November 7, 2017

To the Standing Senate Committee on Energy, the Environment and Natural Resources, Senator Dennis Patterson and Senator Michael MacDonald

From the Royal Architectural Institute of Canada (RAIC)

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Responses to follow-up questions about Qualifications-Based Selection (QBS)

Senator Patterson: Could you explain to me, in simple language, what is flawed with the management of procurement and delivery? How would QBS be better and give better value for dollars?

RAIC: The current low bid Request for Proposal (RFP) process is fine for purchasing commodities that require no customization, are not complex, and have many market alternatives.

For custom, complex, and costly professional services (such as architecture and engineering that drive the construction expenditures) the low bid Request for Proposal process has three basic flaws.

1. It rewards low initial cost but does not reward high long-term value.

The current process awards contracts to those that provide the lowest fees for design (such as engineering or architecture which make up four-to-10 percent of a total design/construction project cost).

When you reduce design fees on a construction project you invariably increase construction costs, and long-term building operation and maintenance costs because the design team’s time is limited by the fees.

So, for example, to save a few thousand dollars at the design stage, the Request for Proposal has caused tens or hundreds of thousands of dollars of additional costs to incur during construction and over the life of the building operation.

2. It rewards interpreting an RFP in a way that reduces the consultant’s scope and therefore billable hours in order to win a project. It limits innovation and transparency.
The procurement department gets an apparent “win” because they saved some money by using a low-bid RFP process, but the end user pays a premium.

It is inevitable, that when selection of professional services consultants is based in part on lowest fees, consultants are forced to analyze the RFP documents for opportunities to reduce their scope of work and limit the consulting hours needed to execute the project. This is what architects and engineers need to do needs to win a fee-based competition.

The project management and construction departments are now faced with significant challenges because they have to work with the lowest bidder that is compliant with the RFP but also the one most likely to have reduced their scope to get to the lowest price. It creates a very confrontational relationship between vendor and client.

Vendors are discouraged from proposing innovative new construction solutions because these typically require increased initial design, may increase construction costs but save significantly more money over the long-term operation of the building.

Simply put, higher initial costs due to innovation or better design cannot win an RFP based on fees even if those costs would create significantly greater long-term savings, quality use, safety, and environmental protection.

3. It generates a lot of administrative waste that is not obvious but is real and substantial.

Cal Harrison, a Certified Management Consultant in Winnipeg and founder of QBS Canada, has researched professional services opportunities available on MERX. He found that 17 percent of the time, more money will be spent by management consulting vendors on proposal writing when responding to an RFP than will be won in fees. For information technology and telecommunications, it is 33 percent. For architecture and engineering, it is 67 percent.

QBS is not new. In 1972, the federal government in the United States passed the Brooks Act. The Brooks Act stipulates that the hiring of architects and engineers for public sector projects must be done based on the qualifications of the firm, not the proposal with the lowest fee. Forty-six of the 50 states have also passed legislation consistent with the intent of the Brooks Act. Three of the remaining states have implemented policies reflective of the Brooks Act, and only one state does not use a Qualifications Based Selection system (South Dakota).
The passing of the Brooks Act was a recognition that the value of architectural and engineering services lies not in the commodification of design services and how cheaply they could be procured, but in the leverage that could be applied to drastically increase the benefits to a capital project and optimize outcomes, with a minimal expenditure in design services. As an example, in the 35-year design, construction and operating life cycle of a building, design services amount to far less than one percent but can have a thousand-fold impact on long-term saving in energy costs, maintenance, and staffing.

As an explicit example, an architect working on a $700 million new hospital project was able to demonstrate that by spending an additional amount less than $500,000 in corridor realignment, a savings of $40 million in staffing costs would be realized over the 35-year concession of the public-private partnership.

A study by the Georgia Institute of Technology and University of Colorado (2009) reviewed more than 200 projects across the United States. It found:

- 93 percent of clients expressed high or very high satisfaction with consultants selected using QBS;
- QBS reduced construction cost growth by 70 percent;
- QBS reduced schedule slippage by 20 percent;
- QBS provided better ability to address societal issues or stakeholder concerns.

