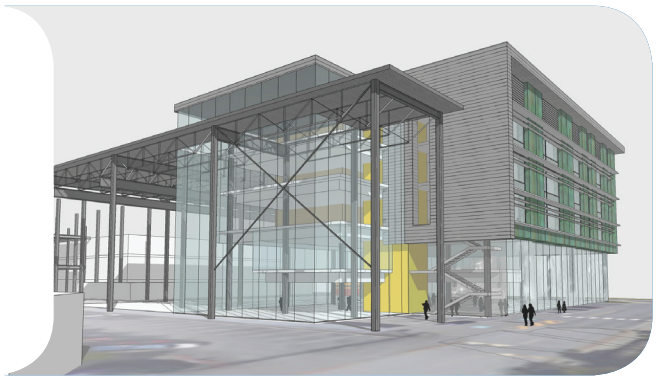



# BCIT Renew:
## Five-Year Capital Plan
## 2017 to 2021

BCIT



Fall 2016

# 5 Year Capital Plan (2017 - 2021)

## Project Overview

| Institution | Campus/City | Project Title | Project Category | Project Priority |
|---|---|---|---|---|
| BCIT | Burnaby | Trades & Technology Centre and NE12 Steel Trades Renewal | 1 | 1 of 4 |

## 1.0 Current Situation

NE12, which houses the Iron Worker Foundation, Iron Worker Generalist, Boilermaker, and Metal Fabrication programs, is an aging building with structural and functional deficiencies. Many systems and components are reaching end-of-life with a VFA FCI value of 0.53. Combined with the building containing asbestos, there is a total of $9 million in deferred maintenance and seismic mitigation.

Currently, BCIT is experiencing long waitlists for in-demand trade programs. Specifically, BCIT's Enrollment Planning Office has noted that the School of Construction and Environment has **459** students on waitlists for trades foundation programs, while trades foundation and technician programs offered by the School of Energy have **432** students on waitlists. In addition to these waitlists, the respective Schools face challenges with apprenticeship intake capacities. Each year, the number of intakes are filled prior to fulfilling the demand of prospective students, causing them to defer enrollment to another year. The additional space delivered by this project will permit growth in the areas in highest demand by students and industry.

## 2.0 Project Description

The BCIT Trades & Technology Centre project is an integrated, multi-phase project that will enhance and expand the Institute's trades and technology teaching space, with specific focus on the in-demand trades and industries identified in the *BC Skills for Jobs Blueprint*. The project is a mix of:

- A new 6,176 $m^2$ (66,480 sf) integrated trades & technology building;
- Four new cost-effective covered workshops;
- A simulated shipyard, including gantry crane;
- A reconfigured works yard;
- Complete upgrade and renewal of the 2,900 $m^2$ (31,215 sf) NE12 Steel Trades building; and
- Demolition of one obsolete building that contains asbestos.

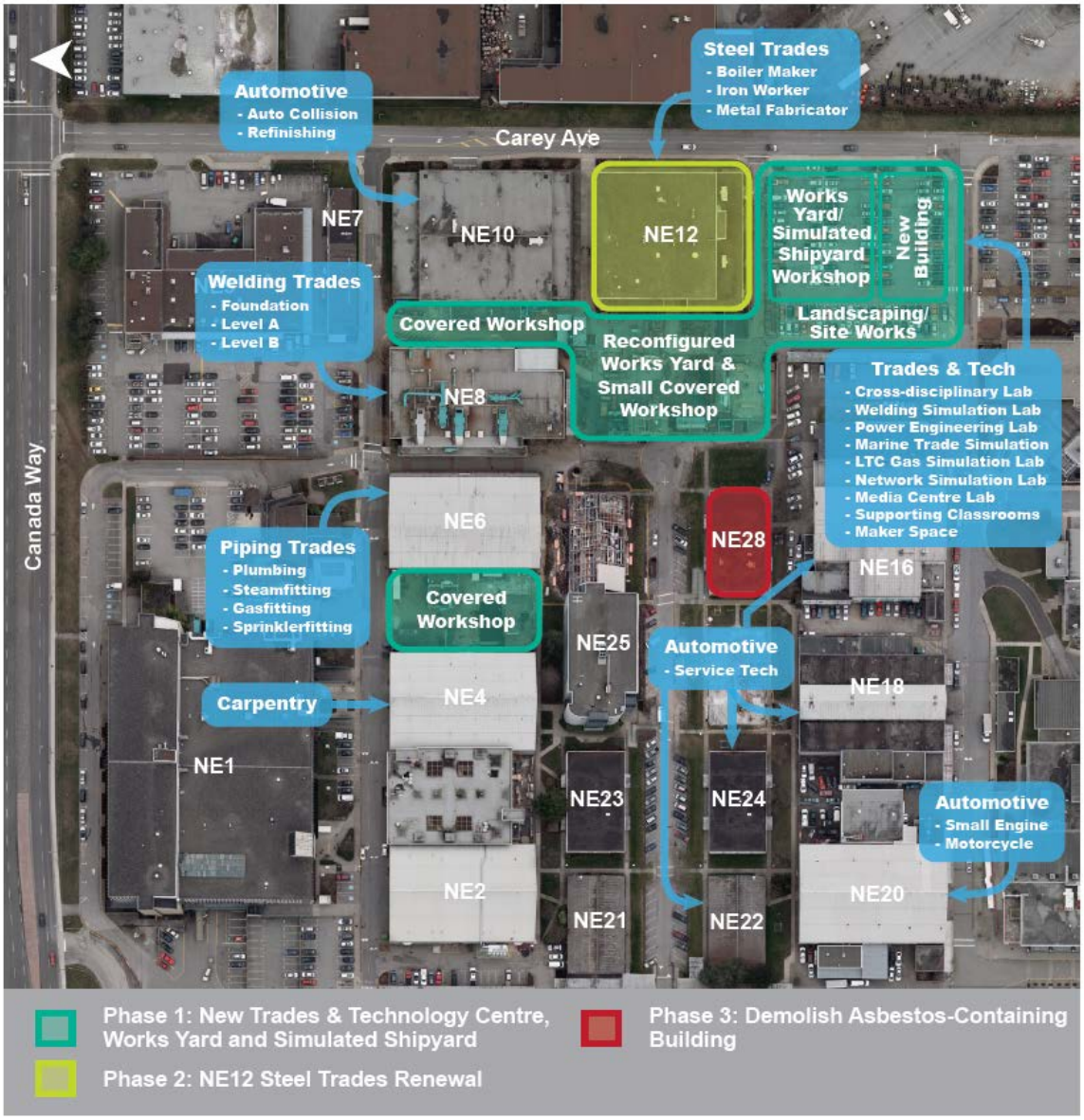
The project is in direct response to growing demand for trades training to address industry-driven labour demand, including the emerging liquefied natural gas industry, and the growing shipbuilding sector. New and enhanced learning environments will showcase advanced technologies and innovations (including simulation) in the design of labs and workshops, and provide flexible space programming that can adapt to changing education and industry requirements.

