Best of Both the Worlds with NextGen EcoSmart Technology

Praj commissioned first plant based on EcoSmart technology in Poland. This 200,000 liter per day multi-products distillery is capable of production fuel and beverage grade ethanol.

This project was special to us for two reasons. This is the first plant that employs the novel EcoSmart technology. This process is based on energy integration of distillation and dehydration sections. The distillation columns have been configured to secure the benefits of integration along with flexibility to produce different grades and concentration of ethanol as per market demand.

Also, the climate conditions at Oborniki County where the plant is located are extremely challenging. The region experiences temperatures as low as -20 degree Celsius in winter when the moderating influences are lacking.
### EcoSmart – The Concept

<table>
<thead>
<tr>
<th>Features</th>
<th>Advantages</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| ▪ First High Grade Alcohol Plant based on novel Ecosmart technology  
▪ Feedstock - corn/wheat  
▪ Capacity - 20 MGPY  
▪ Location - Poland | ▪ Multi-product- fuel ethanol, superior quality Grain Neutral Spirit (vodka grade)  
▪ Energy integrated Distillation and Dehydration System | ▪ Energy Efficiency - uses 2.2 kg of steam / lit of alcohol (18.5 lbs/gal)  
▪ Upto 40% water and energy reduction |

EcoSmart – The Concept

Fermented mash + (water + solids) → Distillation → Dehydration → Refining

- Heavy boiling congeners
- Whole stillage (water + solids)
- Spent lees
- Heavy boiling congeners

High quality ethanol