Senator Patterson: Could you send us some information on how QBS is different?

RAIC: Three documents are attached.

* Buying Professional Services: Replacing the Price-Based Request for Proposal with Qualifications Based Selection
* An Analysis of Issues Pertaining to Qualifications Based Selection
* The Best Practice: Selecting a Professional Consultant

Senator MacDonald: You said (low-bid procurement) wastes $5 billion a year. I’m just curious how you determine that figure. There is no problem that can’t be solved if we have enough money to throw at it, but, of course, there’s never enough money to solve all the problems. I’m just curious about that $5 billion figure. That’s a substantial amount of money. How do you determine that?
RAIC: This is a benchmark number calculated by Cal Harrison. He explains the high volume of waste in a 3.5-minute video (link below).

http://beyondreferrals.com/cal-harrison-professional-services-marketing-speaker/

Mr. Harrison has estimated that in Canada alone almost $5 billion is wasted each year by architects, engineers, management consultants, lawyers and other professional services forced to write proposals in response to price-based RFPs.

The calculation is based on a real case with typical numbers. A federal government department issued an RFP to select an architecture firm for a $500,000 construction project. The fees to the architecture firm, based on a typical 10 percent of the construction cost would be $50,000. In total, 38 consultants responded to the RFP, each spending about $20,000 on their proposal. This means that the architecture sector incurred a cost of $760,000. Multiplied by 6,579 annual RFPs, you have $5 billion worth of waste.

In fact, the level of waste is likely significantly higher than $5 billion, he says.

The waste is incurred by the firms writing the proposals. However, all that is ultimately charged back to their clients as part of their cost of doing business. In the end, the clients (including government) cover the entire cost of these inefficiencies.
November 8, 2017

To the Standing Senate Committee on Energy, the Environment and Natural Resources and Senator Judith Seidman

From the Royal Architectural Institute of Canada (RAIC)

Responses to follow-up questions about Aging in Place

Senator Seidman: I’d like to ask you how you see (aging in place) as an important aspect of sustainability and the retrofit process.

RAIC: The RAIC supports older adults’ desire to age in place, whether this means to grow old in the home where one raised children or in another non-institutional setting in the community. There is also a growing consensus that aging in place is the most cost-effective and appropriate way of supporting the needs of this population. We see a relationship between an aging society and environmental sustainability.

The RAIC Age-Friendly Housing Options Task Force is comprised of architects from across the country with expertise in designing for older Canadians. It was established in 2016 to investigate innovative housing options and best practice aging-in-place design guidelines. The work of the task force is to prepare detailed documentation and to advocate about the need for housing and communities that are designed to accommodate residents as they age. Advocacy is aimed at government, health care professionals and service providers, and the residential industry (homebuilders, renovators, realtors, and financial institutions).

Existing buildings comprise the majority of building stock and present significant opportunities for improvements. Recommissioning and retrofitting existing buildings – including single family houses, rental apartments, and condominiums – will reduce energy consumption and GHG emissions.

Retrofits for resilience and energy-efficiency represent one of the most impactful and cost-effective means of moving to a low-carbon economy. Given the vulnerability of older people to environmental threats, air quality, and temperature, they also have important implications for the health and well-being of older adults.

Energy efficiency improves residents’ comfort and quality of life. Maintaining a comfortable temperature is easier and more affordable if a home is properly insulated and energy efficient. This is a particularly big issue for seniors on low and fixed incomes, who sometimes face difficulty paying for enough energy to keep their homes sufficiently warm during cold Canadian winters. (This Green House II: Building Momentum on Green Jobs and Climate Action Through Energy Retrofits Across Canada, Columbia Institute, 2016.)
The growing seniors segment also needs housing with universal design—improvements and innovations that make housing more usable for people regardless of their physical abilities or disabilities. This would allow seniors to live independently for as long as possible.

Any upgrade that can keep people in their homes for longer adds to their quality of life and likely offsets costs elsewhere as fewer retirement or nursing homes would be required. Offsetting these costs has a direct relation to energy consumption avoidance.

