

# Commercial HVAC Efficient Pumping System (CHEPS) Emerging Technology Field Test

*BPA seeks utilities to participate in Commercial HVAC Efficient Pumping System (CHEPS) Emerging Technology Field Test*

## Opportunity

Bonneville Power Administration (BPA) is seeking a limited number of utilities to participate in an Emerging Technology (ET) Field Test. This ET Field Test could fully fund up to 10 Commercial HVAC Efficient Pumping Systems (CHEPS) retrofits, using direct-procurement, or simplified grants. This ET Field Test will research cost effectiveness, with the intent of informing a region-wide offering in 2018.

## What

Commercial HVAC Efficient Pumping Systems (CHEPS) retrofits include integrated, variable-speed HVAC system pumps, ranging in size between 1/3 and 10 hp, and controls. Multiple manufacturers offer integrated, variable-speed pumps, such as Armstrong, Bell & Gossett, Grundfos and Taco.



## Where

Suitable applications include HVAC pump systems with constant speed pumps that provide water for heating and cooling commercial buildings. Examples include, heating, chilled or condensing water pumps, where the existing pumps are constant speed. Facilities with longer hours of operation, such as hospitals or grocery stores, are good applications because of the higher expected savings.

## Why

- Help your customers save energy with no “out of pocket” cost,
- Be a leader in Emerging Technology research,
- Claim self-funded savings,
- Help the region meet Power Plan targets, and
- Help develop a region-wide offering.

## Non-Energy benefits

With variable-speed pumping, savings go well beyond energy and include enhanced performance, improved reliability, and reduced life-cycle cost. For new projects, capital cost is reduced through the elimination of valves, starters, wiring, pneumatic lines, and smaller-diameter piping with bypass lines. Additionally, the use of VFDs permits the use of smaller pumps with lower-horsepower motors, ensuring a tangible bottom-line benefit for building owners.

For additional information, utilities are encouraged to contact their Energy Efficiency Representative or Erik Boyer, at [ebboyer@bpa.gov](mailto:ebboyer@bpa.gov), 509-822-4586.



Please consider participating in this ET Field Test and help fill the pipeline with a new conservation measure. Your participation and feedback is essential to developing technologies and future BPA program offerings. ET Field Tests could pay the full project cost, while allowing utilities to claim savings as self-funded custom projects.

## Available Funding

A total of \$50,000 is available for eligible projects with an expected maximum of \$10,000 for any project. BPA anticipates five to ten projects will be funded, depending on interest and available funding.

## Application Process

Interested BPA customer utilities are invited to email a letter of commitment in addition to a project description and project information form to Erik Boyer, at [ebboyer@bpa.gov](mailto:ebboyer@bpa.gov), 509-822-4586. For more information, go to [www.BPA.gov/go/fieldtest](http://www.BPA.gov/go/fieldtest) where you will also find a “sample letter of commitment” and “project information form”. Utilities are encouraged to contact Erik Boyer prior to emailing. Following initial project screening, a funding strategy will be developed.

## Selection Criteria

Awards will be made based on the project(s) meeting the eligibility criteria, the provided cost information, the project location, and regional applicability. Preference will be given to the following project types:

- Facilities with longer hours of operation (ie. hospitals, grocery, etc.), Minimum 2000 hrs per year.
- Variability of loads, and
- Regional applicability.

BPA reserves the right to negotiate the project scope to meet available funding limits.

## Eligibility Criteria

Only BPA Customer Utilities can apply. Existing HVAC system pumps need to meet the following requirements:

- Serve commercially occupied spaces,
- Serve HVAC system variable-loads, such as heating water, chilled water and condensing water,
- Are constant speed,
- Range in size between 1/3 and 10 hp,
- Currently operate a minimum of 2,000 hours of per year, and
- Are in good working order.

CHEPS Retrofits must:

- Be integrated variable-speed pumps, either ECM pump motor or variable frequency drive (VFD), with controls,
- Have clear control strategy, providing energy savings while still meeting loads,
- Be installed and programmed by a licensed contractor per the manufacturer’s specifications,
- Be installed by June 30, 2017.

## Roles and Responsibilities

The utility is responsible for identifying projects and working with BPA to verify they meet the eligibility criteria requirements. The utility will be responsible for providing grant funds to the facility owner and coordinating to ensure BPA can perform measurement and verification (M&V).

BPA will help with the custom project proposal and provide funding for the CHEPS Retrofit. BPA will also provide measurement and verification and all energy savings analysis associated with the installation.

## For more information contact

Your Energy Efficiency Representative or Erik Boyer, at [ebboyer@bpa.gov](mailto:ebboyer@bpa.gov), 509-822-4586.