



FortisBC Design Offer

OVERVIEW

FortisBC's Design Offer is available to builders pursuing Steps 3, 4, or 5 and is intended to encourage processes that will reduce builder time and risk when building high-performance homes. In this pursuit, builders may be required to work with a variety of consultants, including building science and mechanical design specialists. The Design Offer will help offset the costs of engaging consultants to identify cost-effective opportunities and innovations.

This offer is to support early planning for building envelope consultants, mechanical design and/or IDP (Integrated Design Process). Builders can choose to participate in one, two, or all three elements of the offer and receive up to \$7,000 to reimburse the cost of the consultants hired to complete the work. The incentive is available per detached home or unique unit in a multi-family complex (up to \$50,000 in multi-family projects).

The three elements of the offer are:

- (1) Integrated Design Process: \$1,000 rebate, must use a pre-approved IDP facilitator.
- (2) Envelope Design and (3) Mechanical Design: up to \$6,000 in rebates, must use a building science consultant and/or mechanical design specialist.

Builders will also be able to access FortisBC's rebates through the existing New Home program, which includes a \$4,000 incentive for Step 3, \$6,000 for Step 4, and a \$10,000 incentive for Step 5.

ELIGIBILITY

New construction projects must be located in the FortisBC service territory and meet the following criteria:

- Project is at the early design stage (prior to permit application);
- Design assistance is provided to optimize building envelope, mechanical systems, and/or IDP;
- 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,
- FortisBC energy source provides the primary heat for space and domestic water heating.

DESIGN OFFER ELEMENTS

Envelope Design

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

Deliverables:

- 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 right-size heating and cooling systems, improve comfort, and can reduce cost. Following these best practices can help homeowners and builders avoid issues with HVAC equipment oversizing.

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

Deliverables:

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

IDP (Integrated Design Process)

Integrated Design Process (IDP) is a collaborative design approach that is intended to optimize the 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 – at an early design stage. IDP examines the needs and performance of a building throughout its lifecycle with the goal of ensuring that the objectives of the builder are met.

Deliverables:

- A report which summarizes 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.
- If building to Step 3, the report will also include a summary of the steps required to reach Step 4 or 5.

HOW TO APPLY

Contact the New Home Program at NewHome@fortisbc.com for further details and to obtain an application form.

RESOURCE LIST

Choosing the right consultant is the first step towards starting an energy-efficient new construction. The following design consultants can help builders pursuing 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.

Confirm the project eligibility by reading the terms and conditions [here](#).

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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

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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@xplornet.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/ |
| 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 | http://petrosadr.ca/ |
| Quality Air Care Heating | 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 Energy | Calgary | 403-251-0683 | https://energyexperts.ca/residential/ |

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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://atecconsulting.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 services Inc | 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.irgroup.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 1 | 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://sprattemanuel.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/ |