A TOTAL SOLUTION FOR
LOW CARBON INTENSITY RENEWABLE FUELS

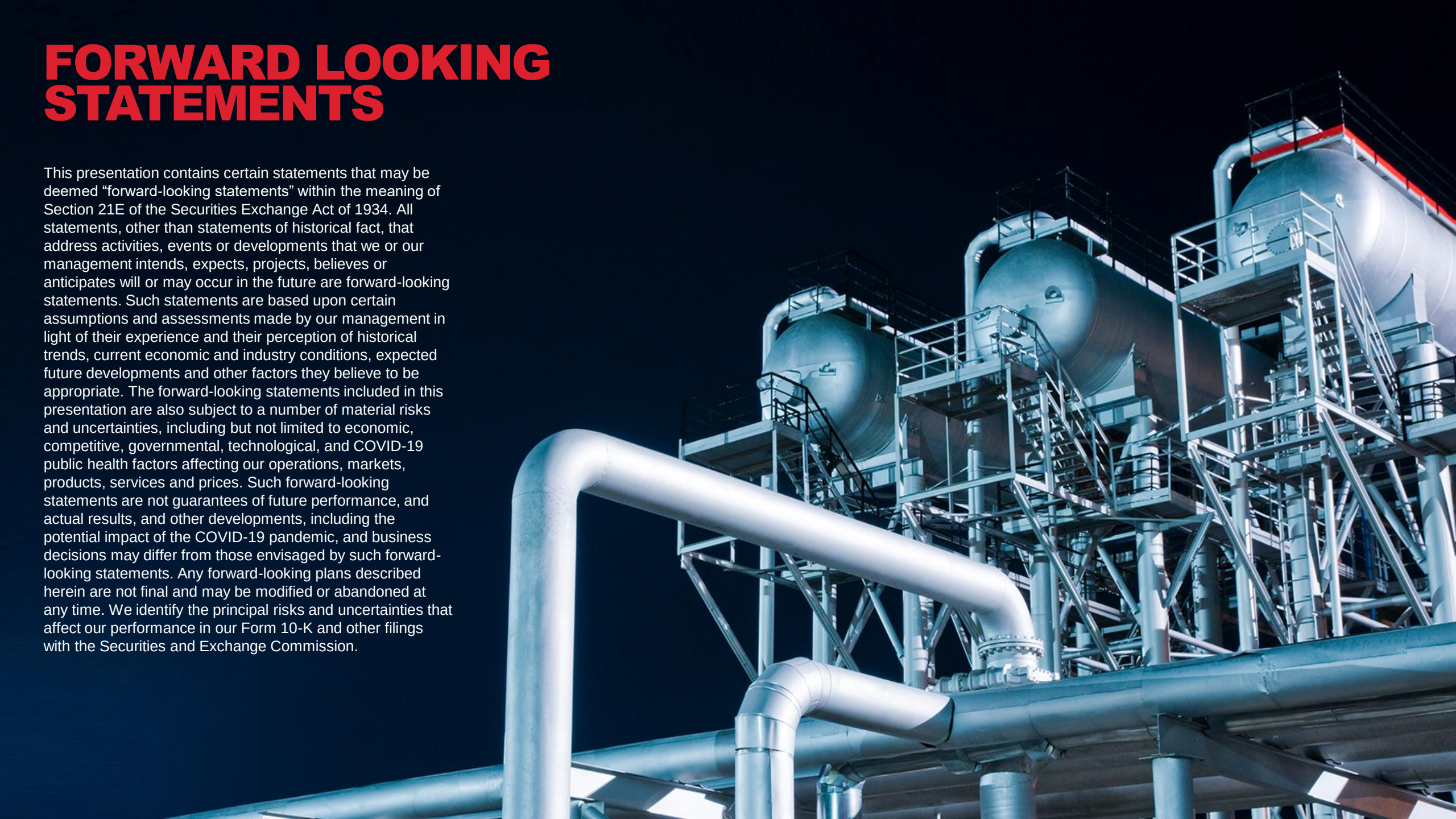
MIKE SPIVEY – PROJECT SALES DIRECTOR

NOV 23RD 2023

Honeywell

FORWARD LOOKING STATEMENTS

This presentation contains certain statements that may be deemed “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical fact, that address activities, events or developments that we or our management intends, expects, projects, believes or anticipates will or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current economic and industry conditions, expected future developments and other factors they believe to be appropriate. The forward-looking statements included in this presentation are also subject to a number of material risks and uncertainties, including but not limited to economic, competitive, governmental, technological, and COVID-19 public health factors affecting our operations, markets, products, services and prices. Such forward-looking statements are not guarantees of future performance, and actual results, and other developments, including the potential impact of the COVID-19 pandemic, and business decisions may differ from those envisaged by such forward-looking statements. Any forward-looking plans described herein are not final and may be modified or abandoned at any time. We identify the principal risks and uncertainties that affect our performance in our Form 10-K and other filings with the Securities and Exchange Commission.



GLOBAL SAF DEMAND

SAF is the

#1

Topic in **new Projects at UOP**

DRIVERS FOR SAF

Short-term (2022-2030)

- SAF demand in US and Europe driven by government incentives and mandates
- ICAO CORSIA Program – mandatory in 2027
- Global SAF demand expanded by corporate GHG reduction commitments

Long-term (2030-2050)

- Demand expected to grow further to nearly 3.5 M BPD
- New feedstock sources needed—FOGs nearly used by 2030