There is also the social sustainability of keeping people close to their social network of family and friends. This can help reduce the need for transportation to and from a more distant care facility option.

This means then that guidelines prepared for aging in place must encourage opportunities for energy efficiency, healthier indoor building environments and community design that meets changing requirements. Neighborhoods that are walkable, with convenient public transit, give the ability to age in place. Such communities need to be designed with sidewalks, safe street crossings and a variety of social, recreational, cultural, artistic and commercial spaces.

A Japanese study has even found that living in areas with walkable green spaces positively influenced the longevity of urban senior citizens. (*Urban residential environments and senior citizens’ longevity in megacity areas: the importance of walkable green spaces*, by T Takano, K Nakamura, M Watanabe.)

It is important to make the retrofit process as simple as possible for homeowners. For example, a one-stop shopping intake model for grant and rebate programs, applications for financing, building permits, inspections and retrofit evaluation can overcome various deterrents.
November 7, 2017

To the Standing Senate Committee on Energy, the Environment and Natural Resources and Senator Rosa Galvez

From the Royal Architectural Institute of Canada (RAIC)

Responses to follow-up questions about the National Building Code/National Energy Code

From Senator Galvez:

i. In its present state, is the building code satisfactory?
ii. Is this the building code that you want to have made mandatory?
iii. Are there improvements that can be done? If so what are they?

RAIC: Strengthening the building codes is one of the best tools available because performance requirements make up the bulk of the actual code change. The outcomes include:

- Optimizing new technology or existing building systems for improved control and operational performance;
- Progressively higher standards to incorporate renewable energy;
- Use of low carbon fuel sources;
- Addressing construction and energy codes for Northern and Indigenous communities.

Considerations for modifying the National Building Code and National Energy Code (the codes) to drive deeper emissions reductions in Canada:

- Mandatory requirements are critical to addressing basic components of energy efficiency design that are difficult to evaluate using energy modeling. Mandatory requirements are incorporated in other leading energy codes (ASHRAE 90.1, IECC).

- Canada should consider partnering more closely with ASHRAE in the development of the ASHRAE 90.1 Energy Standard for Buildings. This North American wide standard is currently the basis for energy codes in more than 40 US states and in multiple jurisdictions in Canada.

- The codes do not currently include requirements for renewable energy systems of any size. At minimum, the standard should require that building projects include explicit provisions for future installation of on-site renewable
energy systems. Beyond this, the standard could include for the provision of renewable energy systems to offset a portion of a building’s energy use. This amount could increase over time as a graduated phase-in approach.

- Dramatic improvements to the availability and efficiency of LED lighting have rendered the requirements of the Lighting section of the standard outdated. This impacts the overall effectiveness of the standard as LED lighting can offset poor performing envelope and mechanical components.

- The codes currently evaluate energy performance instead of GHG emissions. This approach does not address the regional context and GHG intensity of energy grids in Canada and may, in some cases, incentivize building designs that increase GHG emissions.

- The energy code does not currently apply to renovations. Renovations represent a significant opportunity to improve energy performance in buildings; this limitation restricts the impact and penetration of the codes.

- The pace and breadth of the adoption of the expected revised targets across Canada represent a serious threat to the codes’ effectiveness. The pace of adoption across the country is slow relative to the 2030 timeline, and adoption is uneven. Without national alignment, jurisdictions adopting the standard first run the risk of being perceived as less attractive for development. A lack of resources that support code authorities makes the adoption more time-consuming and risky those first out of the gate.

- Energy modeling is a critical tool for the implementation of revised codes. There is little standardization between the tools and approaches used by different energy modelers in the industry. Many local code authorities don’t have the technical background to evaluate the results of code compliance energy models effectively.
November 8, 2017

To the Standing Senate Committee on Energy, the Environment and Natural Resources and Senator Howard Wetston

From the Royal Architectural Institute of Canada

Response to questions about the Pan-Canadian Framework on Clean Growth and Climate Change

From Senator Wetston:

a. What does the RAIC think about it in general terms?
b. Will it be sufficient to meet the goals that the Government of Canada has set for 2030?
c. If not, what is necessary from the RAIC’s perspective?

