

Green Project Information Form Supplement

Additional Drinking Water Information – Business Case for Pumps and Pipe Replacement

This document is a supplement to the Green Project Information Form and contains information for reference when drafting a business case for ARRA drinking water projects involving pumps, drives and pipes.

The following information has been provided by the US Environmental Protection Agency as supplement to guidance previously provided (refer to Green Project Information Form).

A business case will generally involve:

- 1) A technical component comprised of:
 - a) Information from maintenance or operations records, engineering studies, project plans that:
 - (i) Identifies problems in existing facility
 - (ii) Clarifies technical benefits from project in water and/or efficiency terms
- 2) A financial component comprised of:
 - a) An estimate of cost and water savings from the project based on technical analysis of benefits
 - b) An assessment that these savings comprise a substantial part of the financial justification for project

Here are suggestions on documenting an acceptable business case under the ARRA Green Project Reserve for pumps and pipes.

Pump Replacement Documentation:

- 1) Should show selection of a pump that ranks among the most energy-efficient commercially available. Efficiency improvements should be substantial compared to the average efficiency currently available for that type of pump. Additionally, energy efficiency should not be established by simply comparing the new equipment to equipment being replaced, since any replacement equipment would be expected to be more efficient than existing equipment.
- 2) Provide verified efficiency projections
 - a) List the manufacturer, make, and model of key components (motors, pumps, etc.)
 - b) Document that the energy efficiency specifications for proposed equipment demonstrate substantial savings over other currently available equipment

Pipe Rehabilitation/Replacement Documentation:

- 1) Should provide specific data documenting water loss (at minimum, system-wide, or more localized data if available)
- 2) Should identify the length, C-values, pipe material, diameter, and provide a general description of position within system, of pipes being rehabilitated/replaced.
- 3) Should document that the pipes to be replaced are the primary source of water loss (if such data is available). At minimum, should provide specific information on basis for rehabilitation/replacement, such as pipe age, type. Additionally, should provide operation and maintenance records showing that the pipes proposed for replacement are likely to generate largest return in leak reduction
- 4) If energy efficiency is relevant to project qualification as “green”, should provide any available documentation regarding expected increases in energy efficiency