

INSIGHT: Renewable fuels, chem recycling gives Ecovyst another growth path

By Al Greenwood

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HOUSTON (ICIS)--Ecovyst, which has long made catalysts for hydrocrackers in oil refineries and polyethylene (PE) plants in chemical complexes, has found a new market in renewable fuels and chemical recycling.

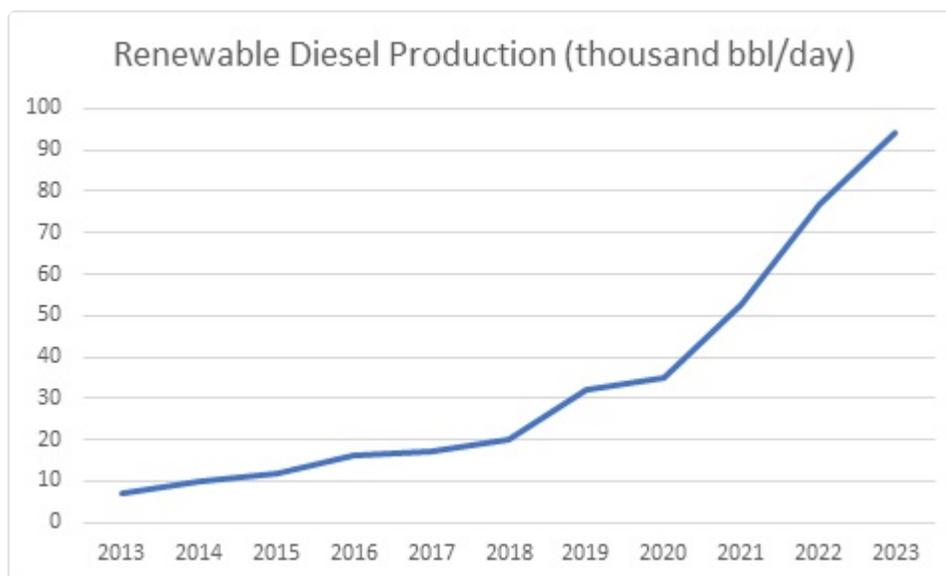
- Growth in renewable diesel and other fuels opens prospect of double-digit sales growth in sector
- Ecovyst could commercialise chemical-recycling catalysts in the second half of the decade
- Ecovyst will continue innovating refining and polyolefin catalysts

SUSTAINABLE GROWTH

Sustainability is one of the biggest opportunities for Ecovyst and for the catalyst industry as a whole, said Tom Schneberger, president of the company's Catalyst Technologies segment. He made his comments in an interview with ICIS.

The company commercialised a renewable-fuels product line in 2019, said Ecovyst CEO Belgacem Chariag during an earnings conference call. By 2021, Ecovyst's renewable fuels sales had tripled year on year.

Companies and refiners are adding new renewable diesel capacity through conversions and new plants. The result has increased US production of the fuel, as shown in the following chart. Figures are in thousands of bbl/day.



Source: Energy Information Administration (EIA)

Ecovyst expects sales of its renewable-fuels products will grow by a compounded annual growth rate in the mid 20% range through at least the mid-decade, Chariag said.

Chemically recycling plastics could become another source of growth for the company's catalysts. Ecovyst is aligned with two of the companies that are in the lead in developing pyrolysis-based chemical recycling, Chariag said.

By 2024-2025, Ecovyst could have a full commercial line a catalysts for chemical recycling, he said. "It will be a pretty important business for us."

Another potential market is renewable jet fuel, also known as sustainable aviation fuel (SAF).

It can be made by a similar process as renewable diesel, but the market is still nascent in its development as the economy improves, Schneberger said. Regulations for SAF are still evolving, and the economics are currently less favourable when compared with traditional jet fuel.

Still, if the airline industry wants to transition its fleet to a less carbon-intensive fuel, it will need a sustainable drop-in substitute for traditional jet fuel.

So far, airlines have started making maiden voyages with aircraft using SAF, Schneberger said.

SPEED OF TRANSITION

The US is the furthest along in developing renewable diesel because of incentives and regulations, Schneberger said.

[A big driver has been California's](#) low carbon fuels standard (LCFS). The standard calls for a gradual reduction of the carbon intensity of gasoline, diesel and their substitutes. By 2030, the carbon intensity of these fuel pools should decline by 20% from 2010.

Oregon also has implemented an LCFS, and several other states are in the process of considering a similar standard.

Outside of the US, [Canada has implemented](#) its Clean Fuel Standard, which calls for the gradual reduction of the carbon intensity of fuels.

Schneberger said Europe is closely behind in renewable diesel. There is some adoption even in Asia.

Ecovyst is focusing on western economies because the regulations and subsidies are already in place. The US already has renewable diesel plants, and companies are building more.

For now, renewable diesel producers should not have any problems finding vegetable oils, animal fats and waste greases for their plants, Schneberger said. Renewable diesel producers have learned a lot from the food-versus-fuel debates that the ethanol industry struggled with during the last decade.

That is why the industry is placing so much focus on waste greases. It is also why catalysts and process technology are so important. They can allow plants to use a wider variety of feedstocks while improving the quality of the fuel and the yields of the plants.

Renewable diesel production is not expected to be limited by feedstock constraints until at least 2024-2026, Schneberger said. Moreover, the industry is working on innovations to prevent those constraints from occurring.

"Folks are working to innovate so those limitations don't materialise," he said.

One variable that is hard to measure is Russia's invasion of Ukraine. The war underscores the importance of having diverse sources of energy. That could increase interest in renewable diesel and other alternative

sources of energy.

On the other hand, the war [has disrupted supplies of sunflower oil](#), the third most traded vegetable oil after palm and soybean oil. The disruption tightened [overall supplies of vegetable oils](#).

Given all of the variables of the war, it is too early to determine how it could affect renewable diesel.

For Ecovyst, the war has not threatened the raw materials it needs to make its catalysts for hydrocrackers, renewable diesel and pyrolysis, Schneberger said.

WORLD STILL NEEDS PETROLEUM

The Russian invasion illustrates that the world still needs fossil fuels. Once markets began factoring in the war's supply disruptions, prices for crude and oil products spiked.

The energy transition has several years to play out, so the world will continue to need fossil fuels.

With that in mind, Ecovyst is continuing to improve its traditional products that serve fossil fuels, such those used in hydrocracking catalysts and emission control, he said.

Similarly, it sells catalysts to make polyolefins and it is developing catalysts to chemically recycle them.

Ecovyst can serve both ends of the markets while the energy transition unfolds.

"We feel very secure as a company that we can support the industry transition," Schneberger said.

Additional reporting by Helen Yan and Lucas Hall

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