

New Home Program



Design Offer

Building a high-performance home can take more time than building a standard one. That's why we introduced our Design Offer rebate of up to **\$7,000** per home. It's available when pursuing BC Energy Step Code 3, 4 or 5. To participate, you'll need to work with a variety of consultants, including building science and mechanical design specialists.

The rebate

The Design Offer supports early planning for building envelope consultants, mechanical design and/or Integrated Design Process (IDP). You can choose to participate in one, two or all three elements of the offer and receive up to **\$7,000** toward the cost of hiring consultants to complete the work. The rebate is available per detached home, or for each unique floorplan in a multi-family complex (to a maximum of **\$50,000** per complex).

The three elements of the Design Offer rebate are:

Elements	Rebate
Integrated Design Process (must use a pre-approved IDP facilitator)	\$1,000
Envelope design (must use a building science consultant)	Up to \$6,000 combined
Mechanical design (must use a mechanical design specialist)	

Eligibility requirements

New home construction projects must be located in FortisBC's service area and meet the following criteria:

- The project is in the early design stage (prior to permit application).
- Design assistance is provided to optimize building envelope, mechanical systems and/or IDP.
- The building design can be modified to enhance the effectiveness of the mechanical system and/or the building envelope to improve the overall energy efficiency of the home.
- A FortisBC energy source provides the energy for primary space and water heating.

Design Offer elements

Envelope design

Architects and designers can have an important impact on a project by optimizing the envelope for energy performance and lower construction costs.

Deliverables include:

- envelope plans/assembly details
- effective insulation (RSI) calculations for each assembly used in the home
- details of areas with significant thermal bridges and how to address them
- airtightness details demonstrating a continuous air barrier



Mechanical design

Energy consultants are engaged to conduct heating and cooling load calculations, which conform with CSA F280 to lead to a better HVAC design. Carrying out CSA F280-12 heat loss/gain analysis will ensure properly sized heating and cooling systems, improve comfort and help reduce cost. Following these best practices can help homeowners and builders avoid the issues with HVAC equipment oversizing.

A complimentary subscription for the CSA F280 software will be available for the mechanical designer.

Deliverables include:

- room-by-room heating and cooling load calculations compliant with CSA F280
- mechanical design plans including detailed equipment schedule
- a start-up report that includes manufacturer requirements and best practices from TECA or HRAI industry associations (provided by mechanical system designer)

Integrated Design Process (IDP)

The IDP is a collaborative design approach intended to optimize performance, cost, occupant comfort and resilience of a residential building. It involves engaging the builder and their team—including designers, mechanical contractors, energy advisors, plumbers, electricians, framers and insulators—early in the design stage. IDP examines the needs and performance of a building throughout its lifecycle with the goal of ensuring the objectives of the builder are met.

The deliverable is a report summarizing the following:

- project overview (project location, housing type, number of units, construction timelines)
- attendees of visioning and charrette workshops
- visioning session and charrette notes
- observations of performance benchmarking activities
- modelling and design optimization results
- proposed solutions
- lessons learned, key strategies and knowledge derived from the process of performing envelope and mechanical design and/or IDP.
- a summary of the steps required to reach Step 4 or 5 (if building to Step 3)

How to apply

For more details and to apply, contact the New Home Program team at newhome@fortisbc.com.

Connect with us @fortisbc



Resource List

Choosing the right consultant is the first step towards starting an energy-efficient new construction. The following design consultants can help builders pursue Steps 3, 4, or 5 to help encourage processes that will reduce time and risk while still creating high-performing homes more effectively and efficiently.

To participate in the New Home Program - Design Offer, builders are required to work with a Mechanical HVAC Designer and/or a Building Envelope Specialist.

Recognizing mechanical and building envelope design may be new to some builders, this resource list serves as a starting point to identify individuals or organizations that work in these fields. Builders are not required to work with the companies listed here to participate in the Design Offer. When hiring a design consultant, it's a good practice to look for their certifications, and credentials and confirm they can meet the Design Offer deliverables.

Disclaimer

FortisBC, not being the builder-developer, designer, manufacturer, provider, or installer of the appliances, products, or equipment, makes no representation or warranty whatsoever as to the safety or fitness of, the necessity for, the quality of workmanship of, or the energy efficiency/savings of, any appliance, product, equipment or service or skill of any contractor or energy advisor.

Listings on the next page

Mechanical HVAC Designer

Companies listed below have met at least one of the following criteria:

Engineers and Geoscientists in British Columbia

Red Seal (Gasfitter Class B or Refrigeration and Air Conditioning Mechanic)

