

NAWTEC17-2346

HANDLING OAHU'S WASTE DISPOSAL

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ABSTRACT

Oahu has special needs and requirements when it comes to dealing with solid waste on the island. The City and County of Honolulu has successfully addressed this problem in the past and is working on solutions for the future. Five percent of the island's electrical power has been generated reliably from the 2000 tons per day of waste processed by their H-POWER Waste-to-Energy Facility. The facility has been processing waste for nearly twenty years and the volume of refuse going to the landfill is reduced by 90 percent. Honolulu is considering the best solutions for the island's waste for the coming years. Waste-to-energy works in partnership with recycling to reduce the island's increasing waste volumes. Recycling programs are in place and additional recycling measures are being considered. Landfill space is limited and questions exist regarding the ongoing use of the existing landfill and what will happen when it is closed. In an island setting, some alternatives available to other areas such as long haul to distant landfills are not available to bridge solid waste issues. Therefore practical solutions must be found and implemented in a timely manner. A number of initiatives and plans are in development. Measures are underway to prepare the H-POWER facility for future emission requirements and operation for the next twenty years. Steps have been taken toward expansion of the existing facility. Permitting and negotiations with agencies and utilities are under way. This paper will explore and expand upon these issues showing how they are interrelated to one another.

INTRODUCTION

Each of the islands in the Hawaiian chain is a separate county and the Island of Oahu is the County of Honolulu. The Island of Oahu is dominated by the City of Honolulu. The local residents, military operations and tourists generate about 1.8 million tons of waste per year. A single governmental body

called the City and County of Honolulu (City) provides the governmental authority for the Island.

The City has a solid waste department that regulates trash in all its forms. The City owns the largest active landfill on the island, the Waimanalo Gulch Landfill. This is the only landfill permitted to accept municipal solid waste. The landfill is operated by Waste Management for the City. The City also owns the Honolulu Program Of Waste Energy Recovery Facility (H-POWER) having recently repurchased it from a group of investment bankers. The City also promotes recycling, green waste collection and composting and other waste reduction programs. This is very important on the island because of the limited land resources, the limited capacity of Waimanalo Gulch Landfill, and limited alternative means of disposal. The H-POWER Facility and recycling divert about a million tons of waste from the landfill each year. Since the City is so highly dependent on tourism, protecting the island's natural beauty is essential which means tight control of illegal dumping and careful management of the permitted facilities. Continued operation of the landfill has become a political issue due to continued development of the island.

Due to the lack of viable alternatives, waste disposal would be anticipated to be quite expensive. However the tipping fee charged on the island is not exceptionally high when compared to other highly developed areas particularly in the Northeast. The tipping fee is currently about ninety dollars per ton for residential disposal with the same fee charged at the landfill as the H-POWER Facility.

Part of the reason for this reasonable tipping fee is the very favorable electrical sales agreement for the H-POWER Facility. The island chain has no natural fossil fuel energy sources and thus is almost entirely dependent on imported diesel fuel oil. A single coal-fired plant located next to the H-POWER Facility imports coal from Indonesia for power production purposes.