



Project Report: Achieving Value for Money

BC Cancer Agency Centre for the North



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June 2010

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British Columbia

Purpose of this Document

This report describes the need for the BC Cancer Agency Centre for the North Project, and the rationale, objectives and processes that led to its delivery, giving the public a clear sense of how and why the decision was reached to proceed with the project. The report explains how quantitative and qualitative benefits are expected to be achieved in the context of current market conditions. It provides a summary of the key aspects of the project agreement and describes the benefits of the project as a whole.

Capital planning in British Columbia (B.C.) is governed by the Capital Asset Management Framework (CAMF); there are six key principles guiding public sector capital asset management, including:

1. Sound fiscal and risk management;
2. Strong accountability in a flexible and streamlined process;
3. Emphasis on service delivery;
4. Serving the public interest;
5. Competition and transparency; and
6. Value for money, capturing quantitative factors, such as costs, and qualitative factors, such as service quality and protection of public interests.

Since 2002, these principles have guided the B.C. public sector's approach to acquiring and managing assets such as health care facilities, bridges and roads. Ministries and other public bodies, such as health authorities, are encouraged to consider all available options for meeting their service objectives.

Under the Province's Capital Asset Management Framework, procurement options are analyzed and, after considering the qualitative and quantitative advantages and disadvantages of each, the one that overall best meets service delivery needs and procurement objectives, and makes the best use of taxpayers' dollars is chosen.

Agencies are publicly accountable for projects through regular budgeting, auditing and reporting processes. In all of its procurement processes, the Province is committed to a high standard of public disclosure as part of its accountability for the delivery of public projects.

For more information on the Province's approach to Capital Asset Management, go to: www.fin.gov.bc.ca/ocg/fmb/manuals/CPM/05_Capital_Asset_Mgmt.htm.

For more information on partnership projects in B.C., go to: www.partnershipsbcc.ca.

Partnerships BC and the BC Cancer Agency are accountable for the contents of this report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

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1. Executive Summary and Highlights

The BC Cancer Agency Centre for the North (Centre for the North) is a critical component of the Northern Cancer Control Strategy (the Strategy). The Strategy is a plan to enhance cancer control outcomes in northern British Columbia (B.C.) through a collaboration of the Ministry of Health Services (MoHS), Provincial Health Services Authority (PHSA), BC Cancer Agency, Northern Health (NH) and the Fraser-Fort George Regional Hospital District (FFGRHD). The Strategy addresses the full spectrum of cancer control, from prevention and screening through to palliative care. It is designed to enhance and augment existing programs already in place in the north, and to add new program elements that will fully integrate the Strategy with the current efforts of the BC Cancer Agency in other regional cancer centres.

The Strategy includes three main elements:

1. A population-based northern cancer control plan,
2. Expansion and renovations to the University Hospital of Northern British Columbia (UHNBC), and
3. Construction of the BC Cancer Agency Centre for the North in Prince George.

The largest capital component of the Strategy is the construction of the Centre for the North, on the site of UHNBC, formerly known as the Prince George Regional Hospital. The Centre for the North will form the hub of the Strategy, providing the same cancer care and treatment elements of radiation therapy and systemic therapy (i.e. chemotherapy) available in other cancer centres in B.C. The Centre for the North will be the sixth regional cancer centre in the BC Cancer Agency's provincial cancer control system, providing care and research for the people of B.C.

The Centre for the North and associated parking solutions will be delivered using a design-build-finance-maintain (DBFM) partnership model; the Centre for the North will be delivered within the

affordability ceiling¹ utilizing a wide-equity financing model. The fixed design-build cost of the Centre for the North is \$69.9 million. Other capital components of the Strategy to support the Centre for the North—including renovations to UHNBC, radiation and diagnostic equipment and infrastructure expansion for cancer care services throughout the north—will be procured using the design-bid-build (DBB) traditional delivery model and those capital costs are budgeted at \$35.9 million. This includes a capital contribution from the FFGRHD toward the renovations to UHNBC. The total project capital cost of the Strategy is \$105.8 million.