RAIC: The RAIC supports the Pan-Canadian Framework on Clean Growth and Climate Change – which includes working closely with the National Research Council, Natural Resources Canada, and all stakeholder to set increasingly stringent energy codes.

New construction code targets are expected to be released in 2020, with the goal of adopting net-zero energy model codes by 2030. Existing construction model codes (referred to as the codes) are to be announced by 2022. Published targets should provide expectations of each step for provincial and territorial adoption.

Tools such as comparative benchmarking of energy and GHG use are key to driving behavioural change at the operational level. The framework should incorporate renewable energy sources and consider district/community scale design versus single building energy and GHG performance.

Speed and consistency of adoption across Canada are of concern. The core recommendation is for the federal government to immediately adopt the advanced targets when they are announced and demonstrate leadership within their built environment footprint – owned, leased and managed.

1. Making new buildings more energy efficient

   - The goal of developing a net zero energy ready model building code by 2030 is too slow a timeline. 2030 is itself too long a timeframe plus it will take one to five years for the model codes to be adopted across Canada.
The Canada Green Building Council’s Zero Carbon Building pilot program, which includes 16 public and private sector projects from across the country, demonstrates that zero carbon buildings are already entering the market. These projects will provide robust data on the cost effectiveness of zero carbon buildings as well as challenges on the technical and code aspects, among others.

Further, other jurisdictions are moving at a much faster pace. For example, California has developed a New Residential Zero Net Energy Action Plan 2015-2020 in support of their goal to have 100 percent of new homes achieve zero net energy beginning in 2020. All new state buildings will be Zero Net Energy by 2025.

2. Retrofit existing buildings

Similarly developing a model code for existing buildings by 2022 is also too slow a timeline. This leaves an eight-to-10-year window for the adoption of energy efficiency and renewable energy standards for existing buildings. Energy efficiency retrofits are the key leverage point for Canada to reach sufficient carbon reduction outcomes in the built environment sector. Without codes, the pace of change will be insufficient. Additionally, other jurisdictions will move forward resulting in a lag in Canadian clean technology expertise.

Citing California again: their Zero Net Energy Building Goals include retrofitting 50 percent of existing commercial buildings to Zero Net Energy by 2030, and all retrofits of state buildings to be Zero Net Energy by 2025.

Mandatory labelling of building energy use by 2019 is a key step. A second step that should be considered is GHG labeling as well as water use labeling. Pumping of water can represent 30 to 50 percent of municipal energy use which in-turn drives municipal GHG emissions.

Tools to allow comparative benchmarking of energy and GHG use are key to driving behaviour change at user levels and investments in energy efficiency at building owner/operator levels. Comparative information is key to understanding relative performance. Furthermore, this information is essential to the development of effective existing building energy performance requirements within new building energy codes.

3. Improving energy efficiency for appliances and equipment

Canada lags behind other jurisdictions in terms of energy efficiency standards for appliances and equipment. The Framework lacks specificity on efficiency
goals for appliances and equipment. Other jurisdictions should be used to inform Canadian standards. For example, Japan substantively reduced demand for nuclear power through efficiency and energy conversation. Their Top Runner Program is a model program setting the mandatory energy efficiency threshold for a broad range of appliances and equipment based on the most energy-efficient model available on the market at the time the standard was established, and continues to update the threshold periodically based on ongoing improvements. This drives both energy efficiency and market competition.

4. Other

- The Framework is missing an emphasis to drive renewable energy use. The European Union Renewable Energy Directive is one of the key pillars of their 2030 plan.

