

# Emily Carr University:

## Going for Gold with a P3 Model



FINANCING



NEW BUILDINGS

*Emily Carr University had outgrown its facility, and was facing \$12 million over five years in renovations and upgrades to stay viable. A long-term public-private partnership (P3) made it possible to design, build, finance and maintain a new LEED Gold caliber facility at a new location.*

### Project Summary

Founded in 1925, Emily Carr University of Art + Design (ECUAD) has grown to serve close to 1,900 full-time students and is ranked Canada's top university of art and design. In 2013, recognizing that the institute was outgrowing its location on Granville Island, the Province announced funding for a new home for the university at Great Northern Way, a few kilometers away. The land had been donated previously by Finning Canada to a group of four post-secondary institutions in Vancouver, and had been held in trust since then. The cost of the new campus would be covered by a provincial investment of up to \$101.65 million, with \$21 million to be raised through the university's capital campaign.

The project team looked at two options for procurement delivery:

**Design Bid Build** – Using this standard model, an architect would develop detailed drawings for the facility, and a construction contractor would build to those specs. ECUAD would bear the risks of design and construction, and would coordinate the involvement of all sub-contractors. ECUAD would own and operate the facility for its entire lifespan.

**Design Build Finance Maintain** – Using this P3 model, a selected contractor (the private partner) would design, build, partially finance and maintain the project over a 32-year period. The contractor would carry the risks of design and construction and the university would make payments to the contractor only if they met defined and measurable performance criteria on an ongoing basis. This model was deemed to yield the best value for money, and thus, the P3 was born.

Among the performance criteria established were targets for energy use, and environmental and sustainability services such as recycling and waste diversion, with financial penalties if targets aren't met. There was a two-year procurement process, and a two-year construction process once the private partner was selected, and the ribbon cutting took place August 4, 2017.

The finished Emily Carr campus is 27,000 square meters, and accommodates faculties of art, culture and community, design and dynamic media, and graduate studies. It is light, bright and spacious, with B.C. wood and high-energy-performance glazing throughout. It is green and energy efficient, designed and built to qualify for Leadership in Energy and Environmental Design (LEED®) Gold certification.

### Energy Efficiency and Sustainability

Because the project involved a move to a brand new facility, there are no before and after comparisons of energy use, however early indicators are that consumption of gas, water, and electricity per square foot are significantly down from historical rates.

One project highlight was the opportunity to connect to the City of Vancouver's Neighbourhood Energy Utility and reduce the amount of fossil fuels used in the facility by accessing their waste heat recovery system. This recovers heat energy from waste water and eliminates the need for a boiler plant and gas burning boilers.

Lots of high-clarity, high-energy-performance glazing, daylight harvesting, and occupancy and daylight sensors minimize the use of lighting.

LED lighting technology and HVAC building automation add to the environmental sustainability.



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## Making the Case

From the beginning, Emily Carr’s executive team was onside. In fact, President Rob Burnett was a key driver in the campaign to redevelop. The fact that this would be Canada’s first post-secondary institution delivered by a P3 arrangement meant that the risks of construction and maintenance would largely be borne by the private partner, Applied Arts Partners (see sidebar).

To engage faculty, staff and students, the project team held many user consultation groups. It was essential that the new facility meet stakeholder needs with the type of space and functionality that would make their education experience or quality of working life even better. Many individuals had a long-standing personal attachment to the previous facility, and wanted to continue to feel that way about the new one.

‘The Big Idea’, a capital campaign to raise additional funds from long-time supporters through donations and naming opportunities, further reinforced the sense of community. That culminated in late October 2017 with ‘The Big Reveal’, a two-day open house welcoming the public to ECUAD’s new home. The event included an Alumni Art Market, a retrospective of the work of 88 graduates over 88 years, self-guided tours, art stations and other activities.

The all-in cost of the Emily Carr project was \$123 million. Funding was provided by the Province, BC Hydro’s Power Smart New Construction Program, and ECUAD’s own funding and supporters.



## Public-private partnerships (from PPP Canada)

“Public–private partnerships (P3s) are a long-term, performance-based approach to procuring public infrastructure that can enhance governments’ ability to hold the private sector accountable for public assets over their expected lifespan.

P3s transfer a major share of the risk associated with infrastructure development (such as the costs associated with overruns, schedule delays, unexpected maintenance, and/or latent defects in the assets) to the private sector. This is accomplished by engaging the private sector in a bundled contract for the life of the asset. This contract connects ongoing operations and/or maintenance payments to the quality of the original construction.