Procurement Decision

A thorough analysis of procurement options, including both traditional and partnership delivery models, indicated that the project objectives could best be met by delivering the Centre for the North using a DBFM partnership model. Under this model, the successful proponent designs, builds, finances and maintains the Centre for the North over a 30-year operating term.

Rigorous and Fair Selection Process

A two-stage procurement process was used to select a partner for the Centre for the North. This included a Request for Qualifications (RFQ) and Request for Proposals (RFP) stage. Four teams responded to the RFQ and a shortlist of three teams was invited to participate in the RFP stage of the competition: Northern Gateway Health, Plenary Health and Sequence Health.

Following a rigorous evaluation process, Plenary Health was selected as the preferred proponent with whom the BC Cancer Agency negotiated the final project and funding agreements.

A fairness adviser was engaged to monitor the competitive selection process and concluded that the process was fair, open and transparent. Reports of the fairness adviser are available on Partnerships BC's website at www.partnershipsbcc.ca.

¹Definition of the affordability ceiling is described in Section 3: Competitive Selection Process and Results.

Partnership Agreement Highlights

Under the partnership agreement, Plenary Health will design, build, finance and maintain a 5,000-square-metre cancer centre and four-and-a-half-storey parking garage. Plenary Health will be responsible for completing and commissioning the Centre for the North by September 2012.

The fixed design-build capital cost of the Centre for the North is \$69.9 million, with financing arranged by the Province and Plenary Health. Once construction of the Centre for the North is complete, Plenary Health will receive annual service payments (ASP) over the 30-year operating period. Part of the ASP is for facilities management services such as maintenance of the Centre for the North; part of the ASP is for designing, building and providing equity towards the capital cost of the Centre for the North and associated parking solutions; and part of the ASP is for major repairs and replacement of building elements during the 30-year operating period. Actual payments will be made monthly and are based on Plenary Health's service performance, availability of the facility to patients and staff and the quality of maintenance services provided over the life of the agreement. Deductions will be made for non-availability of the facility or failure to achieve defined service quality levels. For the first full year of operations, the ASP will be \$2.5 million (October 1, 2012 to September 31, 2013), assuming no deductions.

Project Benefits and Innovations

The Centre for the North will deliver numerous benefits and innovations to meet the health care needs of patients living with cancer in northern B.C. The Centre for the North is expected to achieve the following key objectives of the BC Cancer Agency:

1. Support the BC Cancer Agency's initiatives in northern B.C.

For the first time ever, patients will have access to radiation therapy in Prince George, thereby reducing the need to travel to other regional cancer centres in Vancouver and Kelowna. The Centre for the North will provide the same cancer care and treatment services available in other regional centres and support the network of cancer control initiatives throughout the north.

2. Create a centre which allows the delivery of quality cancer care in an efficient and effective manner

The design of the Centre for the North is expected to create efficient and effective patient and staff flow throughout the building and the layout of clinical programs is expected to encourage interdisciplinary team work and resource sharing.

3. Create a centre which blends seamlessly into the existing campus

The main feature of the Centre for the North is a two-storey atrium that mirrors the atrium in UHNBC. Similarities in architectural style reinforce the impression of an integrated campus while a separate entrance on the north side of the site gives the Centre for the North a distinct identity.

4. Create a centre that reflects and complements the community, including consideration of Aboriginal culture and the use of wood in the facility

First Nations, Métis and Inuit representatives have been engaged in focus groups to identify the appropriate Aboriginal influences to be incorporated in the landscaping, artwork and design of the Centre for the North to help create a healing environment. In addition, the design maximizes the use of wood in both the exterior and interior of the building to recognize the importance of wood as a key building material for the north.

The Centre for the North will be designed and built to achieve Leadership in Energy and Environmental Design (LEED®) Gold certification and sustainable building practices will be used to minimize the impact of construction on the surrounding environment. In addition, there will be a number of positive economic benefits for Prince George and surrounding communities. The majority of construction costs will be spent locally with more than 90 per cent of trades coming from the north.

