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Memorandum

TO: Representative Pete Petersen
FROM: Roger Withington, Legislative Analyst
DATE: October 24, 2011
RE: Permits Required for Waste-to-Energy Plants in Alaska
LRS Report 12.041

You asked for information regarding waste-to-energy electrical generation plants. Specifically, you asked for the list of permits—both federal and state—required to construct and operate a waste-to-energy electrical generation plant in Alaska. You also asked how long the permitting process would take.

Generally, waste-to-energy electrical generation is the process of creating electricity or heat from the incineration of waste. For the most part, waste-to-energy processes produce electricity directly from the combustion of waste or from the combustion of a fuel, such as methane, extracted from decomposing waste. The Alaska Energy Authority classifies municipal waste as a biomass fuel, along with wood, sawmill waste, and fish byproducts.¹

Devany Plentovich, Program Manager for the Alaska Energy Authority, provided us with a list of permits that a potential waste-to-energy project in Alaska would need in order to be constructed and subsequently operate.² Ms. Plentovich cautions that there is no single source for all of the permit requirements and, because each project is unique, permitting is dependent on many variables such as the funding source, location, size, raw material supply, waste products, and the technology to be used. The table on the following page lists and describes the major permitting areas that must be considered when pursuing a waste-to-energy project. Please keep in mind that this list is likely not exhaustive and does not include any local construction and zoning ordinances that may affect the development of a waste-to-energy plant.

¹ The Alaska Energy Authority (AEA) was created in 1976 by the Alaska Legislature and is a public corporation of the state with a separate and independent legal existence. The mission of the Alaska Energy Authority is to reduce the cost of energy in Alaska. According to the AEA, approximately 650,000 tons of garbage is generated each year in Alaska and currently, there is no large scale recovery of energy from the burning of unsorted garbage. The AEA provides information on biomass energy at <http://www.akenergyauthority.org/programs/alternativebiomass.html>.

² Devany Plentovich, Program Manager - Biomass/CHP, Alaska Energy Authority, (907) 771-3068.

Permitting Considerations for Waste-to-Energy Power Plants in Alaska	
Agency	Summary
Environmental Protection Agency	<p>If the waste-to-energy project is on Federal land or is funded through a Federal source, it falls under the National Environmental Policy Act (NEPA) [42 U.S.C. 4321 et seq.], which establishes national environmental policy and goals for the protection, maintenance, and enhancement of the environment. To meet the NEPA requirements, all involved federal agencies prepare a detailed statement, known as an Environmental Impact Statement (EIS), assessing the environmental impact of, and the alternatives to, major federal actions that significantly affect the environment. The Environmental Protection Agency reviews and comments on the EISs prepared by the other federal agencies, maintains a national filing system for all EISs, and assures that its own actions comply with NEPA.</p> <p>http://www.epa.gov/compliance/nepa/</p>
Alaska Department of Natural Resources	<p>The Alaska Department of Natural Resources, Office of Project Management and Permitting (OPMP), coordinates the review of large scale projects. Because of the complexity and potential impact that waste-to-energy projects have on multiple divisions or agencies, these projects typically benefit from a single primary point of contact to facilitate interagency coordination and a cooperative working relationship with the project proponent. http://dnr.alaska.gov/commis/opmp/</p> <p>In addition, the Alaska State Historic Preservation Office becomes involved with archaeological and historical resources. http://dnr.alaska.gov/parks/oha/shpo/shpo.htm</p>
Alaska Department of Environmental Conservation	<p>Air quality permitting is required for most waste-to-energy projects through the Alaska Department of Environmental Conservation's (DEC) Air Permit Program, which is divided into two categories: Title I and Title V. New and existing facilities that propose to construct or modify a stationary source of air pollution would likely need a permit under Title I. The Title V program issues operating permits and emission limit permits.</p> <p>http://dec.alaska.gov/air/ap/permit.htm</p> <p>In addition, the DEC issues water use, solid waste, hazardous waste, and water treatment permits. http://dec.alaska.gov/index.htm</p>
Alaska Division of Fire and Life Safety	<p>The Alaska Division of Fire and Life Safety Construction must approve the repair, remodel, addition, or change of occupancy of any building or structure, or the installation or modification of a fuel tank. http://www.dps.alaska.gov/fire/PRB/</p>
Regulatory Commission of Alaska	<p>The Regulatory Commission of Alaska must issue a Certificate of Public Convenience and Necessity if the waste-to-energy project is to generate electricity.</p> <p>http://rca.alaska.gov/RCAWeb/home.aspx</p>
Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service	<p>The Alaska Department of Fish and Game and the US Fish and Wildlife Service will be involved in any project with threatened or endangered species and habitat issues.</p> <p>http://www.adfg.alaska.gov/index.cfm?adfg=license.main</p> <p>http://www.fws.gov/permits/</p>
U.S. Army Corps of Engineers	<p>The Army Corps of Engineers requires permitting for wetlands and other protected areas.</p> <p>http://www.poa.usace.army.mil/hm/default.htm</p>
Other possible agencies	<p>The National Resources Conservation Services due to certain land development issues. http://www.nrcs.usda.gov/</p> <p>Federal Communications Commission for telecommunications interference and aviation considerations. http://www.fcc.gov/</p> <p>Alaska Department of Transportation and Public Facilities for right-of-way issues and transportation of hazardous materials.</p> <p>http://www.dot.state.ak.us/stwddes/dcsrow/index.shtml</p> <p>Bureau of Alcohol, Tobacco, Firearms and Explosives for any process that requires distillation. http://www.atf.gov/</p> <p>U.S. Coast Guard for issues related to the barging of materials. http://www.uscg.mil/</p>
Notes:	<p>This list is likely not exhaustive and does not include any local construction and zoning ordinances.</p>
Source:	
	<p>Devany Plentovich, Program Manager - Biomass/CHP, Alaska Energy Authority, (907) 771-3068.</p>

Tom Crafford, Director of the Office of Project Management and Permitting (OPMP), Alaska Department of Natural Resources, notes that his agency has not as yet been involved in the permitting of waste-to-energy electrical plants.³ As a result, he is not able to provide us with an exhaustive list of necessary permits, nor an estimate of the length of time required to issue the permits. Mr. Crafford also notes that permitting for projects is often very project-specific and dependent on a number of factors, some of which may include:

- Whether the plant would be dedicated to a specific facility, such as a school, or be connected to a power grid;
- The anticipated electrical generation capacity of the proposed plant;
- The type of waste being considered as fuel;
- The ownership—public or private—of the plant;
- Whether the plant is to be located on state, private, federal or municipal land; and
- If transmission lines are required to deliver the electricity.

Mr. Crafford further notes that the project permitting timeline is generally dependent upon the number of permits and authorizations required by the project, the public notice and comment requirements necessitated by the project, the public support for and opposition to the project, the quality of permit applications, the experience of the applicants and their consultants, and whether or not permitting decisions are appealed.

We hope this is helpful. If you have questions or need additional information, please let us know.

³ Tom Crafford, Director of the Office of Project Management and Permitting, Alaska Department of Natural Resources, (907) 269-8629.