The new Centre will strengthen trades training, and contribute to a new trades and

technology identity on the campus by creating a centralized hub. This hub will support trades and technology collaboration projects including a student commons and trades and technology showcase space that will enhance recruitment opportunities.

This project is proposed to be completed over three stages. The first sees construction of the outdoor workshops, the second includes construction of the new Centre, and the third is renewal of NE12. The total estimated capital cost is $74.0 million.

**BCIT Trades & Technology Centre and NE12 Renewal Project Site and Phase Components**




## Supported Programs

Currently, the following programs are located within NE12:

- Iron Worker Foundation
- Iron Worker Generalist
- Boilermaker
- Metal Fabrication

Programs accommodated in the new Trades and Technology Centre:

- Steel Trades
- Ironworker
- Boilermaker
- Metal Fabrication
- Marine Fitter
- Millwright and Refrigeration
- Pipefitting – Plumbing, Steam and Gas
- Power Engineering/Instrumentation
- Network Simulation Lab

**FTEs**
The Steel Trades building (NE12) supports 313 FTEs.
The new Trades and Technology Centre will support 700 FTEs.

**Project Size**
This project includes a combination of a new building, four covered workshop areas, renewal of an existing facility and the demolition of an existing building:

| PROJECT COMPONENT | AREA |
|---|---|
| Trades & Technology Centre | 6,176 $m^2$ (66,480 sf) |
| Covered workshop | 754 $m^2$ (8,115 sf) |
| NE12 Renewal | 2,900 $m^2$ (31,215 sf) |
| Covered workshop – NE12 | 290 $m^2$ (3,120 sf) |
| Covered workshop – NE4/NE6 | 1,436 $m^2$ (15,460 sf) |
| Covered workshop – NE8/NE10 | 400 $m^2$ (4,300 sf) |
| Demolition of existing building – NE28 (or NE24) | 652 $m^2$ (7,013 sf) |
| **TOTAL – New and Renewed Space:** | **11,956 $m^2$ (128,690 sf)** |
| **TOTAL PROJECT SIZE (incl. demolition):** | **12,606 $m^2$ (135,690 sf)** |

## 3.0 Project Objectives

As described in the Opportunity Assessment Report submitted to the Ministry of Advanced Education (AVED) in April 2016, the Trades & Technology Centre project will provide teaching spaces that are critical for construction-related trades' education in priority areas identified in the *BC Skills for Jobs Blueprint*.

As outlined in the Project Description, this renewal and expansion project will quickly increase high demand trades training capacities, including the growing shipbuilding sector and the emerging LNG industry. The Centre will also provide:

- Facilities that include simulation technologies;
- Integration of trade with technology programs;
- Distance education online "narrowcasting" capabilities that allow the Institute to pursue pre-training, and other innovative delivery methods, designed to foster stronger outcomes for First Nations students, and other remote learners; and
- Visitor viewing opportunities to showcase job training, and assist in K-12 trades' recruitment.

## 4.0 Options Considered

Three options are identified in this assessment:

- Capital Option – New Trades & Technology Centre, Works Yard & NE12 Steel Trades Renewal;
- Status Quo Option; and
- Non-Capital Option – Off-site Lease Option.

The **Status Quo Option** is deemed not viable because of its shortfalls in meeting BCIT's training objectives, and the Province's growing labour market projections for in-demand trade professions.