Appropriate Risk Allocation

Under the traditional procurement delivery model, project design, construction, operation and maintenance are procured separately; as a result, the public sector retains significant risk. One of the key advantages of a partnership structure is the integrated procurement approach which results in an allocation of risks to the party best able to manage them. For example, the BC Cancer Agency is better able to determine the clinical needs of the facility and therefore retains the risk relating to the functionality of the clinical specifications; the risk that the design does not achieve the clinical specifications remains with Plenary Health.

Achieving Value for Money

Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality. To determine whether or not a project offers the best value for taxpayers' dollars, a broad range of factors are examined including comparison of the final project agreement to other benchmarks. For the Centre for the North, the expected results of a hypothetical traditional delivery model and the expected results of the actual partnership delivery model were compared.

The BC Cancer Agency and Partnerships BC analysed the net present cost (NPC) of the project's whole life costs and compared it to the NPC of the risk-adjusted, public sector comparator. Together, the BC Cancer Agency and Partnerships BC determined that the NPC of the Centre for the North, using a traditional delivery model, is an estimated \$83.6 million. The final project agreement cost² for the Centre for the North has an NPC of \$78.7 million. In financial terms, the final project agreement is estimated to achieve value for taxpayers' dollars of \$4.9 million.



Artist's rendering of the radiation therapy unit. Images on the ceiling help convey a sense of peace for patients receiving radiation therapy.

²Definition of the final project agreement cost is described in Section 4: The Final Project Agreement and Funding Agreement.

2. Project Background, Rationale and Objectives

Project Background

The BC Cancer Agency Centre for the North (Centre for the North) is a critical component of the Northern Cancer Control Strategy (the Strategy). The Strategy is a plan to enhance cancer control outcomes in northern British Columbia (B.C.) through a collaboration of the Ministry of Health Services (MoHS), Provincial Health Services Authority (PHSA), BC Cancer Agency, Northern Health (NH) and the Fraser-Fort George Regional Hospital District (FFGRHD). The Strategy addresses the full spectrum of cancer control, from prevention and screening through to palliative care. It is designed to enhance and augment existing programs already in place in the north, and to add new program elements that will fully integrate the Strategy with the current efforts of the BC Cancer Agency in other regional cancer centres.

PHSA is responsible for specialized provincial health services and it operates eight agencies that provide provincewide health care services, including the BC Cancer Agency, BC Centre for Disease Control, BC Children's Hospital and Sunny Hill Health Centre for Children, BC Mental Health and Addictions Services, BC Provincial Renal Agency, BC Transplant Society, BC Women's Hospital & Health Centre and Cardiac Services BC. For more information please visit: www.phsa.ca/AgenciesAndServices/default.htm.

The BC Cancer Agency is responsible for cancer care and treatment, and cancer research for the people of B.C. For more information please visit: www.bccancer.bc.ca/default.htm.

The objectives of the Strategy are to:

- Reduce the incidence of cancer,
- Reduce the mortality rate of people with cancer,
- Improve the quality of life for people living with cancer, and
- Improve access to cancer services in the north.

The Strategy includes three main elements:

1. A population-based northern cancer control plan,
2. Expansion and renovations to the University Hospital of Northern British Columbia (UHNBC), and
3. Construction of the BC Cancer Agency Centre for the North in Prince George.

With the annual number of new cancer diagnoses in the north projected to increase 40 per cent to around 1,400 cases by 2015, expanding the network of cancer care services is critical to ensuring access to specialized health care. To support the increase in volume of cancer patients, a number of renovations and enhancements to UHNBC are required. These include expansion of the medical imaging, laboratory and phlebotomy departments, an expansion and upgrade of the telemedicine and oncology services and the development of a dedicated inpatient care unit. The Centre for the North will be constructed on the site of UHNBC and will provide full cancer care and treatment services, including radiation and systemic therapy (i.e. chemotherapy). Plenary Health, on behalf of the BC Cancer Agency, will procure medical equipment for the Centre for the North including items such as two linear accelerators for radiation therapy treatment, a computerized-tomography (CT) simulator and chemotherapy chairs for patients.