- The Framework does not currently contemplate the significant potential of district/community scale design for energy and GHG performance and is solely focused on single building performance. District/campus scale projects allow for step scale change and leverage emissions reductions across multiple buildings. District energy systems support load shifting, allow a diversity of alternate low carbon energy supply options to be plugged in, reduce transport and distribution losses over a conventional grid, and strengthen resiliency, among other benefits.
November 7, 2017

Re: RAIC Indigenous Task Force

Dear Senator Patterson,

On June 9, 2016, the Royal Architectural Institute of Canada (RAIC) Indigenous Task Force (ITF) was officially launched in Snuneymuxw territory (Nanaimo, British Columbia) during the 2016 RAIC Festival of Architecture. The core purpose of the ITF is to foster and promote Indigenous design and architecture in Canada in First Nations, rural, Métis and Northern communities, and urban spaces, and to advocate with and on behalf of Indigenous communities. The Royal Architectural Institute of Canada and the ITF alike believe strongly that Architecture is a public-spirited profession with an important role in reconciliation – addressing injustices by giving agency back to Indigenous people.

In the short time since its formation, the ITF has already taken great strides in forming its identity and our mandates continue to evolve. In May we (the ITF and the RAIC) hosted the inaugural Indigenous Architecture and Design Symposium in Ottawa, welcoming over a hundred architects and allied professionals from all over the world to discuss critical topics linked to design and Indigenous peoples. We have periodic conference call meetings and have had two annual general meetings to help clarify our goals and collective mission. The ITF has already consulted on the proposed Indigenous cultural centre in Ottawa, as well as proposed competitions for housing for rural communities and Indigenous inspired developments in urban centres. We have recently formed sub-committees to discuss the Ottawa project as well as an educational-based best practices of community engagement by universities through Indigenous-related research and design.

With only approximately 17 Indigenous registered architects in Canada (out of approximately 10,000) and only 3 Indigenous architectural academics (out of a few hundred), one of the most significant initial observations was the poor representation of Indigenous people in our profession in Canada, and thus the lack of our voice in Indigenous design topics. Out of these discussions, we formed a proposal to represent Canada at the Venice Biennale in Italy to celebrate the work of Indigenous architects on Turtle Island (North America) and to have our voices celebrated for the first time on an international stage. Under the leadership of Douglas Cardinal, the proposal was successful, an accomplishment directly resulting from the formation of the ITF. We invite you to visit UNCEDED in Venice May 2018 - November 2018.

We remain a very small group with a very limited capacity given members of the ITF are volunteers as all are full-time employees, practitioners, or students. However, we all recognize the essential role we can play collectively in advocating for the Indigenous voice in design-related practice. There are two Indigenous registered architects working in the north, Chris Clarke who works for the NWT provincial government, and Harriet Burdett-Moulton, who works for Stantec in Iqaluit. Other ITF members have worked with Indigenous communities for many years and offer their experiences to our collective. We aspire to be a resource for a variety of initiatives to address the needs and desires of all Indigenous
communities in a respectful and appropriate manner, where they ultimately take ownership of the design process and hence the buildings and environments that follow.

With specific regards to design in the north, we are still witnessing a hackneyed narrative that continually positions objectified technical solutions derived from the south and then applied to the north. There is a lot of technological progress currently related to climate change, for instance, that can help with the specifics of low-carbon, higher efficiencies, etc. – without question. The architectural community at large is showing a significant amount of interest in the north as a frontier territory for problem solving linked to these exact questions. The main message we are hoping to convey is that this is not solely a technological question with an easy answer because even if a building is high efficiency, low carbon, climate change adaptable, etc. etc. etc., but still conceived by and implemented from the south, it will never be a good fit with the people and the land, nor will it be sustainable in a more comprehensive sense. We argue that the right path is broader, longer-term, and begins with the cultural values, knowledge, and aspirations of the people in each community. It is their metrics for success to be prioritized over any settler-imposed ones.

We feel this is the most essential first step to a truly sustainable architecture that resonates with northern communities and we hope that our collective voice will continue to support and advocate theirs. Furthermore, we hope that the Indigenous architects of Canada might inspire young creative minds from the north to pursue careers that will return them to their communities to design with their knowledges, cultures, languages, collective values and aspirations. This will ultimately lead to the kinds of buildings and communities that are not only technically sustainable (efficient, low-carbon, etc.) but embraced and rooted in the people of the north.

