Solar® Turbines

A Caterpillar Company

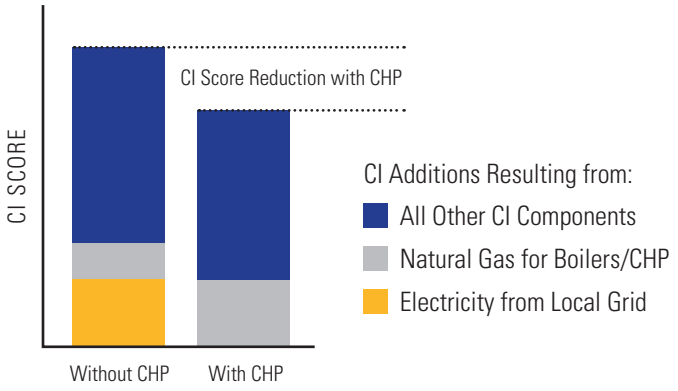
Powering the Future Through Sustainable, Innovative Energy Solutions

REDUCING CARBON INTENSITY SCORE

Ethanol prices have been at record lows for the last few years. Ethanol plant managers are looking for ways to increase efficiency, drive revenue and lower cost.

For some companies, this has led to reducing their Carbon Intensity (CI) score to drive higher prices for their ethanol sold into the California market. Installing a gas turbine based combined heat and power (CHP) plant is the largest single project an ethanol plant operator can execute to reduce their CI score. While site dependent, a CHP plant can reduce the CI score by up to 8 points. Installing CHP can also help a plant reach lower GHG lifecycle amounts to qualify for the EP3 program to produce 20% more ethanol than the nameplate rating of the plant.

Installing CHP reduces the CI score by eliminating nearly all carbon from the electrical grid. This is a result of the the plant creating its own power and getting heat or steam as a byproduct at a much higher efficiency. For most ethanol plants, a CHP plant produces much less carbon and GHG than the current electrical grid and on-site boilers alternative.



Installing CHP reduces GHG and the CI score, but it does not affect plant operations. The plant also has additional redundancy since they can use the electrical grid as backup and still have the existing boilers. This can provide the plant with additional uptime and reliability which will result in additional production with a lower CI score and, ultimately, more revenue.

Solar Turbines has supported the ethanol industry for nearly 20 years by providing CHP plants to initially support the EP3 program and more recently to reduce a plant's CI score. Solar has installed and provided service to 15 turbines in the ethanol market and more than 16,000 turbines worldwide.

For questions or additional information:
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16,000
Gas Turbines in 100+ Countries

7,100
USA Installations

15
Ethanol Plants

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