

## **Target PQ (ecovyst) Virtual Investor Conference: April 8, 2021**

### **TOM SCHNEBERGER – CATALYST TECHNOLOGIES**

#### **Slide 1: Introduction**

- Thanks Kurt and good morning everyone. I'm Tom Schneberger. I joined the PQ team about a year and a half ago to lead our strategy and business development efforts.
- A few weeks ago, I transitioned to lead our Catalyst Technologies business.
- I'm very excited to tell you more about this business and where we'll focus over the coming years.

#### **Slide 2: Key Takeaways**

- Our business has an exciting path ahead with increasing demand for existing products and frequent requests from customers to collaborate in the development of new catalysts.
- As you'll see throughout this presentation, our team's focus is narrow and deep.
- We selectively allocate our resources to provide differentiated technologies that are adopted faster than the growth rate of the broader markets we serve.
- In addition to attractive organic growth, we have opportunities to expand into near adjacencies where our expertise and customer relationships are highly relevant.
- And, due to our close collaboration with customers, we continually refine the performance of our products relative to specific needs. This added-value enables us to qualify new products in advance of demand and command attractive sales margins.

- These important attributes provide an excellent vehicle for top-line growth with attractive margins.

### **Slide 3: Catalyst Technologies Business Structure**

- Let's take a step back for a minute and review the Catalyst Technologies business structure...
- Our business is made up of a wholly owned entity that is focused on silica-based catalyst technologies and a joint venture with Shell that is focused on zeolite-based technologies.
- Our silica catalysts team is primarily focused on the increasing demand for stronger and lighter polyethylene resins and films. In this space, we continue to grow as a leading innovator of silica catalysts and catalyst supports.
- In addition to catalysts for polyethylene, we develop custom silica catalysts for other chemical and material processes.
- The Zeolyst partnership with Shell was established over 30 years ago. Our team is uniquely capable to develop and manufacture new zeolite-based materials tailored to the desired applications.
- As we transition to an economy with cleaner fuels and reduced emissions, Zeolyst will play an important role.

### **Slide 4: Catalyst Technologies Business Snapshot**

- Our business has the advantage of continually innovating with customers to improve the performance of the products they make. In this role, we enable them to meet the increasing and evolving requirements of the markets they serve.
- In addition to a clear focus on the polyethylene, fuel, and emissions control segments, we develop, manufacture and supply novel, custom catalysts for niche applications where our technologies outperform existing products.

- We sell our products globally with a large portion of our current sales in western economies and continued growth in the Asia Pacific and the Middle East regions.
- Regardless of the market segment and geographic location, our business provides fit-for-application catalysts and catalyst supports that outperform other products.
- Once our products are selected, switching costs are frequently high and we are generally well positioned to collaborate with the same customers to serve their longer-term needs.

#### **Slide 5: We Innovate With Customers and Manufacture Strategically to Meet Their Global Needs**

- Our product development and applications testing take place at four global R&D centers, with two located in the United States and two located in Europe. Ray will discuss the purpose and capabilities of each location during the technology portion of today's presentation.
- Our production network includes both owned assets and tollers. This plant network is both global and flexible – giving us the capability to rapidly respond to customer needs.
- Over the past decade, this network of technology centers and manufacturing sites has repeatedly proven its expertise to develop new products and scale them up to commercial production.
- Our customers are served by a global sales force that is deep in specific areas of catalyst technology. Our sales team works closely with our innovation centers to understand the performance of current products and to identify opportunities where we can create additional value.
- Our integrated sales, manufacturing and product development network creates win-win relationships where our customers trust us for reliable supply and for continued innovation.

- Additionally, the smaller size and focused nature of our business allows our team to be agile - creating many opportunities to expand product offerings.

## **Slide 6: We Enable Our Customers to Address the Sustainability of Their Products**

- The continued development of new catalysts enables us to play an important role in our customers' sustainability journey.
- We're focused on two important, long-term secular trends:
- The clean-energy transition and the circular economy for plastics.
- Both of these trends continue to accelerate, and neither is new to ecovyst.
- Our catalysts are often designed to make polyethylene with improved performance characteristics - like strength-to-weight ratio - while reducing the lifecycle impact of the plastic.
- Additionally, we have multiple projects in various stages of development for the recycling of polymers.
- Within fuels & emissions control, our products help to meet increasingly strict emissions control requirements and they're used in the production of renewable fuels.
- Finally, the increased focus on ESG is driving many companies to rethink traditional manufacturing processes - in an effort to create an improved environmental profile. This trend is creating increased opportunities for niche custom catalysts - including several that are in various stages of development for the production of novel renewable materials.

## **Slide 7: We Play a Critical Role in the Polyethylene Value Chain**

- When we take a look at the value chains we serve, it becomes clear that our products play a critical role in our customers' current production as well as their efforts to address sustainability trends.