The **Non-Capital Option – Off-site Lease Option** is also deemed not viable, because of the functional deficiencies it presents within the larger trades and technology complex on campus. Students need to be in proximity to adjacent spaces, and be able to easily access various shops, structures, and classrooms within the larger trades training complex. In addition, this option would not address the backlog of deferred maintenance associated with Building NE12.

## 5.0 Project Outcomes

**Infrastructure Improvements**
This will significantly improve the FCI and address code compliance issues in NE12. Indoor air quality will be significantly improved with new HVAC equipment and controls.

The new Centre will provide 21st century flexible teaching spaces built to modern design and materials standards, correcting infrastructure deficiencies. Once completed, the facility will enable trade and technology program integration and consolidation by creating necessary swing space and program expansion opportunities for in-demand trades and technology programs.

Improvements to the works yard will also create a safer teaching and learning environment, while the covered workshops do likewise by shielding students, teachers and equipment from some of the natural elements. Within the yard, the new dry dock area provides for marine fitting program simulation.

This new Trades Complex will provide a provincial showcase for trades and technology education.

**Cost Effectiveness**

- Renewed mechanical and electrical systems and exterior window upgrades in NE12 will reduce energy consumption. A business case evaluation was undertaken by a Quantity Surveyor and determined that the renewal cost of NE12 is 41% of the current replacement value.
- Provide flexible spaces to adapt to changes in labour market demands and subsequent program delivery options.
- More cost-efficient building and teaching technologies.
- Cost-effective project delivery schedule will create swing space in the new Centre that will expedite the renewal of NE12.

## Innovation

The new Trades and Technology Centre will showcase new technologies and innovations, such as simulation, into the design of labs and workshops, and provide flexible space programming. This will enable student-centered learning that is adaptable over time to changes in teaching and labour market trends.

The inclusion of observation galleries and a demonstration/atrium space allows BCIT to showcase trades and technology education to students and visitors alike. The use of new technology will also enable media broadcasting capabilities to wider audiences, strengthening distance education and industry partnership opportunities. The media centre lab will also provide for these capabilities in a “green room” type environment to allow for varying workplace simulations.

Other innovations of this project include:

- Best practice design elements from the recently completed NE8 Welding Shop upgrade will be integrated into the renewal of NE12.
- Potential heat recovery from the exhaust and plumbing systems will be explored and utilized if feasible.

## Strategic Alignment

The Project is aligned with BC government priorities and strategies:

- *BC’s Skills for Jobs Blueprint.*
- Supports Ministry of Jobs Tourism and Skills Training Goal #4 by providing facilities that support a highly skilled and competitive labour force.
- Supports Ministry of Advanced Education Goal #1 by providing flexible facilities that support high quality education skills and trades training and produce job ready graduates that align with labour market demand.
- Supports BCIT Institute Strategic Initiative 4 – Stewardship and Resource Development to ensure that physical facilities and campus infrastructure needs are met through an integrated plan that accounts for teaching space, research facilities, equipment, information and education technologies.
- Consistent with BC’s sustainability objectives (*BC Climate Action Plan*).
- *#BCTECH Strategy* by supporting tech-related education and training with new and expanded modern teaching spaces.
- Consistent with Aboriginal Post-Secondary Education and Training Policy Framework and Action Plan.

## Quality Education

The existing systems of NE12 have antiquated ventilation and lighting and do not meet modern teaching environment standards. Renewal of these systems will greatly enhance the learning environment and enable an increased student intake.

The incorporation of simulation into trades and technology training provides improved learning environments for students to practice and learn in a diverse range of situations and experiences. These replicated situations may not be as readily available in real-life training experiences as they are limited by lab, workshop and work yard limitations. The simulators can replicate more real life scenarios in a safe and controlled environment. Simulation also provides more cost-effective training, as expensive materials are not being utilized as frequently as with traditional hands-on training. Together, these

improvements greatly enhance the trades education experience.

**Energy and Emission Reduction**

- Energy efficient HVAC, lighting, welding systems and insulated building envelop will increase energy efficiency and reduce GHG emisions.

A 30% reduction in energy and subsequent green house gas emissions is targeted for the renewal of NE12. The building will be designed to meet (or exceed) LEED Gold design standards.

## 6.0 Project Cost/Funding

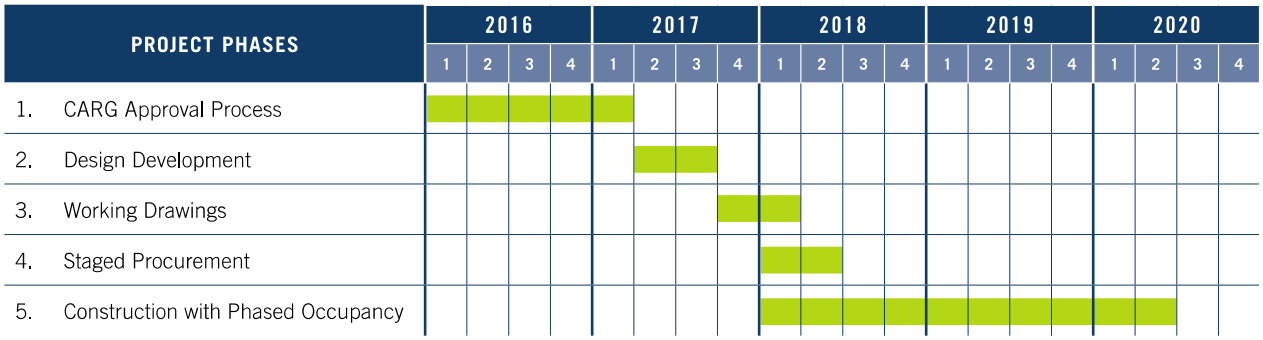
**$74.0 MILLION** – Total estimated project cost, including escalation, equipment and taxes.