In practical terms, this means that:

- Governments do not pay for the asset until it is built and operational;
- A substantial portion of the contract is paid out over the long term, and only if the asset is properly maintained and performs well; and
- The lifetime cost of the asset is known upfront, meaning that taxpayers are not on the hook for costs that arise unexpectedly during the contract period.

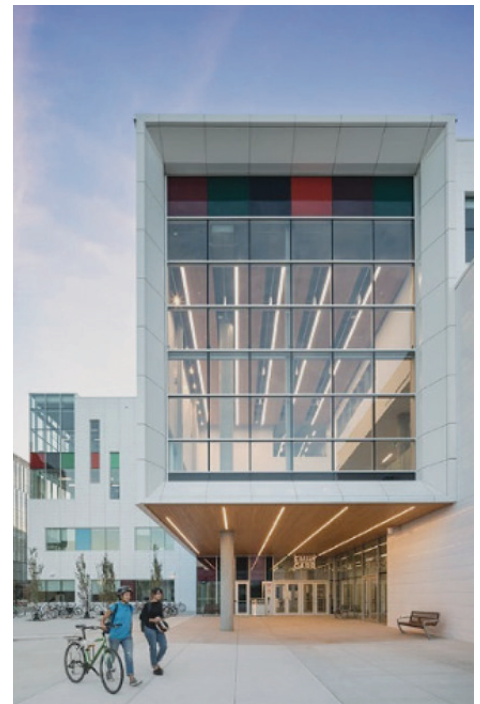
While they are not the right solution in every case, P3s can provide many benefits when applied to the right projects.”

## Results

The ECUAD Redevelopment Project Agreement contained schedules outlining strict performance measures around energy, and environmental and sustainability services. For example, Applied Arts Partners are contractually required to do the following:

- Apply to the BC Hydro Power Smart New Construction Program and any applicable energy incentive programs;
- Collaborate with BC Hydro and FortisBC to identify potential improvements to the facility design that would achieve greater energy efficiency;
- Install equipment to record and monitor energy consumption, and secure all such properly recorded information against adjustment, modification or loss;
- Provide a certificate each month showing energy consumption, peak use, weather data, building occupancy, and other data;
- Avoid or minimize the production of pollutants and waste, thereby reducing the overall impact to human health systems, building components, life cycle and the environment

ECUAD is currently monitoring energy and measuring the building's practical performance against the theoretical performance modeled by engineers.



## Lessons Learned

1. Ensure access to recycling stations and separated waste facilities. The student community will embrace the model of reducing, reusing, recycling, and keep the institution honest on its environmental sustainability.
2. Expect some unanticipated fixed costs on a project like this. For example, there is a connection fee when using a neighbourhood energy utility. The system lets users avoid capital cost but you'll pay a connection fee based on the potential maximum amount you might use.
3. Be prepared for fast-paced decision-making. Staying on schedule and on budget sometimes means pressure for a quick yes or no.



## Related Resources & Links

- Minimum program requirements, LEED projects  
[https://www.cagbc.org/cagbcdocs/LEED\\_Canada-Minimum\\_Program\\_Requirements-120731-EN.PDF](https://www.cagbc.org/cagbcdocs/LEED_Canada-Minimum_Program_Requirements-120731-EN.PDF)
- Canadian Council for Public Private Partnership,  
<http://www.pppcouncil.ca>
- P3 Spectrum, website highlighting P3 projects in Canada (active and upcoming)  
<http://www.p3spectrum.ca/>
- BC Hydro Power Smart New Construction Program  
<https://www.bchydro.com/powersmart/business/programs/new-construction/projects.html>

## Government Funding Programs

- B.C. Government, PSO Funding Information  
<https://www2.gov.bc.ca/gov/content/environment/climate-change/public-sector/resources>
- NRCAN Directory of Energy Efficiency and Alternative Energy Funding Programs in Canada  
[http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/policy\\_e/results.cfm?programtypes=4&regionaldeliveryid=11&attr=0](http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/policy_e/results.cfm?programtypes=4&regionaldeliveryid=11&attr=0)
- Innovative Clean Energy (ICE) Fund  
<https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/innovative-clean-energy-solutions/innovative-clean-energy-ice-fund>

## Contact

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