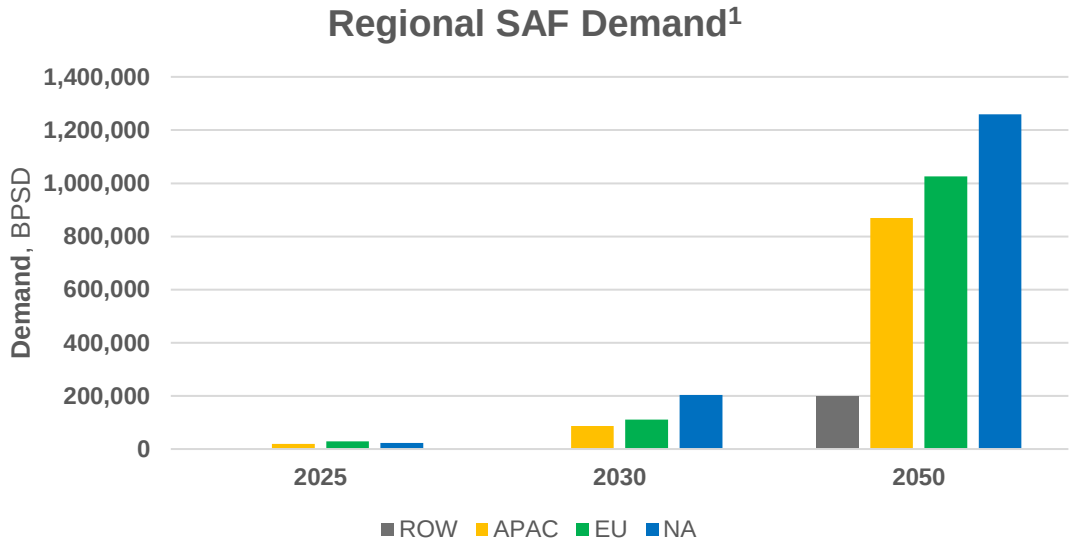
DRIVERS FOR eSAF

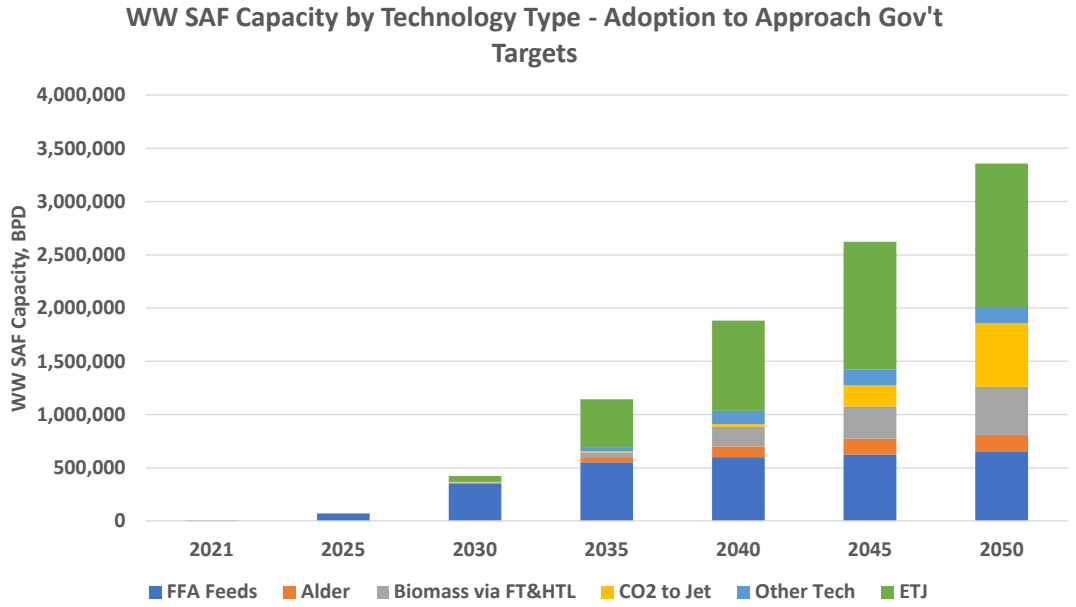
Mid-term (2030-2040)

- eSAF-specific government incentives and mandates.

Long-term (2040-2050)

