



Mechanical System Design Offer

Residential new construction

BACKGROUND

NRCan's Local Energy Efficiency Partnerships (LEEP) program has been working to accelerate energy efficient construction by bringing together leading builders and industry experts in workshops, technology forums, and field trials. As part of the LEEP Program in B.C., a series of training events were held in 2018, administered by local Canadian Home Builders Associations (CHBAs) and supported by the Province, BC Housing, FortisBC and BC Hydro. Builders who attended these sessions were primed to build future projects to Net Zero Energy Ready Performance levels. BC Hydro is offering funding to support builders obtain high performance mechanical systems in their resulting field trial homes that are built to Net Zero Energy Ready Performance levels.

OBJECTIVES

Our goal is to partner with builders to build industry capacity to ensure mechanical systems in residential homes are properly designed, installed, and upon completion verified to meet the original design intent. This offer will highlight existing strengths and opportunities to support builders in providing mechanical systems that cost effectively meet the needs of the homeowner. It will also provide partners and participants with insights into the differences in regional capacity of services and equipment available locally. This initiative is intended to help build market readiness for the Province's 2032 Net Zero Energy Ready building target for the B.C. Building Code.

THE OFFER

Each project will be provided financial assistance of \$3,500. Additional funding is available with justification, on a project by project basis, for special circumstances such as remote location or limited equipment availability. Mechanical system design that considers adaptation for future climate scenarios is also eligible for funding support on a preapproved basis.

A Steering Committee that will include representatives from CHBA BC, NRCan's LEEP program, BC Housing and BC Hydro will oversee applications and offering details.

ELIGIBILITY

BC Hydro is offering funding to support mechanical system design, installation and verification in new Part 9 buildings within the BC Hydro service territory that meet the following criteria:

- Project is at early design stage (prior to permit application);
- Design assistance is provided to optimize the mechanical systems (space conditioning, water heating and ventilation services);
- Building design can be modified to enhance the effectiveness of the mechanical system being installed;
- Space conditioning and water heating equipment must employ electric heat pumps;

Eligibility requirements apply unless otherwise agreed upon with BC Hydro and the Steering Committee members.

DELIVERABLES

Projects should deliver evidence on the impact this offer has on the quantitative and qualitative aspects of designing, installing, and verifying high performance mechanical systems in a local-market context. Project funding is available for builders who commit to build their home to Net Zero Performance levels and share their data with the Steering Committee.

Deliverables will include:

- Detailed room-by-room heat loss analysis report compliant to CSA F280-12
- Detailed mechanical system drawings for space conditioning, water heating, and ventilation services
- Inspection at rough in
- Start-up report that includes manufacturer requirements and best practices from TECA or HRAI industry associations (provided by mechanical system designer)
- Relevant, available documentation (such as home energy audit results, technical data, pictures, or reports) that may have been created or captured for the project and which help to convey the project results and learnings.

ELIGIBLE COSTS

All reasonable costs directly related to the deliverables will be considered for funding support with the exception of costs attributed to existing staff time and labour.

HOW TO APPLY

Applications must be submitted to BC Hydro on a first come, first served basis until the offer is fully subscribed. Builders should contact Gary Hamer at Gary.Hamer@bchydro.com for further details and to obtain an application form.