## 7.0 Key Risks

As outlined in Table 4.3 of the Opportunity Assessment Report submitted to AVED in April 2016, a risk register has been developed for this project. BCIT has a well defined project management framework that will identify appropriate risk mitigation strategies during the project design process.

## 8.0 Project Schedule

*Proposed Schedule for Trades & Technology Centre, Works Yard & NE12 Steel Trades Renewal*



| Institution | Campus/City | Project Title | Project Category | Project Priority |
|---|---|---|---|---|
| BCIT | Burnaby | Centre for Automotive Innovation | 1 | 2 of 4 |

## 1.0 Current Situation

BCIT has identified an emerging need to train automotive technicians with the appropriate skills to work within the rapidly growing intelligent vehicle and intermodal transportation sectors.

As a flagship for polytechnic education, BCIT is the only institution in Canada that can provide comprehensive programming in intelligent intermodal transportation, such as:

- Specialized campuses for aerospace, marine and commercial transportation are complemented by operation management and engineering divisions.
- Clean energy vehicle technology and cyber security are strong elements of the Institute's research portfolio.
- Car manufacturers use BCIT's Automotive division for authorized Original Equipment Manufacturer (OEM) and brand-specific training.
- Industry provides state-of-the-art vehicles for modern training and has committed to even more engagement.

## 2.0 Project Description

BCIT proposes to replace functionally inadequate transportation facilities at the Burnaby Campus with a comprehensive, multi-disciplinary training centre to showcase modern vehicle technology. Conceptually, this new facility will draw interest from industry and form the context for augmented training, implementing new teaching methodologies with an industry storefront campus approach. This joint industry/research facility will be dedicated to next-generation transportation solutions, including autonomous driving, alternative energy propulsion and vehicles that interact with the infrastructure around them.

The new Centre for Automotive Innovation will combine three crucial areas:

- **Mechanical.** An automotive mechanic (vehicle technician) training facility with continuously updated equipment and direct industry interaction.
- **Engineering.** A research area with makerspaces where students of multiple trades, technology and engineering schools can interface; and design, install and test new solutions.
- **Supplemental Technology.** An interface for related technology sectors such as computing, materials technology or clean energy.

The mechanical component is envisioned to be like a storefront/demonstration exhibit where vendors provide new vehicles and exhibit them in a showroom setting with full branding. During the day, the vehicles would be pulled into adjacent student shop areas.

The industry storefront facility would be subdivided into different brands. The joint commitment by the vendors will ensure a constant influx of new vehicles.

The facility will also boast a system of raised catwalks with interpretive signing. This will allow potential future apprentices (e.g. high school students) to observe vehicle technicians in action without interfering with floor operations, effectively ensuring safety and non-interference.

This approach forms part of a new methodology in applied training that will be experienced at the new Centre and fulfills two purposes:

1. It provides a platform for integrative, interactive and tangible experiential learning that can attract the curiosity of young minds while providing state-of-the-art training to the industry professional.
2. It consolidates transportation technologies across multiple disciplines by providing a venue for exchange, discourse and experimentation. As such it forms BC's centre for intermodal logistics – a crucial national infrastructure nexus.

Overall, this innovative system makes for a very dynamic and flexible teaching and training backplane that is responsive to changes in industry.

**Project Size**
This project will comprise approximately 6,040 $m^2$ (65,000 sf).

## 3.0 Project Objectives

**Project Specific**

- Create a hub for Pacific Northwest auto manufacture's training.
- Convey emerging technologies through new educational tools, materials and methodologies, such as makerspaces where industry, students and faculty interact in a multi-disciplinary innovation lab.
- Strengthen and maintain existing partnerships with car manufacturers, OEMs, and authorized vendors, as well as create new ones.

**Future Initiatives (made possible by the new Centre)**

- Create a research, test and training facility that will stimulate innovation in LNG vehicle power technologies.
- Create a test site for autonomous vehicles, in collaboration industry partners.
- Provide design, prototyping, manufacturing and testing of airframes and payloads of Unmaned Aerial Vehicles (UAV, Drones) for Smart Grid.
- Provide a platform for the simulation of cyber security and train students in protection of our national infrastructure.

## 4.0 Options Considered

- **Status Quo**: Does not provide for collaboration and multidisciplinary environments critical for the success of applied research initiatives that require the embedding of industry, faculty and students. And this option does not address the backlog of deferred maintenance associated with existing buidlings.
- **New Centre**: Preferred.