The Centre for the North will be delivered using a design-build-finance-maintain (DBFM) partnership model and the fixed design-build capital cost is at \$69.9 million. Other capital components of the Strategy will be procured using the traditional delivery model and capital costs are budgeted at \$35.9 million. This includes a capital contribution from the FFGRHD of up to \$4 million toward the renovations and expansion to UHNBC. The total project capital cost of the Strategy is \$105.8 million.

This Project Report will focus on the Centre for the North, and the expected benefits and innovations.

The Need for Change

The unique geography and demographics of the north create both challenges and opportunities for every aspect of planning for cancer-related services. The unique characteristics of the region include:

- A small, widely dispersed population with a higher proportion of young people than the provincial average;
- An expectation for rapid growth in the number of seniors;
- A projected increase in the number of new cancer cases reported annually from 1,000 in 2005 to 1,400 in 2015;
- A high level of behavioural risk factors for cancer including high smoking rates, high levels of alcohol consumption and high rates of obesity; and
- The highest proportion of Aboriginal people in B.C. with numerous levels of organization and differing models of health service provision.

The Centre for the North will provide the same active treatment elements of radiation therapy and systemic therapy (i.e. chemotherapy) available in other regional centres, and will support the network of cancer control initiatives throughout the north. This will be the sixth regional cancer centre in the Province and the first in the north.

The Centre for the North will:

- Improve patient access to specialized cancer care for all communities across the north by offering treatment capacity for systemic therapy (i.e. chemotherapy) and radiation therapy closer to home and on-site seamless integration with cancer control services, including: diagnostic imaging, laboratory, surgery, patient and family counselling, nutrition, palliative care and end of life care;
- Enhance and establish a team of specialized experts through the recruitment and retention of oncologists, medical physicists, oncology nursing and pharmacists for the region;
- Increase access to patient and professional staff education, academic and research capacity across a multidisciplinary team of experts in the Centre for the North and throughout the communities of northern B.C. via telemedicine; and

- Strengthen partnerships with NH and northern B.C. communities to enhance existing networks and common services, including: prevention, screening and early detection, family practice oncology network, consultative clinics, psychosocial network, palliative care network, communities oncology, cancer registry, surveillance and outcomes and clinical practice guidelines.

Project Objectives

- Support the BC Cancer Agency's initiatives in northern B.C.;
- Create a centre which allows the delivery of quality cancer care in an efficient and effective manner;
- Create a centre which blends seamlessly into the existing campus; and
- Create a centre that reflects and complements the community, including consideration of Aboriginal culture and the use of wood in the facility.

Project Scope

In July 2008, the BC Cancer Agency received provincial funding approval for the Centre for the North to be procured using a DBFM partnership delivery model, with debt and equity financing contributions by the private sector partner. Scope of the project included:

- Design, construction and financing of: a regional cancer centre; temporary and permanent parking; and a connection between the cancer centre and UHNBC;
- Ongoing hard facilities management services;
- A 30-year performance-based agreement; and
- Appropriate risk sharing and compensation.

The Centre for the North will be built to achieve Leadership in Energy and Environmental Design (LEED®) Gold certification. The Centre for the North will be designed to be high-performance and energy efficient.

All medical and clinical services will continue to be provided under the universal, publicly-funded health care system, consistent with the Canada Health Act. Patients will use Care Cards to obtain service, as in other public health care facilities in B.C., and will not pay for health care services that are medically necessary and covered by the Medical Services Plan.