Completed all HRAI/TECA courses and use a Heat Loss/Heat Gain software

Company Name	Location	Phone Number	Website
Acacia Engineering Ltd.	Calgary	403-245-2200	http://acaciaengineering.ca/
Alphatec Energy Inc.	North Vancouver	604-771-5886	rasoulivan@gmail.com
BMAC Technologies and Consulting Inc	New Westminister	604-544-7564	http://www.bmactc.com/
Building& Environment Engineering Inc	Ontario	519-856-9916	rlay@explornet.com
Canadian Aerothermal	Penticton	1-877-663-6472	https://canadianaerothermal.ca/
Chen Consulting Ltd	Burnaby	604-629-6755/604-722-4895	http://www.chenconsulting.ca/
Ecolighten	North Vancouver	604-971-2088	http://www.ecolighten.com/
Energy 1 Services	West Vancouver	1-844-488-3700	https://www.energy1services.com
Enforma Engineering	Kelowna	778-363-0401	https://enforma.ca/
Epro Consultants Ltd.	Abbotsford	778-242-8111	https://eproconsultants.ca
Falcon Engineering/Hayley Shearer	Kelowna	250-762-9993	https://falcon.ca/
GeoTility Geothermal Installations Corp	Kelowna	250-762-5776	https://www.geotility.com/
HVAC Systems & Solutions Ltd.	Port Coquitlam	604-944-9222	https://www.hvacsystems.ca/
Infinity Solutions	Cranbrook	250-464-0632	https://infinitysolutionseng.ca
IRC Building Sciences Group	Richmond	604-671-5023	https://www.ircgroup.com/en
Jade West Engineering Co Ltd	Surrey	604-671-5023	https://www.jadewest.com
Micah's Plumbing & Heating Ltd.	Nelson	250-551-4920	micah@micahsplumbing.com
Madonald Mechanical Inc.	Kelowna	250-681-2600	https://www.macdonaldmechanical.ca/
McCuaig & Associates Engineering Ltd.	Vancouver	604-255-0992	https://www.mccuaig.net
Our Energy	Vancouver	778-939-4388	https://www.ourenergyadvising.com/
Patan Heating & Air Ltd.	Penticton	250-462-5224	info@patanheating.com
Petro Sadr Corporation	Port Coquitlam	604-474-0414/604-446-1123	http://petrosadr.ca/
Quality Air Care Heating& Air Conditioning Ltd.	Kelowna	250-862-9063	https://qualityaircare.ca/
Step 5 Solutions	Burnaby	604-616-6001	info@batta.ca
TAG Engineering	Surrey	604-564-6800	https://www.tagengineering.ca/
VerdaTech EnergyManagement & Consulting	Calgary	403-251-0683	https://energyexperts.ca/residential/

Building Envelope Specialist

Companies listed below are a member of at least one of the following organizations

Architectural Institute of British Columbia
 Applied Science Technologists & Technicians of British Columbia
 Engineers and Geoscientists in British Columbia
 Royal Architectural Institute of Canada

Company Name	Location	Phone Number	Website
APEX Building Science Inc	Abbotsford	604-575-8220	https://apexbuildingsciences.com/
ATEC Building Envelope Consulting	West Vancouver	778-288-4959	https://ateconsulting.com/
BAR Engineering Co. Ltd	Vernon	604-681-1844	http://www.bareng.ca/
BC Building Science	New Westminster	604-520-6456	https://bcbuildingscience.com/
Best West Engineers Ltd	Coquitlam	604-492-4559	http://www.bwengs.com/
Bluegreen Architecture Inc	Kamloops	250-374-1112	http://www.bluegreenarchitecture.com/
BMAC Technologies and Consulting Inc	New Westminster	604-544-7564	http://www.bmactc.com/
Building Envelope Engineering Inc.	Calgary	403-861-4044	david@beei.ca
Detailed Inspections& Energy Advising	Kamloops	250-574-3449	http://www.detailinspections.ca/
Dubas Engineering Inc	Burnaby	604-875-1930	http://www.dubasengineering.com/
EXP servicesInc	Burnaby	604-874-1245	http://www.exp.com/
Berry Architecture & Associates	Red Deer	403-357-7349	http://www.berryarchitecture.ca/
Hamid Design Build Ltd	Burnaby	604-603-3142	http://www.hamiddesignbuild.com/
Herold Engineering	Nanaimo	250-751-8558	http://www.heroldengineering.com/
i3 Building Science and Consulting Inc.	Coquitlam	604-306-7505	http://www.i3bsc.com/
Inspired Architecture	North Vancouver	604-773-1015	http://www.inspiredarchitecture.ca/
IRC Building Sciences Group	Richmond	604-295-8070	http://www.ircgroupp.com/en
JRS Engineering	Burnaby	778-386-3298	http://www.jrsengineering.com/
McCuaig & Associates Engineering Ltd.	Vancouver	604-255-0992	http://www.mccuaig.net/
Measured Architecture Inc	Vancouver	604-737-0235	https://measured.ca/
Meiklejohn Architectural Design Studio Inc	Penticton	250-492-3143	http://www.madstudio.ca/
Method Engineering and Building Services	Victoria	250-590-1999	http://www.methodengineering.ca/
Peakflow Energy Solutions Ltd	Comox	778-228-4828	http://www.gopeakflow.com/
NIDO Design Inc	Kelowna	250-448-4307	http://www.nido.design/
Qualistat Building Envelope Consultants	Calgary	403-457-7828	http://qualistat.com/
R340 Enterprises	Kelowna	250-86206400	https://inspectit.org/
Rathco ENG Ltd	Kelowna	250-300-9612	https://rathco.pro/
RDH Building Science Inc.	Burnaby	604-873-1181 ext 107	http://www.rdh.com/
Read Jones Christoffersen	Vancouver	604-738-0048	http://www.rjc.ca/
Richard Kadulski Architect	Vancouver	604-689-1814	kadulski@direct.ca
Sense Engineering	North Vancouver	604-319-5661	https://senseengineering.com/
Spratt Emanuel Engineering Ltd.	Vancouver	604-872-1211	https://sprattmanuel.com/
Strata Engineering	Burnaby	604-780-1316	https://strataengineering.ca/
Studio 9 Architecture + Planning Inc	Nelson	250-354-3959	http://studio9architecture.com/
Susanna Houwen Architect	Vancouver	604-836-7749	http://www.susannahouwen.com/
Tri-Can Consulting Ltd	Vancouver	604-449-7789	http://www.tccltd.ca/
urbanSTIX Architecture Inc.	Fernie	250-423-8800	https://urbanstix.ca/contact
Vancouver Engineering and Consulting	Vancouver	778-319-3403	https://vancouvereng.ca/