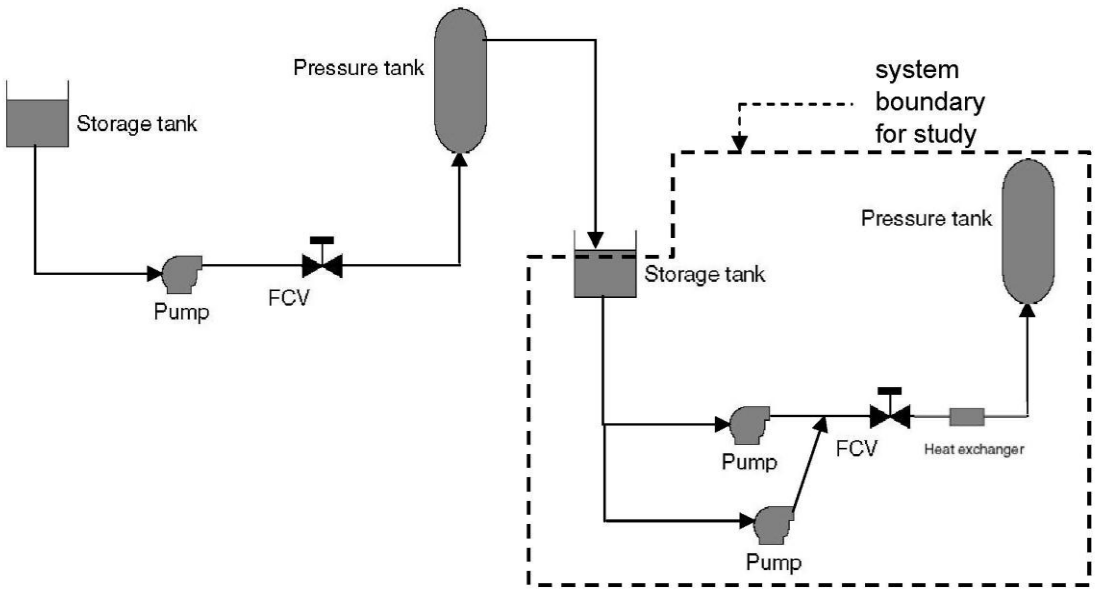
Introduction

This document outlines methodology and report items for a typical End-Use Assessment of an existing system. The title refers to the end-use of electricity, not to be confused with compressed air, water, or other commodity. It is understood that some projects may require a modified methodology and some report items will not be relevant to every project. The consultant should adopt an approach that is logical and transparent and include all report items that support the assumptions and conclusions reported, as well as any information that will facilitate understanding by BC Hydro's customer and review by Power Smart Engineering. These guidelines are intended to demonstrate, but not necessarily to prescribe, good energy engineering methodology, scoping and reporting.

The primary purpose of an End-Use Assessment is to identify the potential for energy conservation worthy of further study and to collect sufficient information to write a reliable proposal for an Energy Efficiency Feasibility Study (EEFS) on the same system. An assessment may also identify low-cost conservation measures that can be implemented immediately and in some cases may recommend no further action.

1. Typical End-Use Assessment Procedure

1.1. Identify and describe the system being assessed. Make a diagram of it, showing a system boundary and indicating all energy and product flows across the boundary. Sample diagram:



1.2. Collect data from easily accessible sources, such as rated power or current from name plates, estimates of loading and operating hours from operators, and similar data from existing instrumentation and data logs.

1.3. Identify opportunities within the system to save significant energy. The ideas may come from new, unbiased observation as well as any previous end-use assessment, plant-wide energy audit, customer site inspection or special request by the customer. Consider all opportunities, including those that may seem infeasible, at this stage.

1.4. For each Energy Conservation Measure:

1.4.1. Estimate from experience or with simple calculations the expected energy savings in kWh/year.

1.4.2. Calculate the savings in $/year using the customer's current electricity rate (from Tier 2 in case of a stepped rate). Neglect the demand and rate rider.

1.4.3. Estimate the cost of implementation. Previous similar experience or informal telephone quotations from suppliers shall provide sufficient accuracy.

1.4.4. If the customer has stated that the system flow rate is expected to change, adjust the savings and costs accordingly.

1.5. Write the report.

2. Contents of a Typical Report

2.1. Project identification

- Title
- Customer name
- Site location
- Contact names, phone numbers and email addresses of customer, consultant and BC Hydro Key Account Manager
- Report date, number and revision number

2.2. Plant and system descriptions

- Brief description of plant and nature of production or business
- Brief description of system (note diagram and comments above)
- Simple definition of the system boundary that defines interactions with other systems and constrains the assessment

2.3. Energy conservation opportunity summary

- Description of each energy conservation measure
- A list of opportunities as follows:

Energy Conservation Measures

ECM #	Description	Energy Savings (kWh)	Electricity Cost ($) Savings	Project Cost ($)
1				
2				
3				

- Optionally, columns may be added for demand (kW or kVA) and incremental cost ($) if those values are conveniently available and important to the assessment.

2.4. Methodology

- Brief description of method used to collect data, calculate savings and estimate costs for each energy conservation measure.

3. Consultant's Fee

- The fee charged for an Industrial End-Use Assessment (excluding taxes and expenses) may not exceed $5,000.