Procurement Options Analysis

The BC Cancer Agency and Partnerships BC analysed the procurement delivery options for the Centre for the North. As part of the business planning process, and consistent with the Province's Capital Asset Management Framework, three procurement models were selected representing a range of options from traditional to partnership delivery models:

- **Design Bid Build (DBB):** This is a traditional delivery model where an architect is retained by the owner to develop a detailed design (working drawings) for the building. Once the working drawings are complete, a tender call for a construction contract is issued. Typically, the lowest qualified price is selected and an industry standard construction contract is used. The construction contractor takes responsibility for constructing the building to the specifications detailed in the working drawings. The owner remains responsible for design errors and omissions and monthly progress payments to the contractor, whereas the contractor is responsible for construction errors. Once the building is complete, the owner takes possession and maintains and operates the asset for its entire lifespan. The owner retains key design and construction risks, for example, schedule, construction cost and life cycle maintenance costs. In this model, since separate parties design, build and maintain the building, cooperation between consultants and contractors can be less than ideal, and the opportunities for integration in design, construction and maintenance are not always maximized.
- **Design Build (DB):** The DB delivery model falls within the spectrum of partnership models. It expedites the delivery of the project relative to a DBB delivery model. With DB, the owner provides performance requirements and seeks multiple design-build proposals based on output specifications developed by the owner. A fixed price contract can be either based on standard industry documents or the owner can negotiate a project-specific design-build agreement (similar to the standard project agreement). Payments to the DB team can be made monthly and based on milestones achieved with a hold-back to incent the DB team to meet their schedule requirements. The DB process generally does not involve the owner and the owner's representatives during the design phase to the same extent as the DBB model; however, in B.C., design-build contracts have been negotiated that effectively transfer some risk components during the DB phase of the project and yet include extensive consultation with the owner.
- **Design Build Finance Maintain (DBFM):** This is a partnership delivery model where the owner develops performance specifications, invites competitive proposals to design, build, finance and maintain the asset, and then remits an annual service payment to the private partner after the asset is constructed in accordance with the project agreement. The private partner works collaboratively with user groups to finalize the design and is responsible for building and commissioning the facility, arranging the project financing for its portion of the capital cost, providing facilities management services, conducting life cycle maintenance and meeting hand-back requirements at the end of the project term. The private partner assumes all construction (cost and schedule), design, long-term maintenance cost and operational cost risks.

The procurement options analysis concluded that the DBFM model offered an advantage compared to the other models based on a number of criteria, such as the ability to effectively transfer risk, and would best meet the Centre for the North project objectives. In July 2008, the Province approved funding for the Centre for the North to proceed using the partnership delivery model.

Partnership Delivery Model

The partnership delivery model is designed to capture the strengths of both the public and private sectors, recognizing that private companies have always played an integral role in delivering public infrastructure such as bridges, highways and hospitals. Partnership agreements build on that history and clearly delineate areas of responsibility for both sectors over the life of a long-term, performance-based agreement. The partnership delivery model has successfully been used to deliver health care and transportation infrastructure projects in B.C. since 2002.

For projects with certain attributes, the partnership delivery model can provide better value for taxpayers' dollars by efficiently allocating risk to the private sector and encouraging private sector innovation through rigorous competition. A partnership delivery model provides greater accountability for performance as ongoing payments made by the public sector are conditional on the private partner meeting the performance specifications as outlined in the project agreement.



Artist's rendering of the systemic therapy (i.e. chemotherapy) unit. Large windows provide patients and staff with access to natural light and views of the outdoors, helping to create a healing environment.

3. Competitive Selection Process and Results

Objectives

The competitive selection process for the best suited partner had the following key objectives:

1. Select a qualified, experienced partner to design, build, finance and maintain the BC Cancer Agency Centre for the North;
2. Implement a fair, timely and competitive procurement process; and
3. Achieve the best value for taxpayers' dollars, from both a quantitative and qualitative perspective.

The successful proponent, Plenary Health, was selected using a two-stage procurement process, which included a Request for Qualifications (RFQ) and a Request for Proposals (RFP)³. During the RFQ stage, respondents were asked to present their qualifications for undertaking the design, construction and financing of the Centre for the North. A shortlist of three teams was selected and invited to participate in the RFP stage of the competition.

The members of the proponent teams are listed in the table below.