- Pathways for CO_2 to SAF will be necessary to meet global SAF demand





SAF demand expected to grow from <1% of WW jet pool in 2022 to 35-40% by 2050

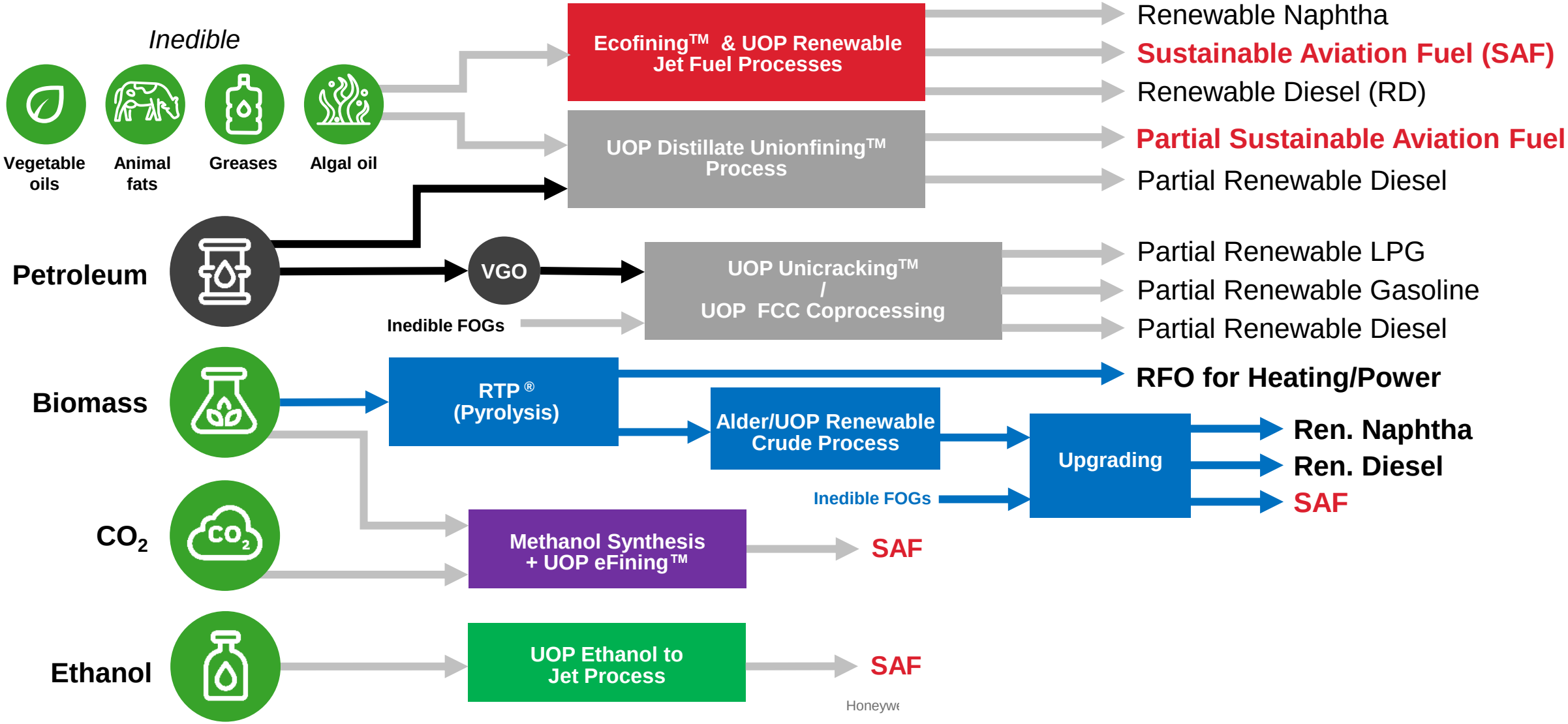
[1] Based on UOP internal analysis

ROUTES TO SUSTAINABLE AVIATION

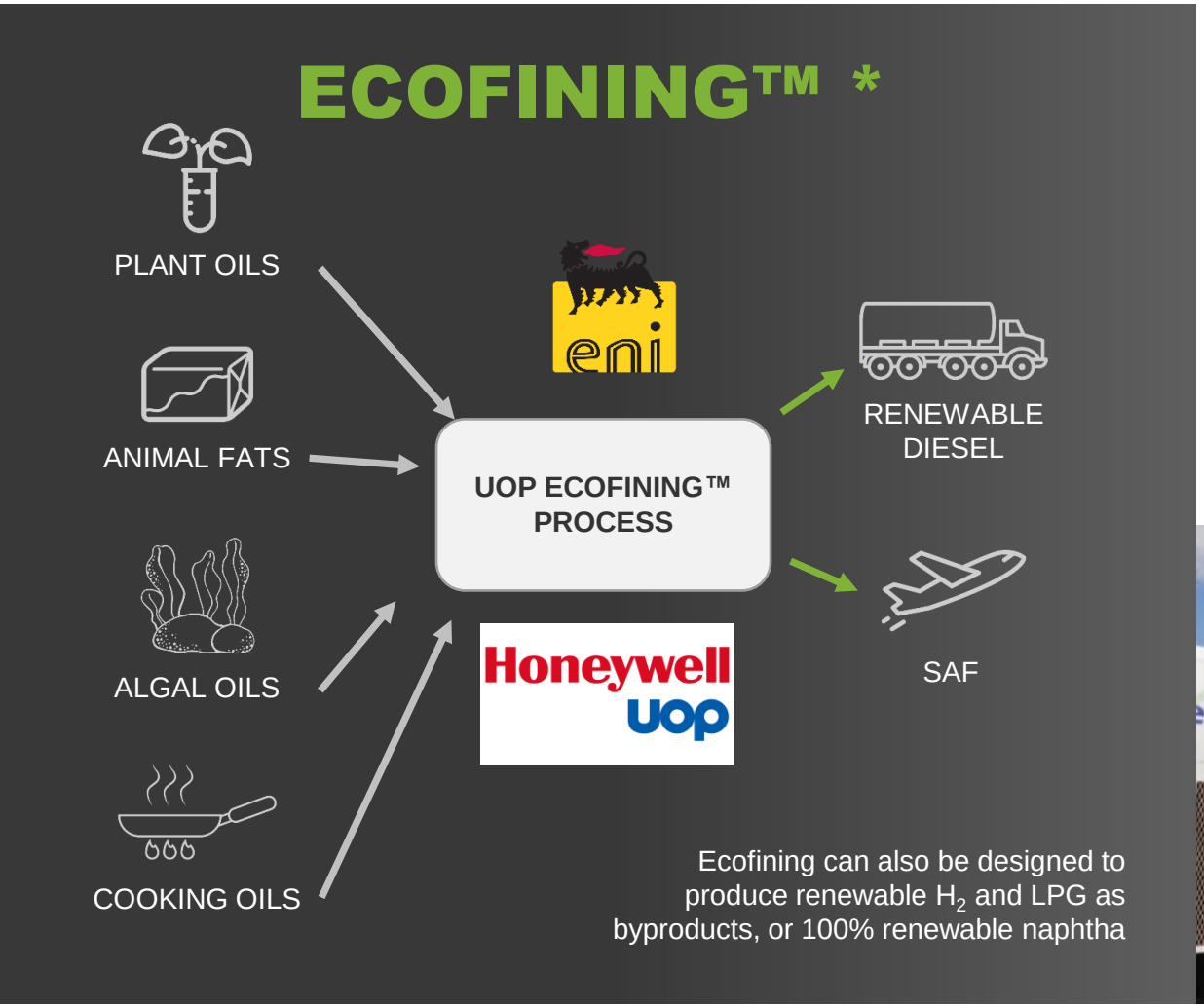
Honeywell UOP

UOP RENEWABLE TECHNOLOGY SOLUTIONS

Driving flexibility in feedstock drop-in fuels



DROP-IN RENEWABLE FUELS FROM HONEYWELL UOP



Honeywell UOP is the Proven Licensor in Renewable Fuels

- Leading renewable fuels experience; 40+ licenses and 25+ years combined operating data
- Proven start-up and performance tests with all units on stream, at capacity, and on spec within days of start-up
- 9 operating plants including 3 customers expanding their facility with UOP

Commercial drop-in fuel replacements that are ready today

