

# Energy and Fuel for Island Communities – Our Approach



**Honolulu, Hawaii  
Asia Pacific Clean Energy Summit  
September 9-11, 2013**

**Uop**

A Honeywell Company

**Honeywell**

# Honeywell International

Honeywell

- \$37.7 billion (2012) in revenues, ~50% outside of U.S.
- Nearly 130,000 employees operating in 100 countries
- Morristown, NJ global corporate headquarters

## Aerospace



**\$12.0B**

## Automation & Control Solutions



**\$15.9B**

## Performance Materials & Tech



**\$6.2B**

## Transportation Systems



**\$3.6B**

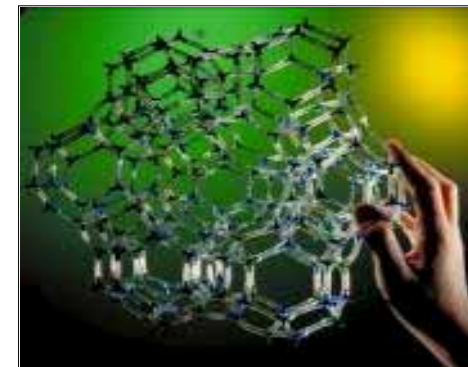
# UOP LLC, A Honeywell Company

Honeywell

- Founded in 1914
- A leading international supplier and licensor of processing technology, catalysts, adsorbents, process plants, and technical services.
- Largest process licensing organization in the world.
- 31 out of 36 refining technologies in use today were developed by UOP

## Markets

- Petroleum refining
- Petrochemical production
- Gas processing
- Renewable fuels and chemicals



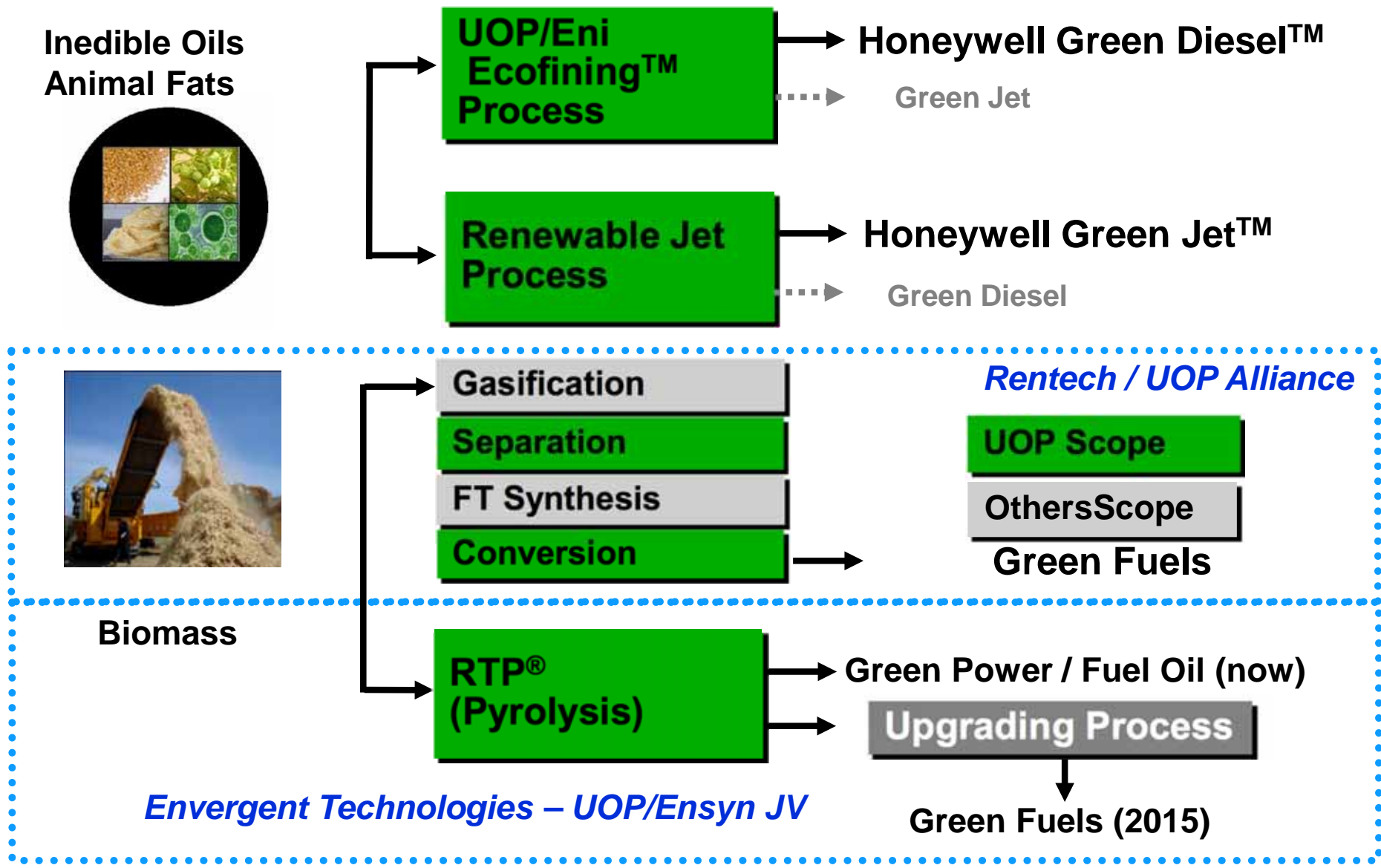
## Products/Services

- Developing and licensing of process technology
- Equipment
- Catalysts
- Adsorbents
- Molecular sieves