RESPONDENT	LEAD DESIGN	CONSTRUCTION	FINANCING	FACILITIES
Northern Gateway Health	Chernoff Thompson Architects Vermeulen Hind Architects	Stuart Olson Constructors Inc.	Innisfree Ltd.	ACML Management Western Limited
Plenary Health	CEI Architecture Planning Interiors	PCL Constructors Westcoast Inc.	Plenary Group (Canada) Ltd.	Johnson Controls LP
Sequence Health	Kasian Architecture Interior Design and Planning	Graham Design Build Services	Gracorp Capital Advisors Ltd.	Honeywell Limited

The RFP invited the proponents to submit proposals to design, build, finance and maintain the Centre for the North. A draft project agreement was issued with the RFP; during collaborative discussions, the proponents had the opportunity to discuss issues or concerns. These collaborative discussions covered four broad areas: technical requirements (design and construction), clinical requirements, financial and commercial requirements and facilities management services.

³The RFQ and RFP procurement documents are available on Partnerships BC's website: www.partnershipsbc.ca.

The table below outlines the competitive selection process and timelines.

PROCUREMENT STAGE	TIMING	OUTCOME:
Request for Qualifications	July 31, 2008 to March 20, 2009	The project was marketed locally, provincially and nationally. Submissions from four respondents were evaluated and a shortlist of three teams was announced December 15, 2008: <ul style="list-style-type: none"> • Northern Gateway Health • Plenary Health • Sequence Health
Request for Proposals	March 20, 2009 to October 20, 2009	The three shortlisted teams submitted proposals. This stage included collaborative discussions with the proponents.
Selection of Preferred Proponent	October 20, 2009	After evaluation of the proposals, Plenary Health was selected as the preferred proponent.
Project Agreement Finalization	December 18, 2009	A project agreement was signed by the BC Cancer Agency and Plenary Health.
Project Development to Substantial Completion	December 18, 2009 to September 2012	Construction and detailed design development commences for the Centre for the North and parking facilities, with construction of the Centre for the North scheduled for completion in September 2012.

RFP Process and Evaluation of Proposals

The BC Cancer Agency appointed an evaluation committee, which, with the assistance of topic-specific teams, evaluated proposals according to the criteria and procedure set out in the RFP. Membership on these teams included clinicians and front line staff representing all aspects of cancer care, facilities operations, design and construction plus third party experts in health care planning, architecture, facilities management services, engineering, business and law.

There were four broad categories of evaluation criteria:

- Technical requirements (design and construction)
- Clinical requirements
- Financial and commercial requirements
- Facilities management services

The overall objective of the evaluation was to select the proposal that provided the best cancer centre within the affordability ceiling and the terms of the RFP.

Affordability Ceiling

To ensure the BC Cancer Agency received affordable proposals, it was mandatory for the cost of the proposals to be equal to or lower than the affordability ceiling. The affordability ceiling is the net present cost (NPC) of all annual service payments (ASP) at an assumed cost of finance⁴. For the Centre of the North, the affordability ceiling was set at \$72.2 million.

Three high-quality proposals were received on August 31, 2009; all proposals included the full scope of the project and were under the affordability ceiling identified in the RFP.

Following a rigorous evaluation process, the evaluation committee made a recommendation to the PHSA Board of Directors that Plenary Health be selected as the preferred proponent. This recommendation was approved by the PHSA Board of Directors.

⁴The assumed cost of financing is measured as a project internal rate of return of 7.43 per cent, the discount rate for the NPC calculation was given at 7.43 per cent.

Scope Ladder

The RFP included a scope ladder. The purpose of the scope ladder is to provide proponents with project elements that can either be added to or subtracted from a design to ensure the proposal cost is either equal to or lower than the affordability ceiling. The scope ladder also signaled to proponents that the priority of the BC Cancer Agency was to receive the best clinical design solution within the affordability ceiling as opposed to the lowest cost proposal.

