions presented below, KES typically offers an internal rate of return ("IRR") >50 percent higher than a different counterparty over a 10-year period based on KES modeling of market alternatives.

REVENUE BUILD-UP	
★ Diesel Sale Price	2.0
★ RIN Credit <sup>1</sup>	1.8
★ BTC	1.0
★ LCFS <sup>2</sup>	0.7
Total Revenue/Gal	\$5.5
COST BUILD-UP	
★ Renewable Feedstock Costs <sup>3</sup>	3.6
Conversion Costs⁴	0.9
Total Costs/Gal	\$4.5
PRE-TAX MARGIN BUILD-UP	
Total Revenue	5.5
Less: Costs	4.5
Renewable Diesel Margin/Gal	\$1.0
★ Includes Marketing and Trading Support.	

ENGINEERING & CONSTRUCTION DETAILS	KOCH	THIRD PARTY
Engineering & Construction Period (Yrs)	3	4
Total Costs (\$/gal)	\$2.7	\$3.0
Total Costs (\$ Millions)	419	465
IRR	19%	12%
Payback Period (Yrs)	6	7

20% savings in construction time versus 3rd party 10%
in cost
savings
versus 3rd party

IRR>50% HIGHER

counterparty over

a 10-year period.

- <sup>1</sup> Assumes renewable diesel earns 1.7 RINs per gallon
- <sup>2</sup> Considers a soybean oil CI score of 58
- <sup>3</sup> Assumes 8 gallons of soybean oil required to produce 1 gallon of renewable diesel
- <sup>4</sup> Includes both fixed and variable operating expenses

## **Cash Flow Scenarios**

KOCH SCENARIO CASH FLOWS (Presented In \$ Millions)										
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Renewable Diesel Margin	-	-	-	160	160	160	160	160	160	160
Depreciation	-	-	-	(42)	(42)	(42)	(42)	(42)	(42)	(42)
Income Tax 21%	-	-	-	(25)	(25)	(25)	(25)	(25)	(25)	(25)
NIAT	-	-	-	93	93	93	93	93	93	93
Add Back Depreciation	-	-	-	42	42	42	42	42	42	42
Construction Capital	(140)	(140)	(140)	-	-	-	-	-	-	-
After Tax Cash Flow	(140)	(140)	(140)	135	135	135	135	135	135	135
IRR	19%									
Payback	6 Yrs									

THIRD PARTY SCENARIO CASH FLOWS (Presented In \$ Millions)										
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Renewable Diesel Margin	-	-	-	-	160	160	160	160	160	160
Depreciation	-	-	-	-	(47)	(47)	(47)	(47)	(47)	(47)
Income Tax 21%	-	-	-	-	(24)	(24)	(24)	(24)	(24)	(24)
NIAT	-	-	-	-	89	89	89	89	89	89
Add Back Depreciation	-	-	-	-	47	47	47	47	47	47
Construction Capital	(116)	(116)	(116)	(116)	-	-	-	-	-	-
After Tax Cash Flow	(116)	(116)	(116)	(116)	136	136	136	136	136	136
IRR	12%									
Pavback	7 Yrs									