***We've Known Hydrocarbon Fuels for 100 Years!***

# Renewable Technology Portfolio



**Proven Technologies for Feedstock Flexible Drop-in Fuels**



# Advancing The Production Of Renewable Fuel

Honeywell

- **US Government Defense Production Act Program**

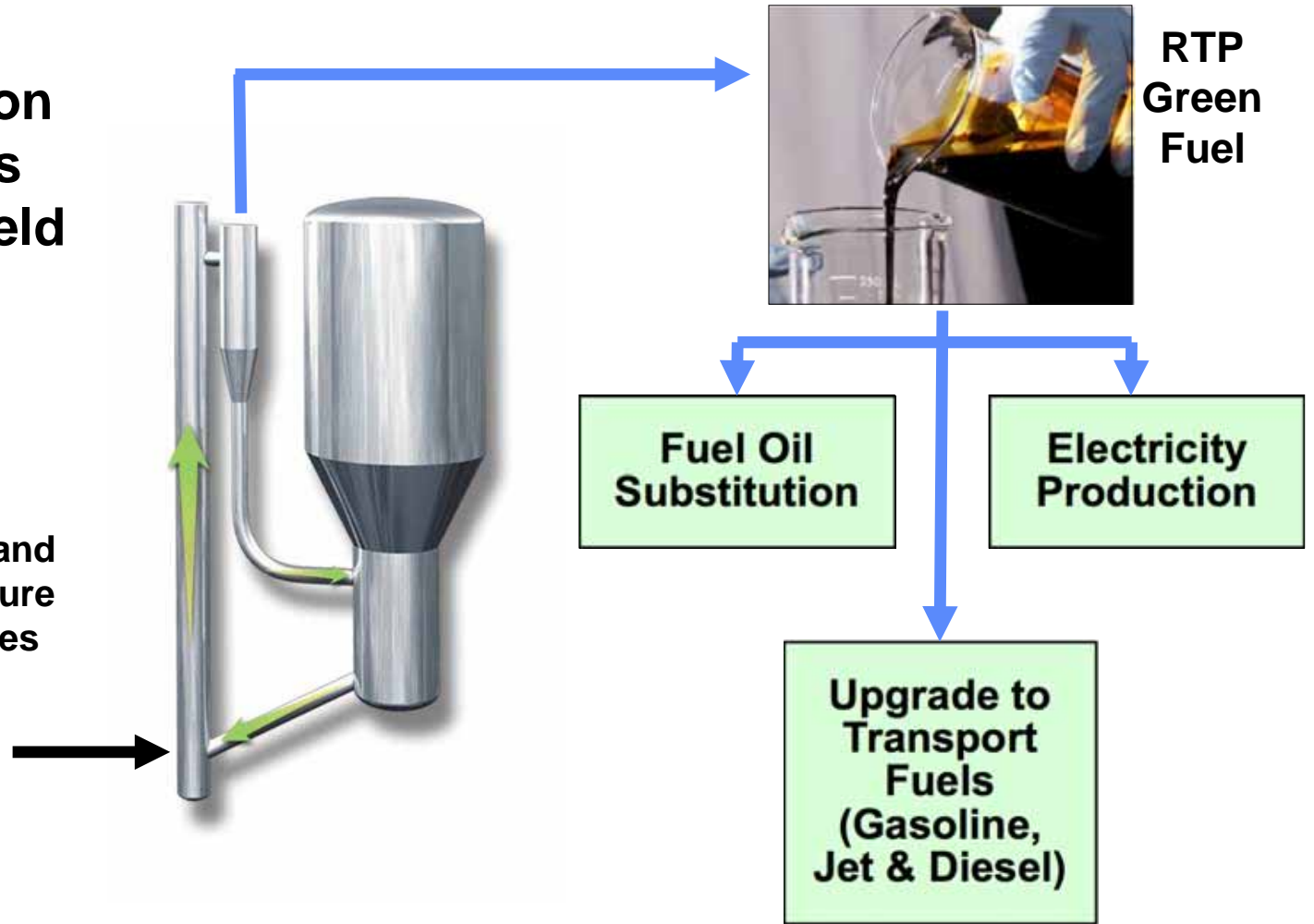
- Five (5) biorefineries awarded
- Three (3) awarded to UOP technologies
  - ◆ AltAir, California – 2,500 bpd
  - ◆ Emerald, Louisiana – 6,500 bpd
  - ◆ Natures Bioreserve, Nebraska – 4,000 bpd



- ***Added to US's largest integrated operating biorefinery:***
  - **Diamond Green Diesel, Norco, Louisiana – 10,000 bpd (diesel, naphtha)**
- **ENI, Italy**
  - 10,000 bpd (diesel, naphtha) on-stream early 2014

# RTP – Second Generation Residues to Energy

- Transportable fuel
- Energy densification relative to biomass
- Maximum liquid yield 65 – 75 wt%



*Liquid Fuel Decouples Biomass Conversion from Energy Generation*