Innovative Financing in Adverse Financial Markets: A Technical Explanation

Innovation in Procurement

The RFP for procurement of the Centre for the North was released to the shortlisted proponents in March 2009. At that time, global financial markets were continuing to experience significant challenges, including the availability and cost of capital for infrastructure projects. The priority of the Province and the BC Cancer Agency in this environment was unchanged: to deliver an affordable project within scope, schedule and budget.

During the collaborative process it became clear that none of the proponents would be able to meet the affordability ceiling due to the high cost of financing. To mitigate the impact of financing costs and to keep the project affordable, an innovative wide-equity financing structure was introduced (the wide-equity model had recently been used on the Fort St. John Hospital and Residential Care Project). All three proponents submitted proposals that complied with this new innovative financing structure.

In this solution, a larger amount of equity, approximately 20 per cent, is invested by Plenary Health (typical partnership projects have around 10 per cent private partner equity contributions). The equity investment from Plenary Health, in combination with funding from the Province, is financing the project.

The use of the wide-equity financing structure was an innovative response to the global financial crisis. Moreover, it appears that the wide-equity financing structure could be a viable option for financing future infrastructure projects.

Impact of Wide-Equity Financing Structure on Risk Transfer

Partnership projects typically have private financing (senior lenders), such as bank debt, which assumes certain business risks beyond those assumed by equity investors. Examples include those risks with financial consequences that exceed the amount of equity invested (cataclysmic risks that are uninsured).

The BC Cancer Agency's exposure to these risks is mitigated by the wide-equity solution, but not to the same extent as a partnership structure with senior lenders; however, the wide-equity structure provides a significant level of risk transfer beyond that of traditional procurement.

In the wide-equity structure, a portion of the payments made to Plenary Health (on its equity investment) are held until the last two years of the 30-year partnership agreement to ensure they are incented to provide high levels of service until the end of the agreement. This arrangement is similar to that required in partnership transactions involving senior lenders.

The senior lenders are also typically required to exercise due diligence and fiduciary responsibility over the private partner (Plenary Health) under certain conditions. Typically, technical advisers are the on-site parties that provide senior lenders with oversight during the construction period. In the wide-equity model, the BC Cancer Agency has assumed the typical due diligence role of senior lenders, which for the Centre for the North will be applied during construction and the operating period. The BC Cancer Agency has retained an authority technical adviser, BTY Group, to perform the due diligence functions during the construction period.

Calculating Value for Money in a Wide-Equity Model

The quantitative value for money expected to be realized over the life of the project agreement has been defined for previous projects as the difference between: the present value of the maximum payments (annual service payments, or ASP) from the Province (or the Authority) under the project agreement, applying a discount rate⁵ that reflects the value to the Province (or the Authority) of risks transferred to the private partner and other benefits from the DBFM; and, the present value of the public sector comparator (PSC), adjusted for the expected value of risks transferred to the private partner.

With the Centre for the North, the ASP has been reduced to take into account the payments provided by the BC Cancer Agency which are made in the form of construction milestone contributions. The total present value cost of the project under the DBFM delivery model is calculated as the present value of the maximum ASP in the project agreement plus the present value of the BC Cancer Agency's contributions using the discount rate of 7.43 per cent. It was deemed that a discount rate of 7.43 per cent would be appropriate for a project of this type. This discount rate, which approximates a normalized cost of capital (eliminating the impact of the global financial crisis on financing charges at the time), is within the range of discount rates used on previous partnership health care projects in B.C. and is reflective of the overall cost to the BC Cancer Agency of transferring risks and achieving other benefits from the DBFM delivery model.

The BC Cancer Agency's construction milestone contributions rank senior to the equity contributions and have a significantly reduced risk exposure. As a result, the BC Cancer Agency's construction milestone contributions are assumed to be financed over the life of the agreement at the Province's long-term borrowing rate of 4.9 per cent set at financial close (December 2009).