- In this simplified diagram of the polyethylene value chain, our traditional catalysts are used to form polyethylene at location #1.
- The catalysts are consumed during the production process and must be replenished as more polyethylene is made. These catalysts enable the cost-effective manufacturing of polyethylene with specific performance characteristics.
- Below the diagram are examples of characteristics commonly requested by customers, which provide opportunities to sell improved, designed-for-purpose, catalysts.
- As progress is made toward a circular economy, the types of catalysts used at location #1 will remain relevant, while chemical recycling processes for polymers will create new opportunities for ecovyst in position #2 on this diagram.
- Our current product development pipeline has active projects for each of these types of catalysts.

#### **Slide 8: We Are Integral to Clean Fuels and Emission Control**

- Similarly, if we use the diesel value chain, as an example for fuels and emissions control, we're increasingly realizing sales for products that enable renewable fuel production.
- This is in addition to the recovering demand for more traditional hydrocracking and emissions control catalysts – shown at locations 1 & 3.
- As global energy requirements continue to increase, we believe the evolution toward a cleaner and more efficient fuel mix - combined with increased emissions reduction requirements - will provide more demand for our business over the next decade in aggregate.

### **Slide 9: We Focus on Higher-Growth Segments Where We Have Technology Advantages**

- Using the chart Belgacem shared earlier – but focused on the catalyst markets – we can see that there are many types of catalysts - each requiring specific expertise.
- The green circles in this chart indicate our strategic focus areas.
- On average these areas are growing faster than the broader catalyst market.
- More importantly, these areas are at the high end of our competitive advantage based on current talent and assets. This means we are well positioned to continue growing our product offering within the defined space.
- Our discipline not to focus in some larger markets - where the technologies are further from our core - enables us to focus resources and continue to achieve faster than market growth in our target space - which is over 6 billion dollars in total size.

### **Slide 10: Polyethylene Demand is Growing with Increasing Product Performance Requirements**

- Let's take a closer look at demand growth trends - starting with polyethylene.
- Polyethylene demand remains strong. This is one of the few segments that continued to grow during 2020 as stay-at-home conditions and health & hygiene trends offset the broader economic slowdown.
- We expect this market will continue to grow at about 4% per year, as a growing middle class increases global per capita demand.
- The trends shown on the right of this slide are making polyethylene a preferred material that is being specified with increasing performance requirements.

- We expect our customized catalyst products will continue to support sales growth at more than 2 times the market growth rate in this segment.

### **Slide 11: Fuel & Emission Control Customers Will Require More and Tailored Catalysts**

- Turning to fuels and emissions control, our addressable market is more than 1 billion dollars in size. The demand for catalysts continues to grow in this segment as the fuel mix shifts and environmental requirements tighten.
- Our ability to tailor zeolite materials allows us to develop and manufacture products for traditional fuels, renewable fuels, and emissions control applications.
- The continued demand for traditional fuels and the increasing demand for renewable fuels both provide clear opportunities for our proprietary zeolite products. Our emissions control product line will also benefit from the tightening environmental standards worldwide.
- Coming off a demand disruption, driven by the pandemic, we expect demand growth of high-single-digit percentages in this segment through 2025.

### **Slide 12: There is Increasing Demand for Custom Catalysts in Niche Applications**

- Our technologies are also advantaged for niche, high-value-add products, within larger markets.
- While each application can take multiple years to develop with the customer, the results are novel products that we're exclusively positioned to sell.
- We are seeing demand for novel catalysts continue to increase, as customers seek the development of renewable materials and more efficient production.

### **Slide 13: Our Innovation Model is Driven by Customer Collaboration**

- The customers we serve increasingly require innovation partners they can trust.
- Their own product development, capital investments and go-to-market strategies require the technologies and manufacturing expertise that ecovyst provides.
- Over the past decade, we've built and refined our abilities to take concepts from unmet customer needs to production on an accelerated basis.
- Additionally, our ability to manipulate crystal structures, surface areas, pore volumes and other material properties often results in novel materials that we patent.
- Our innovation projects start with customer performance requirements and the development process is collaborative - from start to finish.
- As a result, we develop a deep understanding of the applications we serve and we're able to customize catalyst materials to serve the shifting needs of our target markets.
- You'll hear more about our innovation pipeline later in the program.

### **Slide 14: Organic Growth Outlook**

- So, when we put it all together, what does this mean for ecovyst investors?
- We expect organic revenue growth at a 10% CAGR through 2025 - with each of our three segments contributing.
- As we exit this downturn, and restore our manufacturing network efficiencies, we expect our Adjusted EBITDA to increase at a 15% CAGR through 2025-- with improving margins over the time period.
- In addition to these strong organic growth rates, we see upside potential via our innovation pipeline and inorganic growth.



## **Slide 15: Key Takeaways**

- To summarize, a few key takeaways to remember:
- We provide innovative technologies in growing markets.
- We selectively invest where we can grow faster than the market.
- And, our customers rely on our tailored offerings, incorporating them into their processes - which results in predictable and sustainable growth with strong margins.
- Thanks for your interest. In ten minutes, we'll be back with a technology overview.