* Ecofining technology produces renewable diesel, SAF, and other renewable products from 100% biogenic feed sources. The technology was developed and commercialized jointly by UOP in collaboration with ENI

FUELING THE FUTURE FOR CLEANER SKIES

Honeywell

Take off with UOP's ethanol to jet (ETJ) process technology. The next generation of renewable fuels.

5. SUSTAINABLE AVIATION FUEL (SAF)

BENEFITS OF ETJ

- High jet yield output
- Lower CAPEX & OPEX
- Reduced GHG emissions
- Higher profit margins

4. FUEL BLENDING

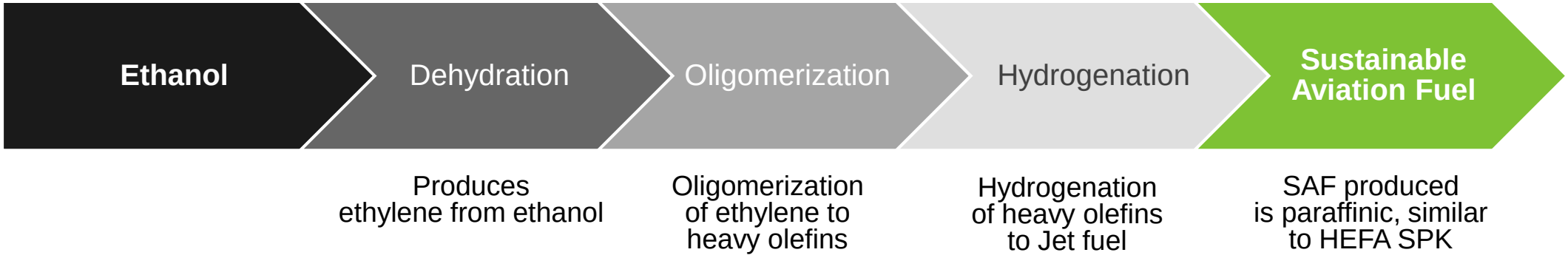
2. ETHANOL PLANT

3. ETHANOL TO JET

1. FEEDSTOCK SUPPLY

Reduced GHG emissions is based on UOP analysis derived from a 3rd party LCA for 1G low carbon ethanol production with locally sourced feedstock used in comparison to fossil fuels.

UOP'S APPROACH
ETHANOL CONVERSION TO JET



Key Features

- High yields to jet and diesel from UOP's ETJ process
- Reduce greenhouse gas (GHG) emissions by 80% on a total lifecycle basis[1]
- Compatible with hydrous or ASTM D4806 anhydrous ethanol
- Advanced heat integration for lower carbon intensity route
- Based on commercially demonstrated technologies – enables fast scale-up and quicker time to commercialization
- Option to purchase full-scope catalyst and process design to provide a single point of guaranteed accountability

1- Based on the EPA's summary LCA of GHG emissions for sugarcane

UOP ETJ COMMERCIAL UPDATE

Honeywell UOP will license its Ethanol to Jet (ETJ) processing technology to Summit Next Gen, an affiliate of Summit Agricultural Group, for the production of Sustainable Aviation Fuel (SAF).