## 5.0 Project Outcomes

**Infrastructure Improvements**
The new Centre will replace the current functionally obsolete and deteriorating transportation facilities at the Burnaby Campus. The creation of makerspaces, integrated with Technology Interface Points (TIPs), provide demonstration labs designed for interactive exhibition of technology. The innovative storefront approach the Centre brings to showcasing education embedded with ever-changing equipment will generate strong and on-going support from car manufacturers, OEMs, and authorized vendors.

**Innovation**
The new Centre will be a unique state-of-the-art training facility that provides students with the necessary spaces and new teaching methodologies required to keep pace with the changing transportation industry and various manufacturer equipment specifications zand technology. By embedding industry vendors, and the creation of a storefront approach into the new Centre, students and faculty will be will be provided with a multi-disciplinary learning environment that establishes a strong foundation for innovation, technology transfer and solution engineering.

**Strategic Alignment**
The Project is aligned with BC government priorities and strategies:

- *BC's Skills for Jobs Blueprint.*
- *#BCTECH Strategy* by supporting tech-related education and training with new and expanded modern teaching spaces.
- Supports Ministry of Jobs Tourism and Skills Training Goal #4 by providing facilities that support a highly skilled and competitive labour force.
- Supports Ministry of Advanced Education Goal #1 by providing flexible facilities that support high quality education skills and trades training and produce job ready graduates that align with labour market demand.
- Supports BCIT Institute Strategic Initiative 4 – Stewardship and Resource Development to ensure that physical facilities and campus infrastructure needs are met through an integrated plan that accounts for teaching space, research facilities, equipment, information and education technologies.
- Consistent with Aboriginal Post-Secondary Education and Training Policy Framework and Action Plan.
- Consistent with BC's sustainability objectives (*BC Climate Action Plan*).

**Quality Education**
The new Centre would employ innovative teaching methodologies that would strengthen BCIT's leadership role in intermodal transportation related education. This will support the emerging need to train automotive technicians with the appropriate skills to work within the rapidly growing intelligent vehicle and intermodal transportation sectors.

## 6.0 Project Cost/Funding

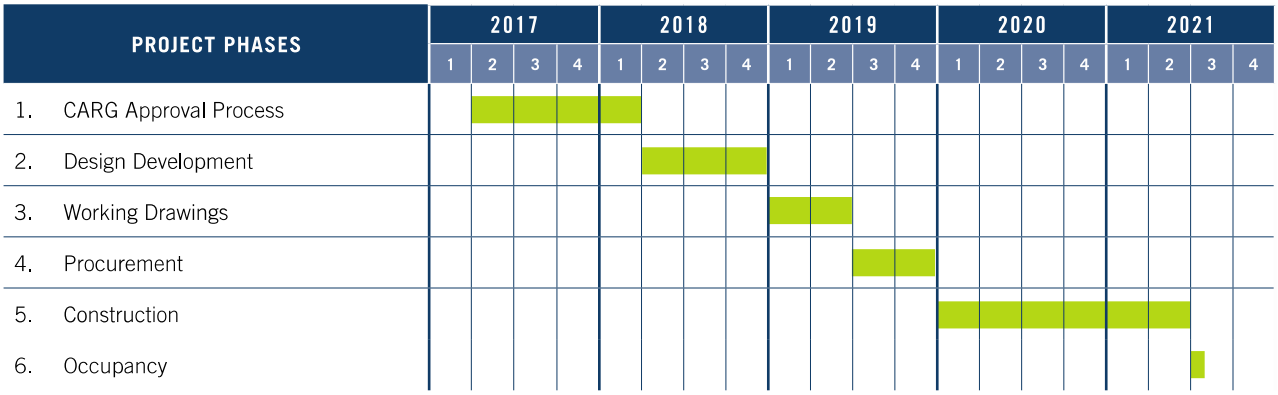
**$58.0 MILLION** – Total estimated project cost, including equipment and taxes.

## 7.0 Key Risks

- Impact on recruitment of faculty and staff – loss of market share to other intermodal transportation research institutions.
- The weakening of industry and vendor partnerships if status quo is maintained at the Burnaby Campus.
- Limit the Province's ability to successfully implement its priorities and initiatives identified in the "Strategic Alignment" section.

## 8.0 Project Schedule

*Proposed Schedule for the Centre for Automotive Innovation*



| Institution | Campus/City | Project Title | Project Category | Project Priority |
|---|---|---|---|---|
| BCIT | Burnaby | Centre for Clean Energy Innovation and Distribution | 1 | 3 of 4 |

## 1.0 Current Situation

The generation, storage and distribution of energy is a research priority for BCIT. BCIT is a provincial and national leader in the field of energy management, and boasts various programs, installations and research programs that are unique in the country. This includes the BCIT-led Smart Grid, the Centre for Energy Education and Research, or its related Power Engineering program. BCIT receives requests from industry to expand this position into new areas like domestic LNG or cyber security for the power grid.

Presently, BCIT is restricted in its ability to integrate students within multi-disciplinary research initiatives. Applied research initiatives are most successful when they are available to students and form the core of educational programs. This requires localization in a secure and maintained facility that is easily accessible, open after hours and equipped with the appropriate breakout and learning spaces.

