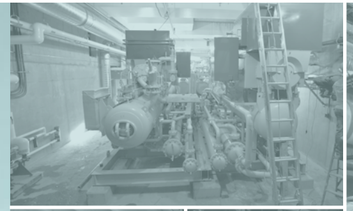
FALSE CREEK COMMUNITY ENERGY CENTRE

The False Creek Community Energy Centre building is designed as an interpretive facility to showcase the innovative use of sustainable technology. The building, designed by Walter Francl Architecture, is targeting LEED™ Platinum Gold certification. "There is an emphasis on information and public education, and a high degree of transparency to the building," says Francl, alluding to the street level portals that allow the public to view the machinery down below. The City of Vancouver had a strong interest in showcasing this innovative technology, so it initiated a public dialogue about how the building would be designed, including design charrettes with local residents and two well-attended open houses. Francl comments that "though the building is, in essence, an infrastructure project, we didn't want to contain it completely in a windowless box. We were challenged with designing an attractive building form for a sewage pump station." The designs were well received. At the City's open houses, recalls Baber, "the public expressed overwhelming support for the technology and design."

One of the challenges of designing the building was keeping its footprint as small as possible in an effort to preserve public right-of-ways in the vicinity of SEFC. "The building responds to existing urban design form," says Francl. "Three-quarters of what's happening in this building takes place underground." The Energy Centre is located directly underneath the Cambie Street Bridge, a car, bike and pedestrian bridge that leads to Vancouver's central business district. Given the close proximity of the bridge footings, specialized excavation methods had to be used to ensure that the structural integrity of the bridge was not compromised. The building's small footprint freed up half of the site for landscaping, and its above-ground portion is designed to accommodate tours and serve as a public education resource.

Left: Architect's rendering of the False Creek Community Energy Centre, nestled under the Cambie bridge.

Below (group of four): Recent photos taken of the False Creek Community Energy Centre as it nears completion.



PUBLIC ART

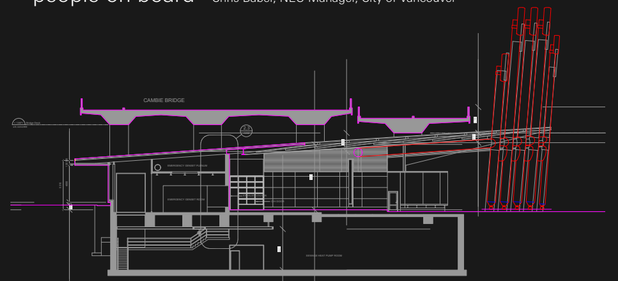
Artistic Interpretation Adds Visual Appeal to the NEU

In an effort to make the new building aesthetically appealing and to draw attention to the sustainability and innovation of the NEU, the project commissioned local artists to provide a design that would transform the system's emissions stacks to a community amenity. Local designers Pechet and Robb Art and Architecture were up to the challenge, coming up with a design both attractive and functional.

The NEU has five exhaust flues: three for the three natural gas boilers, one for an odour control system and one linked to an emergency generator. Pechet and Robb's approach was to instill a "human quality" to these flues, their rationale being, "it seemed significant that the [Energy Centre] will be heating people with existing body heat," says designer Stephanie Robb. The stacks extend into a sculpted stainless steel "hand," with each 22-metre long "finger" (flue) topped by an inclined "fingernail". The fingernails are LED lighting fixtures that will change colour to reflect the amount of green energy being produced by the system.

This artistic interpretation adds visual appeal to the NEU, inspiring residents and passersby to take an interest in the neighbourhood's sustainable infrastructure. "Initially, at the public consultations, people raised concerns about the appearance of the stacks," says Baber, "Today that's the part that people are most excited about. It's a great example of how good design and a good public process can bring people on board."

"It's a great example of how good design and a good public process can bring people on board" Chris Baber, NEU Manager, City of Vancouver



Above, the artists' rendering and schematic drawing of the Energy Centre's sculpted stainless steel hand. The fingernails are LED lighting fixtures that will change colour to reflect the amount of green energy being produced by the system.

PROFILE

FVB Energy

FVB Energy Inc. is a management and engineering consultancy specializing in community energy. The Canadian company was founded in 1992 as a subsidiary of a Swedish parent company that has over 40 years of district energy experience globally. FVB was responsible for the feasibility study and conceptual system design of the NEU. FVB contributed to the design and construction of the Energy Centre, distribution system and building connection interfaces.

Bard Skagestad was the Engineer on Record for the NEU energy transfer stations (ETSs) – the interface between the NEU system and each building's internal heating system. A key element of the district energy delivery system, ETSs consist of heat exchangers, controls and meters, piping and miscellaneous equipment.

"The most challenging part of the project was coordinating between all of the various disciplines, particularly given the imposition of a tight project schedule," remarks Skagestad. The system's capacity to accommodate other renewable sources of energy, is, to Skagestad, "perhaps the most innovative feature of the energy system."

"My belief and hope is that this project will set a new standard for sustainable and adaptable energy supply systems for future developments in Metro Vancouver and beyond."