The facility will be the biggest ETJ plan in the world, located in the U.S. Gulf Coast region. The innovative project will produce nearly 250 million gallons of SAF per year and is expected to be operational in 2025.

Honeywell and GranBio Technologies announced that they will combine Honeywell's ethanol to jet (ETJ) technology with GranBio's cellulosic ethanol AVAP® technology to produce carbon neutral sustainable aviation fuel (SAF) from biomass residues at GranBio's forthcoming U.S. demonstration plant.

The demonstration plant that will produce ~2 million gallons per year of SAF upon start-up in 2026.

UOP ETJ launched in Oct 2022

CONVERTING CO_2 INTO AVIATION FUEL

Honeywell UOP

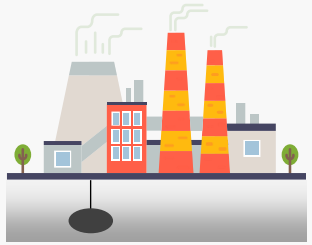
THE HONEYWELL APPROACH

IMAC & LEAP Approach

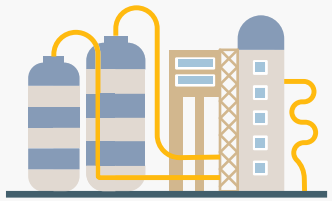
Integrated Operations & Enterprise Data Management

Honeywell FORGE

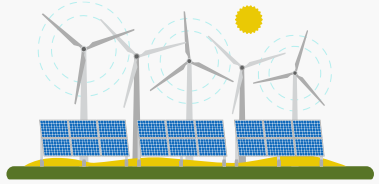
Integrated Industrial Cyber Security



Carbon Capture



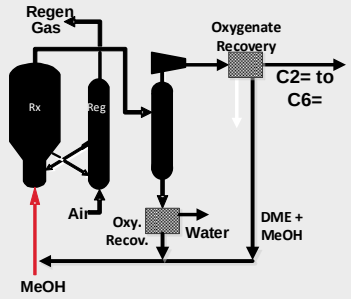
Making Methanol



Renewable Energy

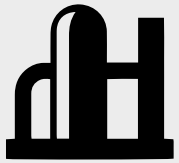
Green H_2

UOP eFining™



Methanol to Olefins (MTO process)

Light Olefins



Oligomerization & Hydrogenation

Integrated Safety and Security with Controls

SAF

Equipment Effectiveness

Advanced Alarm Management

Workforce Competency

Advanced Control

ADVANTAGES OF MeOH ROUTE TO SAF

Commercially Proven Pathway

- Steps in methanol path are commercially proven at scale or are small changes from proven tech
- No need for small-scale demonstration to prove the concept
- Costs/economics for commercial scale can be estimated with relative accuracy today

Hub & Spoke Option for Economies of Scale

- Methanol is a fungible, marketable and easily transportable liquid.
- Methanol from multiple sources could be combined in a single facility

Speed to Market

- Option to build world scale capacity on mix of renewable and fossil methanol, with transition to fully renewable methanol over time

Yield and Carbon Intensity

- High-yield pathway with low utilities and H_2 consumption per barrel of SAF
- Honeywell UOP eFining can reduce greenhouse gas (GHG) emissions by 88% compared to conventional jet fuel*

*** Reduced GHG emissions is based on UOP carbon intensity analysis, derived from a 3rd-party study of methanol production from green hydrogen and CO_2 captured from biomass processing, in comparison to fossil fuels.**

IN SUMMARY…

- UOP has a proven record of leadership and success in commercializing renewable fuels technologies at scale
- UOP's Ecofining, eFining, RTP and Ethanol to jet fuel processes build on decades of related R&D and commercial technology
- UOP has unique capabilities in catalyst development and manufacturing, process design/integration to increase return on investment while achieving technical goals
- Our SAF processes utilizes demonstrated technologies to achieve a high selectivity to jet fuel and to make a low C.I. jet fuel[1]
- Produce SAF with a low cost of production (COP)

1 - Proprietary catalyst design and engineering tools result in low process carbon intensity


THANK
YOU
Honeywell
UOP