On behalf of our colleagues, we thank you for your interest in the ITF and hope we might be able to collaborate in some capacity in the future. Should you want to speak with us or a representative of the ITF, please let us know.

All Our Relations,

Patrick Luugigyoo Stewart, PhD, Associate Professor
MArch, BArch, BEDS, BA
Architect, AIBC, MRAIC, LEED AP
Chair, RAIC Indigenous Task Force

David Fortin, PhD, Architect AAA
Asst Professor, Incoming Director
MRAIC, LEED AP
McEwen School of Architecture
To the Standing Senate Committee on Energy, the Environment and Natural Resources, and Senator Neufeld.

From the Royal Architectural Institute of Canada (RAIC)

Response to a question about eliminating 219 megatonnes of greenhouse gas emissions by 2030

Senator Neufeld: When I look at government targets and numbers — they're not mine or this committee’s — but by 2030, we’re supposed to reduce by about 219 megatonnes. That’s an awful lot. How do you think we can actually get that 219 megatonnes without destroying the economy that we presently have and the lifestyle that people in Canada have become accustomed to?

RAIC: Many studies show that designing and building for sustainability and resilience has a positive impact on economic development through new investments, job creation, revenues and cost savings.

Here’s a sample:

*Green Building in Canada: Assessing the Market Impacts and Opportunities* (Attached)

According to a 2016 study by the Canada Green Building Council and Delphi Group, *Green Building in Canada: Assessing the Market Impacts and Opportunities*, the green building industry was estimated to have employed 297,890 direct full-time workers in Canada and generated approximately $23.45 billion in GDP in 2014. “This represents more jobs than Canada’s oil and gas extraction, mining, and forestry industries combined, which collectively employed approximately 270,450 workers in 2014.”

The study notes that voluntary adoption by building owners and investors has played a major role in the market uptake of green building growth in the commercial sector. This adoption has been driven by a business case that demonstrates a positive return on investment over the life of green buildings.

*Returns on Resilience: The Business Case*

This 2015 report by the Urban Land Institute in the United States says that investing in sustainability and resilience (new infrastructure and technologies, innovative design and construction methods) protects properties and leads to financial returns.

“The case studies illustrate that sustainability efforts intended to minimize negative impacts on the natural environment and manage natural resources more efficiently complement resiliency planning,” says Sarene Marshall, executive director of ULI’s
Center for Sustainability. “When resilience efforts are planned in tandem with sustainability measures, the results are likely to lead to success in better financing, faster and higher lease rates, more competitive insurance premiums, lower utility costs, and greater returns on investments.”

Such investments, says the report, also deliver value through business continuity and loss prevention during extreme weather events.

**Canada Green Building Trends: Benefits Driving the New and Retrofit Market**

This 2014 report, prepared by McGraw Hill Construction for the Canada Green Building Council, reported the following findings:

- “Like their counterparts in the U.S. and around the world, Canadian building owners, architects and contractors report that green buildings significantly decrease operating costs in the first year after construction, and that their impacts on operating costs continue to increase over five years. Operating cost savings are no doubt impacted by the energy and water savings reported.”

- “The Canadian respondents also report reasonable payback periods of eight years for new green building projects and seven years for green retrofits and renovations. They also find that their green retrofit/renovation efforts contribute to increased building values, with a median increased value of four percent.”

- “The consistency of the findings globally for new and renovated/retrofit green building projects, despite the wide disparity of the markets, demonstrates a compelling business case for building green.”

- “Other benefits beyond strict financial benefits are also considered important by Canadians. These include getting a higher quality building, tenant attraction and retention, recognized leadership, ability to influence the market by leading by example, health and productivity benefits, a healthy indoor environment and daylight.”

**World Green Building Trends 2016 Smart Market Report**

This report by Dodge Data & Analytics demonstrates the positive financial and business impacts of building green.

- New green buildings, on average, deliver 14 percent savings in operations costs over five years and 13 percent savings for retrofit and renovation projects;
The average green building — whether new or renovated — is worth seven percent more than its traditional counterpart;

Market demand for green building is doubling every three years.