## 2.0 Project Description

BCIT proposes the creation of a provincial nexus for education and innovation in energy management with a correlated set of facilities at its Burnaby Campus. At the heart of these facilities will be a Centre for Clean Energy Innovation and Distribution which will hold various modules such as:

- Flexible and reconfigurable space for industry and other partners.
- Research labs for clean energy innovation and distribution.
- A lecture theatre for conferences, presentations and discourse on energy-related matters.
- Expansive space for clean energy prototyping and demonstration labs, testbeds and comparative analysis to educate and showcase accomplishments in clean energy and LNG research.
- Prototyping labs for the design, manufacture and proof of concept of new ideas, including those in fields adjacent to energy generation and grid maintenance.
- Makerspaces for student, teacher, researcher, engineer and industry interaction.

The new Centre will play an intricate roll in the energy node at the Burnaby Campus. As part of the nexus, it will be the central nucleus acting as a cross-disciplinary hub for the other research facilities and programs on campus such as the Centre for Energy Education and Research (CEER), and its related Power Engineering program, the Intelligent Microgrid Network (“Smart Grid”), the OASIS energy project (Open Access to Sustainable Intermittent Sources), and other future initiatives and applications made possible by the new Centre.

**Supported Programs**
Creating a cross-disciplinary learning and research environment, the Centre supports the following programs:

- Power Engineering
- Industrial Instrumentation
- Chemical / Environmental Technology
- Mechanical Engineering
- Electrical Engineering

**Project Size**
This staged project will eventually comprise approximately 6,040 $m^2$ (65,000 sf).

## 3.0 Project Objectives

**Project Specific**

- Create a multi-disciplinary incubation and technology transfer hub for energy research, education and discourse – integrate disciplines such as energy, mobility, infrastructure and computing.
- Through expanded research capabilities, ensure BCIT's leadership position in the adoption of electric vehicle charging stations.
- Support the Province's mandate for greener transportation.
- Build partnerships to support and enhance critical infrastructure resiliency.

**Future Initiatives (made possible by the new Centre)**

- Create an LNG research, test and training facility that will stimulate innovation in breakthrough technologies for LNG production, distribution and consumption.
- Empower remote, off-grid, indigenous communities with training in the operation and maintenance of custom Smart Grid installations, both in situ and at the new Centre.
- Create a test site for autonomous vehicles, in collaboration with industry partners.
- Provide design, prototyping, manufacturing and testing of airframes and payloads of Unmaned Aerial Vehicles (UAV, Drones) for Smart Grid inspection.
- Provide a platform for the simulation of cyber security and train students in protection of our national infrastructure.

## 4.0 Options Considered

- **Status Quo**: Does not provide for collaboration and multidisciplinary environments critical for the success of applied research initiatives that require the embedding of industry, faculty and students.
- **New Centre**: Preferred.

## 5.0 Project Outcomes

**Infrastructure Improvements**
The new Centre will be a state-of-the-art core School of Energy facility that permits BCIT to build on its provincial leadership role in energy research and education by providing flexible and reconfigurable space for industry partners, linking research and

training directly to application and market.

The Centre will generate opportunites that will attract industry, researchers, national and international partners. This will be a landmark investment into a physical facility serving as a nexus for Energy Innovation and Distribution, bringing together researchers, industry, students and instructors in a central location.

**Innovation**
The new Centre will provide a core facility for the advancement of applied research and innovation technologies related to energy generation, storage, and distribution. Acting as an incubator and technology transfer hub, the Centre is part of a larger nexus of energy on campus, creating a system that provides for a very dynamic and flexible research and training backplane that is responsive to changes in industry.

The Centre will act as the nucleus, connecting BCIT's other energy distribution related facilities and programs, such as the Centre for Energy Education and Research (CEER), and its related Power Engineering program, the Intelligent Microgrid Network ("Smart Grid"), and the OASIS energy project.

**Strategic Alignment**
The Project is aligned with BC government priorities and strategies:

- *BC's Skills for Jobs Blueprint.*
- Supports Natural Resources Canada's National Strategy for Critical Infrastructure by providing research and education space for energy generation from different energy sources including intelligent and cyber secure supply systems.
- *#BCTECH Strategy* by supporting tech-related education and training with new and expanded modern teaching spaces.
- Supports Ministry of Jobs Tourism and Skills Training Goal #4 by providing facilities that support a highly skilled and competitive labour force.
- Supports Ministry of Advanced Education Goal #1 by providing flexible facilities that support high quality education skills and trades training and produce job ready graduates that align with labour market demand.
- Supports BCIT Institute Strategic Initiative 4 – Stewardship and Resource Development to ensure that physical facilities and campus infrastructure needs are met through an integrated plan that accounts for teaching space, research facilities, equipment, information and education technologies.
- Consistent with Aboriginal Post-Secondary Education and Training Policy Framework and Action Plan.
- Consistent with BC's sustainability objectives (*BC Climate Action Plan*).

**Quality Education**
The creation of a centralized hub on campus, bridging many adjacent fields and facilities, creates an indispensable resource and training opportunity that would build on its reputation as being a key institution for knowledge and research of energy generation and distribution. The facility will attract educators, presenters and partners from around the globe and provide the opportunity for exchange and discourse on energy-related and other matters of engineering and polytechnic nature, linking research and training directly to application and market.

