

Guideline: Customer Prerequisites EEFS on large multiple-pump systems

Purpose

The purpose of this document is to ensure multiple-pump systems and related engineering documentation is in a condition that will facilitate a Power Smart funded Energy Efficiency Feasibility Study.¹

Scope

This document applies to large multi-pump systems such as municipal potable water distribution systems, municipal waste water systems and multi-pump industrial water supply systems involving multiple wells, river and reservoirs.

While Assessment and Study funding is in support of identification, evaluation and recommendation of efficiency and performance improvement. It is the customers' responsibility to confirm the following is available and ensures appropriate staff and equipment is also available in support of Power Smart funded assessments and studies. In some instances an End-use Assessment may identify and determine the state and level to which these prerequisites need to be addressed.

Energy Efficiency Feasibility Study Prerequisites²

1. Asset Inventory
 - 1.1. Equipment list - all machines and devices in system
 - 1.2. Size and capacity of system and components
 - 1.3. Current operating conditions, flows, production
 - 1.4. Equipment drive rated (name plate) power and voltage
 - 1.5. Age and condition of system and components
 - 1.6. Operations and Maintenance "O&M" files/records
 - 1.7. Drawing List - including as-built documentation
2. Process/System Flow Diagram
 - 2.1. Hand-drawn or software modelled (Pipe Flow, AutoCAD, etc.)
 - 2.2. Labelled with elevations, length and pipe sizes
 - 2.3. Design and Actual Control strategy
3. System History
 - 3.1. A list of audits, assessments and studies previously done on the system
 - 3.2. A list of retrofits, modifications and rebuilds done in the past 10 years
4. Documented System Development and planned Operational changes
 - 4.1. Planned studies and retrofits
 - 4.2. Include design modification details, major repairs, rebuilds, expansion or contraction
5. At time of proposal, identify staff necessary to facilitate Power Smart funded efforts
 - 5.1. Technical and other staff such as engineers, electricians, millwright as, required
 - 5.2. Equipment needed for power, flow or other measurements, as required

¹ See document BCH-QMS-9462-C-001 "Industrial Energy Efficiency Feasibility Study Guideline"

² Incorporate with funding contract via BCH-QMS-9462-C-002 "Project Specific Requirements for Industrial Plant-wide Audit, End-use Assessment or Energy Efficiency Feasibility Study"