



MTAC Product & Technology Review

“Green Machine” – Approval for Massachusetts Custom Efficiency Programs

Report Date: November 15, 2012

MTAC Approval: Bob Dvorchik, chair

Summary of MTAC Action

On October 11, 2012 the statewide Massachusetts Technology Assessment Committee (MTAC) approved the eligibility of equipment utilizing the ORC technology for power generation for participation in the Custom efficiency programs of the eight Massachusetts utilities and program administrators (“PAs”). It should be noted that financial rebates will be available only if a specific project is deemed to be cost effective on the basis of the Mass Save cost effectiveness standards utilized in Massachusetts.

Technology Description

This is a technology that utilizes using the Organic Rankine Cycle (ORC) to generate electricity utilizing low temperature waste water (>190 degrees). According to one manufacturer, the proper application is anywhere that has waste heat of at least 190 degrees. If the waste heat is being mechanically cooled it is even better. At least 1.37 MMBTU of heat must be available to operate the equipment.

There are other manufacturers which utilizes similar technology (ORC) to generate electricity through air-borne waste heat. This type of equipment would also be eligible for evaluation under the energy efficiency Programs

There have been a number of applications in Europe but few in the US to date. MTAC concluded that this is a viable technology provided that adequate waste heat is available.

Summary of MTAC Decision

- This document does not approve incentives for any specific installation of the technology. However, MTAC has determined that this technology will be generally eligible for Custom program participation on a site specific basis provided that the specific application is demonstrated to be cost effective according to the criteria established for ratepayer funded efficiency programs in Massachusetts.
- Under the MassSave Custom energy efficiency project path, each site specific project will have to have a detailed technical assistance study performed to fully document the

estimated energy savings and installed equipment costs. This information will then be used as the basis to determine the cost effectiveness of the project and it's eligibility for incentives.

Manufacturers, Product & Model Info

At this point MTAC is only aware of one manufacturer that makes a product with this capability: ElectraTherm, Inc. (www.electratherm.com.) The vendor does not currently have a project in identified in Massachusetts but is actively seeking a site.