

Case Study

Central Maui Landfill Beneficial Use of Landfill Gas

Background

The Central Maui Landfill is a publicly-owned and operated landfill receiving approximately 800 tons per day of municipal solid waste. Following the installation of a landfill gas flare and collection system, and the preparation of a landfill gas master plan including site life projections (completed by DEI), the County wanted to review their options regarding the development of their landfill for beneficial use and energy recovery.

DEI Scope of Work

DEI was hired to assist in (1) a review of the site master plan and landfill gas site life projection, and prepare a comprehensive report discussing the options available to the County of Maui for the beneficial use of landfill gas; and (2) evaluate technologies available for transforming landfill gas into energy and perform an economic and feasibility analysis of the proposed technologies.

DEI Tasks

DEI was responsible for the following work tasks:

- Determining the amount of energy available for beneficial use by utilizing the previously prepared projection of quantity and quality of landfill gas
- Providing background information regarding the development of the landfill, compliance requirements associated with LFG and LFG volume, and energy projections from collected LFG
- Providing a conceptual design analysis to describe the scope, capital costs and operating costs associated with multiple technology options for an energy recovery facility
- Providing recommendations for the development of an energy recovery facility to the County covering technology, ownership arrangements and operating relationships with a third party developer

Results

 The report was well received by the County and they implemented the report's recommendations by conducting a RFP for third party development of an energy recovery facility