## 6.0 Project Cost/Funding

**$60.0 MILLION** – Total estimated project cost, including equipment and taxes.

## 7.0 Key Risks

- Impact on recruitment of faculty and staff – loss of market share to other energy generation, storage and distribution research institutions.
- Negative impacts on industry due to reduced ability/sites to conduct research and test innovations.
- Limit the Province's ability to successfully implement its priorities and initiatives identified in the "Strategic Alignment" section.

## 8.0 Project Schedule

*Proposed Schedule for the Centre for Clean Energy Innovation and Distribution*

| PROJECT PHASES | 2017 | | | | 2018 | | | | 2019 | | | | 2020 | | | | 2021 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| 1. CARG Approval Process | | | | | | | | | | | | | | | | | | | | |
| 2. Design Development | | | | | | | | | | | | | | | | | | | | |
| 3. Working Drawings | | | | | | | | | | | | | | | | | | | | |
| 4. Procurement | | | | | | | | | | | | | | | | | | | | |
| 5. Construction | | | | | | | | | | | | | | | | | | | | |
| 6. Occupancy | | | | | | | | | | | | | | | | | | | | |

| Institution | Campus/City | Project Title | Project Category | Project Priority |
|---|---|---|---|---|
| BCIT | Burnaby | Centre for Indigenous Initiatives and Dialogue | 1 | 4 of 4 |

## 1.0 Current Situation

As part of BCIT's strategy to recruit and support more indigenous learners, BCIT requires a new centre for Indigenous Iniativies and Dialogue to provide a forum for indigenious learning iniatives and pan institututional cultural exchange.

## 2.0 Project Description

The Centre for Indigenous Initiatives and Dialogue will be a hub within BCIT to coordinate and support all Indigenous Initiatives and intercultural dialogue. The Centre will provide a place for reciprocal engagement amongst BCIT, the Indigenous community and stakeholders to advance innovation in reconciliation, education, skills and training, and holistic student supports with the goal of authentically and effectively assisting Indigenous learners and communities to meet their challenges and maximize their opportunities.

**Project Size**
This project will comprise approximately 1,400 $m^2$ (15,000 sf).

## 3.0 Project Objectives

- Provide a centre that extends the notion of a "Gathering Place" to a place of collaborative and responsive change maker for Indigenous Initiatives.
- Create a centre for dialogue and a think tank to discuss, design, and implement initiatives in education, training and community needs.
- Provide a space for programs and services, community forums and local events.
- Reframe the approach to partnerships and the relationships between Indigenous communities and post-secondary Institutions that are sustainable and contributes to the nations economic, social, political and environmental well-being, thus resulting in increased capacity in education, health, housing, energy use, and, more importantly, cultural revitalization and community development.
- Create innovative learning and dialogue that will support and enhance existing pathways in education and relationships amongst Indigenous and non-Indigenous people.
- Support and increase community collaboration that is more effective, unique and entrepreneurial using the latest technology and thought.
- Support Indigenous Initiatives in education, training, research and advocacy.
- Create awareness, promote thought and build capacity to achieve goals of Indigenous peoples.

## 4.0 Options Considered

- **Status Quo**: does not provide appropriate space for a 'gathering place' that fosters cultural exchange.
- **New Centre**: preferred.

## 5.0 Project Outcomes

**Infrastructure Improvements**
The new Centre is unlike any facility currently on campus. It will be the centre of discussion, design and implementation of Indigenous education initiatives that are currently undertaken in inadequate spaces.

**Innovation**
The Centre will be a 'gathering place' for BCIT employees, students, community partners, organizations and First Nations to discuss, design, dream and implement Indigenous initiatives. The Centre will create a forum to re-frame the approach to partnerships and dialogue through sustainable and authentic relationships between Indigenous communities and post-secondary Institutions.

**Strategic Alignment**
The Project is aligned with BC government priorities and strategies:

- Consistent with Aboriginal Post-Secondary Education and Training Policy Framework and Action Plan.
- Consistent with BC's sustainability objectives (*BC Climate Action Plan*).

**Quality Education**
The facility will provide a holistic centre for reciprocal engagement with the Indigenous community, stakeholders and others to advance education, skills and training. It will be innovative and provide relevant focus to support Indigenous learners to meet their challenges and to maximize their opportunities.

This new facility will serve as a hub within BCIT to coordinate and support all Indigenous Initiatives on campus and help them move towards stable and effective governance, economic and social prosperity and a brighter sustainable future.

