



## MEMORANDUM

**TO:** Applicants for Green Project Reserve or Green Innovation Grant Program

**FROM:** NYS EFC Staff

**DATE:** May 21, 2009

**SUBJECT:** **Guidance on Energy Efficiency Business Case for Drinking Water Systems for ARRA Green Project Reserve**

The following guidance was provided to New York State Environmental Facilities Corporation (EFC) Staff from United States Environmental Protection Agency (EPA) staff via email on May 21, 2009 as guidance related to preparing a business case for energy efficiency projects funded through the Drinking Water State Revolving Fund (DWSRF) with American Reinvestment and Recovery Act (ARRA) funds and the Green Innovation Grant Program in New York State.

Additional information on making a business case for a DWSRF-funded project involving pumps and pipes, that is not categorically eligible to qualify for Green Reserve in Appendix 8 to the March 2 ARRA Guidance. As discussed in [EPA's March 12 webcast](#), a business case under either SRF 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

Below are suggestions on documenting an acceptable business case under the DWSRF for pumps and pipes.

1. Pump Replacement Documentation:

- a. 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.
- b. Provide verified efficiency projections
  - i. List the manufacturer, make, and model of key components (motors, pumps, etc.)
  - ii. Document that the energy efficiency specifications for proposed equipment demonstrate substantial savings over other currently available equipment

2. Pipe Rehabilitation/Replacement Documentation:

- a. Should provide specific data documenting water loss (at minimum, system-wide, or more localized data if available)
- b. Should identify the length, C-values, pipe material, diameter, and provide a general description of position within system, of pipes being rehabilitated/replaced.
- c. 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
- d. If energy efficiency is relevant to project qualification as “green”, should provide any available documentation regarding expected increases in energy efficiency