

An Information Dependant Computer Program for Engine Exhaust Heat Recovery for Heating

Vamshi K. Avadhanula, Chuen-Sen Lin
Department of Mechanical Engineering
University of Alaska Fairbanks

DEER Conference, Dearborn, MI
August 3-6, 2009



Poster P-1



- In Alaska there are about 180 rural villages, with individual diesel power plants.
- In 2007 electric power usage was about 370,000 MW-h.
- Heating was selected as exhaust heat recovery application.
- Each village is unique in power load, heating load, power system infrastructure, heating system infrastructure, technical personnel availability, labor cost, shipping cost etc.
- To conduct a reliable estimate of applying exhaust heat recovery on the economic of individual villages and to accelerate the process, a computer program has been developed which can help the village power plant engineers to quickly evaluate whether or not the installation is beneficial.