**Smart Growth and Economic Success: Benefits for Real Estate Developers, Investors, Businesses and Local Governments**

Smart growth is a development strategy that can minimize air and water pollution, reduce greenhouse gas emissions, encourage cleanup and reuse of contaminated properties, and preserve natural lands.

This 2012 report by the United States Environmental Protection Agency highlighted the economic benefits of smart growth.

“Compact, diverse, and walkable development can increase property values and property tax revenues, encourage job creation, reduce housing and transportation costs, and create amenities and places that improve residents’ quality of life,” says the report.

As just one example, modeling research shows that a doubling of population density increases economic productivity by two to four percent. “This increased productivity is thought to be due to reduced costs of transporting products between businesses, the higher degree of specialization possible in areas with more people, and a faster flow of ideas,” says the report.

“Real estate developers and investors, businesses, and local governments can use smart growth development as a strategy to maximize their economic advantages while improving the quality of life and creating attractive, healthy communities that help protect the environment.”

**Sustainable Building Cluster Study**

In 1999, the City of Seattle in Washington established LEED Silver as the performance standard for municipal buildings. A 2005 economic development study by the Seattle Office of Sustainability and Environment and the Office of Economic Development found that the green building industry had become one of the city’s strategic economic “clusters.”

Green building activity was estimated to generate:

- between US $316.8 million and $1 billion in revenues annually;
- provide between 1,370 and 4,160 jobs, directly engaged in sustainable building;
- generate US $1.6 million to $5.0 million annually in City tax revenues from these two sources.
Notes from other sources:

Cost of green building

Experiences in cities such as Seattle, Washington have demonstrated that there is a learning curve for designers and builders when energy and environmental requirements are introduced. Costs increase at first, but industry maturation, professional experience and more affordable sustainable materials and systems have resulted in declining investment requirements needed to achieve ever-higher levels of green building.

The director of sustainable design at HOK, a global architecture, engineering, and planning firm working toward a carbon-neutral design portfolio by 2030, says it is no longer true that sustainable buildings have to be more expensive.

“We have delivered many deep green projects that came in below cost or at similar price points to what those same buildings would have cost without sustainable design elements,” says Anica Landreneau. “We did this by focusing on three tactics for improving sustainability: leveraging integrated design, employing energy modeling and programming for efficiencies.”

Innovation

The Canada Green Building Council observes that many Canadian companies are now developing advanced green building materials and energy efficient technologies that are being exported internationally.

These include heating technologies (such as heat exchangers and heat/energy recovery ventilation systems, heat pumps, high-efficiency boilers, and drain water heat recovery), renewable energy systems (including geothermal and solar), energy management and building controls, and high-performance windows and building envelope technologies.

Conclusion

The RAIC puts forward that there is sufficient evidence of positive financial benefits of building green to drive economic growth including; reduced operating costs, rising market demand, and increased building values. Not to adapt to this inevitable trend suggests possible negative impacts to the economy and Canadian living standards.

Improving energy and environmental requirements for the buildings and communities will improve air quality, living and working conditions and in this way will improve the lifestyle of Canadians.
December 7, 2017

To the Standing Senate Committee on Energy, the Environment and Natural Resources and Senator Howard Wetston

From the Royal Architectural Institute of Canada (RAIC)

Response to follow-up questions about uninsurable risk and procurement practices

Dear Senators,

Please find attached a response to a follow-up question by Senator Wetston regarding uninsurable risk and procurement practices.

In its October 26, 2017 presentation to the committee, the RAIC noted that transfer of uninsurable risks to professionals is a serious impediment to innovation because it creates a risk-averse and adversarial environment.

The response was prepared for the RAIC by legal and risk management experts provided by Pro-Demnity Insurance Company.

Pro-Demnity provides the mandatory professional liability insurance for Ontario architects, the largest group of provincially regulated architects in Canada.

Yours truly,

Michael Cox, MAA, FRAIC
President
Royal Architectural Institute of Canada