Investment Grade Energy Audit (IGEA)
Requirements Overview

An investment Grade Energy Audit (IGEA) is a requirement of the State infrastructure funding and is required for step 2, 3 and 4 projects receiving Clean Water State Revolving Fund (CWSRF) and/or Centennial funds. **Revised Code of Washington (RCW)** 43-19.670 (1) defines the energy audit as a determination of the energy consumption characteristics of a facility which consists of the following elements:

A. An energy consumption survey which identifies the type, amount, and rate of energy consumption of the facility and its major energy systems. This survey shall be made by the agency responsible for the facility.

B. A walk-through survey which determines appropriate energy conservation maintenance and operating procedures and indicates the need, if any, for the acquisition and installation of energy conservation measures and energy management systems. This survey shall be made by the agency responsible for the facility if it has technically qualified personnel available. The director of enterprise services shall provide technically qualified personnel to the responsible agency if necessary.

C. An investment grade audit, which is an intensive engineering analysis of energy conservation and management measures for the facility, net energy savings, and a cost-effectiveness determination.

The requirement for an IGEA applies if:

- The project received funding after July 1, 2011.
- The project involves repair, replacement, or improvement of a wastewater treatment plant or other public work facilities; AND
- An Investment Grade Energy Audit is obtainable.

There are four methods to meet the IGEA requirement. These methods include:

1. Documentation that you have met the IGEA requirements in the past.

- An audit showing potential energy savings,
- A design review, and
- Documentation must be less than three years old.

2. Third Party Design Review

- New projects and major retrofits may not fit into a traditional energy audit framework.

- The design review will focus on the energy-intensive processes; motors, pumps, blowers, etc.
- A design firm can sub-out to a qualified third party for "peer review" on the energy components.
- Design review can also be conducted by your power provider (this includes Public Utility Districts with their own energy experts).

3. No "Obtainable" Energy Savings

- Projects receiving funding with no energy uses, i.e., "pipes and pavement;"
- Minimal energy use (maintenance lighting); or
- A preliminary audit that concludes that energy savings are not obtainable.

4. A Formal Audit

- An IGEA will identify cost effective energy strategies to save power and money for your utility.
- The audit can be prepared by your power provider or an Energy Services Company (ESCO).
- Starts with a preliminary audit to determine if an IGEA is "obtainable."

The IGEA can be just for the funded project or the entire system, although the latter is preferred. The IGEA can also be paid for with Centennial grant or CWSRF loan funds.

Frequently Asked Questions:

- **What kind of documentation is required?** Document that you made a good-faith effort to find energy savings in your utility. This could be a formal report documenting specific projects, a letter from your power provider, or a copy of your EnergyStar portfolio score.
- **Is there anyone who can help us review our energy use?** Contact your energy provider and ask for a Scoping Audit. Often energy utilities can also provide financial incentives for energy savings projects. Contracting with an ESCO is another option. Department of Enterprise Services (DES) maintains a list of ESCO's in the state. the Environmental Protection Agency's (EPA) EnergyStar benchmarking tool can also be a good place to start.
- **Does every borrower have to do an energy review?** Not every borrower has to do an energy review. There are several instances where doing a utility energy review does not make sense.
    - If your utility or treatment facility is brand new or will entirely replace your existing facility do not perform an energy review of the existing facility. Instead, you must

perform a design review (Third-party design review) to optimize energy efficiency of your new infrastructure.

- If your utility does not use much energy (No obtainable energy savings). Many stormwater utilities are entirely passive. Small wastewater utilities may rely on gravity sewer collection, lagoon treatment, or infiltration basins. If your utility does not pay a power bill, there is no need to review your power use. If your utility has an annual power use of less than 200,000 kWh, the Department of (Ecology) does not require a third-party review; just submit a copy of your utility bill and fill out the Small Utility Energy Checklist.

- If the project is not a "Public Work" Ecology does not require you to review your energy use. If, for example, we are funding an engineering contract or the purchase of a street sweeper.

- **Will Ecology pay for IGEA reviews?** Ecology can pay for the IGEA review. In many cases, you should be able to get a scoping audit or preliminary review from your energy provider for free. If you are not able to, or if you want to pursue a more in-depth review, those costs are eligible for reimbursement.

- **What about other types of energy?** Electricity and natural gas are the most common energy sources for utilities. Collecting methane, co-generation, solar energy, or even in-pipe micro-turbines are all possible sources of reducing energy costs for your utility. If any of these alternatives are an option for your utility, we encourage you to explore them as part of your energy reviews. Ecology does not require an evaluation of these alternative energy sources. Ecology can fund cost-effective alternative energy projects.

- **When is a design review for energy efficiency required?** If your project is the construction of a new facility or will replace your existing facility, you must perform a design review of the project for energy efficiency. If your project is modifying or replacing only a portion of your facility a design review for energy efficiency is encouraged, but not required. Instead, you must review your utility's overall energy use looking for cost-effective energy savings. A design review for energy efficiency is performed during project planning or project design phases. This review will evaluate the equipment sizing for all the major energy-consuming systems and will at a minimum calculate the energy per million gallons treated at both the design flows and loadings and the flows and loadings at startup.

Contacts for Additional Information:

Peter Hernandez, P.E.
Financial Assistance Engineer
Water Quality Program - Financial Management Section
360-890-0969
peter.hernandez@ecy.wa.gov