Cellulosic Ethanol Solution

Generation 1.5: Grain Fiber to Cellulosic Ethanol Technology™ (Gen 1.5)

Serving as a cost-effective technology in today’s marketplace, ICM’s Gen 1.5 integrates a process for converting corn fiber to cellulosic ethanol with existing ethanol plants. This pathway to cellulosic ethanol is accomplished by combining mechanical, chemical, and biological processes with ICM’s extensive experience in integrating advanced technologies with existing corn ethanol plants.

Enhanced Capabilities

› Gen 1.5 has been proven in both pilot (up to 35,000 gallons) and production (585, 000 gallon) fermentors in runs greater than 1000 hours

› In many cases, ethanol produced by Gen 1.5 process can be made at a lower cost of production than the traditional Generation 1.0 starch-based ethanol process

› Collaboration with two world-leading biotechnology companies, DSM and Novozymes

Benefits of Gen 1.5

In addition to SMT™ and FST™, Gen 1.5 benefits include:

› Additional 7-10% increase in cellulosic ethanol

› Additional 20% increase in oil recovery

› No feedstock collection required – fiber handles far easier than agricultural residue

› Fully-integrated solution reduces costs – capex cost of $3-5 per gallon compared to $10-15 for cellulosic Generation 2.0

› Capture D3 RINs, cellulosic tax credits and California Low Carbon Fuel Standard Credits – may result in added value as high as $3.00 per gallon above corn ethanol prices

› Produces a high protein DDGs mix – bringing added value to animal feed

› Flexible rollout

› Patent-pending technology

“ICM’s Generation 1.5: Grain Fiber to Cellulosic Ethanol Technology™ is a patent pending technology that is a robust solution for corn fiber ethanol maximizing the cellulosic gallons compared to other costly approaches."

Contact us for pricing and financing options

Learn more about this and other services ICM offers to meet your plant’s needs!

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Leading the renewable fuels industry with proven results ICM recognizes the need for plants to continually improve, diversify and stay competitive. Since 1995, backed by the strengths of the renewable fuel industry’s top engineers, scientists, construction management specialists, account managers, and leadership, ICM has developed services tailored specifically for renewable energy producers, supporting its customers from initial concept to decades beyond construction.

ICM is invested in the future with a state-of-the-art pilot plant focused on optimizing technology for our customers. With a plant’s needs in mind to increase yields and throughput, reduce cost per gallon, provide carbon intensity reduction, and open the doors to market diversity, ICM continues to strive to optimize ethanol production and enhance increased profits for plant owners globally.

As ICM improves its designs and develops new innovations, ICM will continue to test its ideas to ensure delivery as promised.

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