## 6.0 Project Cost/Funding

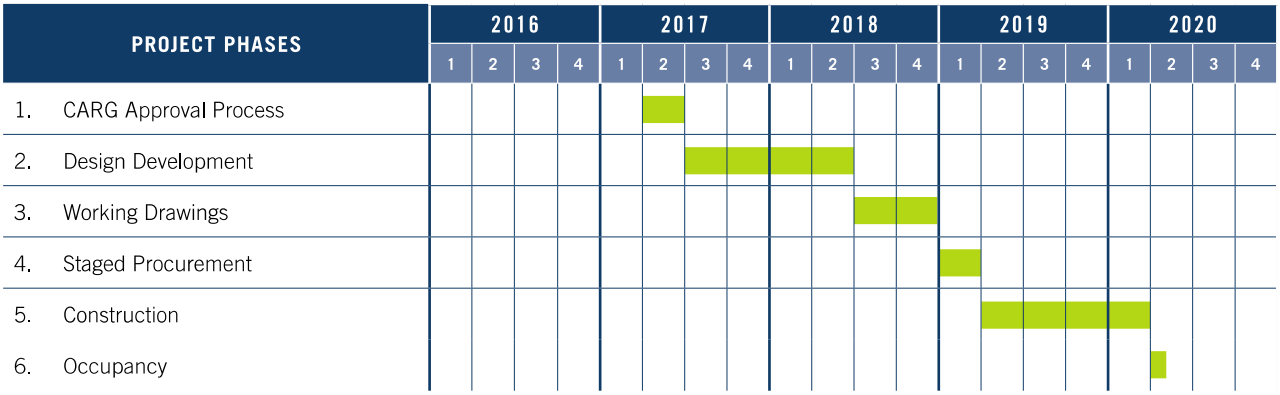
**$8.0 MILLION** – Total estimated project cost, including equipment and taxes.

## 7.0 Key Risks

- Limit the Province's ability to successfully implement its priorities and initiatives identified for Indigenous students, including the wider population.
- The effectiveness of existing BCIT Indigenous initiatives and efforts would be lessened.

# 8.0 Project Schedule

*Proposed Schedule for the Centre for Indigenous Initiatives and Dialogue*



# Five-Year Capital Plan Instructions (2017/18-2021/22)

Attachment 3 -- Prioritized list for Proposed Category 1: New Priority Projects, Category 2: Whole Asset Replacement & Renewal Projects, and Category 3: Student Housing Projects

| # | Institution | Campus | Project Description | Project Category | Anticipated Construction Start Date | Anticipated Occupancy Date | Total Project Budget | Total Cashflow Forecast 2017/18 | Total Cashflow Forecast 2018/19 | Total Cashflow Forecast 2019/20 | Total Cashflow Forecast 2020/21 | Total Cashflow Forecast 2021/22 | Total Cashflow Forecast Outgoing Years | Provincial Cashflow Forecast 2017/18 | Provincial Cashflow Forecast 2018/19 | Provincial Cashflow Forecast 2019/20 | Provincial Cashflow Forecast 2020/21 | Provincial Cashflow Forecast 2021/22 | Total Provincial Cashflow Forecast Outgoing Years | Total Provincial Budget |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BCIT | Burnaby | Trades and Technology Centre | 1 | Jan-18 | Jul-20 | $74,000,000 | $10,447,082 | $24,753,363 | $24,713,363 | $14,086,192 | $0 | $0 | $10,487,082 | $24,713,363 | $24,713,363 | $3,961,192 | $0 | $0 | $63,875,000 |
| 2 | BCIT | Burnaby | Centre for Automotive Innovation | 1 | Jan-20 | Aug-21 | $58,000,000 | $4,200,000 | $4,250,000 | $10,445,000 | $29,305,000 | $9,800,000 | $0 | $4,200,000 | $4,250,000 | $10,445,000 | $29,305,000 | $4,000,000 | $0 | $52,200,000 |
| 3 | BCIT | Burnaby | Centre for Clean Energy Innovation and Distributic | 1 | Jan-20 | Aug-21 | $60,000,000 | $4,300,000 | $4,400,000 | $10,880,000 | $30,315,000 | $10,105,000 | $0 | $4,300,000 | $4,400,000 | $10,880,000 | $30,315,000 | $4,105,000 | $0 | $54,000,000 |
| 4 | BCIT | Burnaby | Centre for Indigenous Iniatives and Dialogue | 1 | Jan-19 | Apr-20 | $8,000,000 | $800,000 | $800,000 | $5,910,000 | $490,000 | $0 | $0 | $800,000 | $800,000 | $5,110,000 | $490,000 | $0 | $0 | $7,200,000 |
| 5 | | | | | | | **$200,000,000** | **$19,747,082** | **$34,203,363** | **$51,948,363** | **$74,196,192** | **$19,905,000** | **$0** | **$19,787,082** | **$34,163,363** | **$51,148,363** | **$64,071,192** | **$8,105,000** | **$0** | **$177,275,000** |
| 6 | Notes: | | | | | | | | | | | | | | | | | | | |
| 7 | Project #1 includes a BCIT contribution of 15% ($10,125,000) that has been applied to the Provincial Cashflow Forecast in the year 2020/21 | | | | | | | | | | | | | | | | | | | |
| 8 | Project #2 includes a BCIT contribution of 10% ($5,800,000) that has been applied to the Provincial Cashflow Forecast in the year 2021/22 | | | | | | | | | | | | | | | | | | | |
| 9 | Project #3 includes a BCIT contribution of 10% ($6,000,000) that has been applied to the Provincial Cashflow Forecast in the year 2021/22 | | | | | | | | | | | | | | | | | | | |
| 10 | Project #4 includes a BCIT contribution of 10% ($800,000) that has been applied to the Provincial Cashflow forecast in the year 2019/20 | | | | | | | | | | | | | | | | | | | |