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Attachments: [SRU Calculation Questionnaire.doc](#)
[SRUFlueGasCondenser-InstallationOption.pdf](#)
[Therm&CO2CounterBrochure.pdf](#)

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Good day California Energy Commission

I attended the meeting in Fresno last week Thursday (May 9, 2019). After watching the presentation and listening to the presenters it seems that the California Food Processors and Beverage Producers and Processors (FPIP) need to reduce their natural gas consumption or increase their natural gas energy efficiency in order to reduce their high operating costs and their emissions of greenhouse gases (GHG). Going through your list of Tier 1 Eligible Technologies - Boilers, economizers are mentioned.

Not knowing the operations of most of the eligible processors, but knowing that most food processors require steam and or hot water for their process requirements the natural gas boilers must make it high into their list of appliances that consume the most natural gas.

Most boiler operators are aware of feedwater economizers and their roll at producing steam. How many realize that a feedwater economizer can only increase the boilers energy efficiency by 2 to 4% and that in most cases there is 10% of the combusted produced heat energy still going up the chimney into the atmosphere?

It takes the installation of a condensing economizer to get that other 10 plus % of available heat energy out of the combusted natural gas exhaust. It also takes a bit more effort and engineering from the boiler operator or facility manager to look and source the best application of this recovered heat energy.

The manufacturer of these Condensing Flue Gas Heat Recovery Units will also need this information in order to engineer a Condensing Economizer that will provide the best energy recovery performance possible for this facility, and be able to provide a quotation for this equipment. (see attached)

The tell tale sign of the Condensing Economizer recovering the most energy available, will be in how much Water is being "produced". In every 1 million Btu's of combusted natural gas are 5 gallons of recoverable distilled water. The cooler the exhaust temperature can be lowered in the heat recovery process will determine how much water will be produced.

It is for this reason that the installation of an SRU Flue Gas Condensing Unit is placed beside the boiler or the boiler chimney. It is to ensure that none of the produced condensate can find it's way back into the boiler unit. Water on the fireside steel components will cause serious corrosion problems, negating the financial gains that were possible by doing heat recovery. (see attached)

The US DOE states that for every 1 million Btu's of heat energy that is recovered out of the combusted exhaust of natural gas and the recovered heat energy is utilized in the building or facility or for another purpose, 117 lbs of CO₂ will not be put into the atmosphere. Sidel has also developed and delivers with each SRU Unit sold a Therm & CO₂ Counter. (see attached)

Natural gas that is not wasted today, will be there to be used another day. It has also been stated that California wants to reduce Global Warming. The State also wants to Increase Water Conservation, and the State wants to reduce Carbon Emissions.
All that is made possible when increasing natural gas energy efficiency is applied beyond feedwater heating with an economizer.

Natural gas can be consumed to near 100% efficiency. This has to become the California standard when increasing an appliances energy efficiency. Doing condensing flue gas heat recovery.

As in all things ~ Go for the gusto!

We look forward to your reply.

Have a Fantastic Day!



What natural gas is not wasted today, will be there to be used another day.

Sid Abma

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