Fairness Adviser

A fairness adviser, ADR Chambers Inc., was engaged to monitor the competitive selection process and offer an assessment about the procedures and whether or not the selection process was carried out in a fair and reasonable manner. The fairness adviser was provided access to all documents, meetings and information related to the evaluation processes throughout both the RFQ and RFP stage. The report of the fairness adviser was presented to the BC Cancer Agency and PHSA.

The fairness adviser was satisfied with both the RFQ and RFP processes, and in the RFP report the adviser noted "We are of the view that the Evaluation of Proposals met the criteria of fairness, openness, transparency and integrity. We congratulate all members of the Evaluation Committee and the BC Cancer Agency and Provincial Health Services Authority, and Partnerships BC, for the high degree of professionalism displayed throughout."

⁵Discount rate is the interest rate used in determining the present value of future cash flows.

Project Agreement Finalization and Financial Close

Competitive Selection Costs

The cost of the competitive selection process is factored into the value for money analysis. The total competitive selection cost for the Centre for the North from approval of the business case to financial close is \$3.6 million, including partial compensation to the unsuccessful proponents of \$500,000. Offering partial compensation is common in the competitive selection process and recognizes the significant time and expense that proponents have spent on developing their response to the RFP. Other competitive selection expenses include the cost of developing performance specifications, preparing procurement documentation and obtaining advice from external advisers. Competitive selection costs do not include planning costs.

Procurement Best Practices

As a centre of partnership procurement expertise, Partnerships BC has developed an extensive library of best practices. Partnerships BC continually transfers knowledge and experience gained from past projects to others, to improve efficiency and quality, and to streamline and expedite the procurement process to save time and money for both the public and private sectors. Partnerships BC's representation on project boards contributes to the application of best practices across projects and sectors. For example, the use of best practice procurement documents across health care projects, including the Centre for the North, has resulted in the reduction of certain procurement related costs.



Artist's rendering of the interior atrium. Wood will be showcased in the exterior and interior of the Centre for the North, in recognition of the importance of wood as a key building material for the north.

4. The Final Project Agreement and Funding Agreement

Final Project Agreement Cost

The final project agreement cost for the BC Cancer Agency Centre for the North is comprised of three components. The first component is the NPC of the ASP that will be made to Plenary Health over the term of the project agreement. The NPC for the Centre for the North is \$70.3 million, which falls within the affordability ceiling of \$72.2 million. The second component consists of project management costs incurred by the BC Cancer Agency to manage the partnership agreement plus required insurance and GST costs, which total \$6.6 million. Finally, the third component is the value of the project risks retained by the BC Cancer Agency of \$1.8 million. Therefore, the final project agreement cost for the Centre for the North is \$78.7 million.

The final project agreement cost should not be confused with the fixed capital cost of \$69.9 million, which only includes design and construction costs. The final project agreement cost also includes facilities management, rehabilitation and other project management costs.

Profile of the Private Sector Partner

Plenary Health has carefully handpicked a team of like-minded organizations to design, build, finance and maintain the new state-of-the-art Centre for the North.

Plenary Group: Plenary Group, as the 100 per cent equity provider and long-term asset manager, specializes in Canadian public private partnership social infrastructure projects. Plenary Group's business is based on successful partnerships, a focus on project delivery and active commitment over the long term. Plenary Group is a leading developer and operator of partnership projects and features specialist health care, construction and finance personnel. Plenary Group has as its sole focus the delivery of the Centre for the North on time and on budget and its successful physical operations over the next 30 years.

PCL Constructors Westcoast Inc.: PCL Constructors Westcoast Inc. is a member of the PCL family of companies, Canada's leading construction contractor and one of North America's most prolific health care construction providers. Examples of recent health care projects include the Abbotsford Regional Hospital and Cancer Centre, the Gordon and Leslie Diamond Health Care Centre in Vancouver and the Ambulatory Care Expansion at the BC Children's Hospital and BC Women's Hospital in Vancouver.

CEI Architecture Planning Interiors: CEI is a full service architecture firm with more than 20 years of experience. CEI's work on health care facilities includes the BC Cancer Agency Centre for the Southern Interior in Kelowna, the Robert H. N. Ho Research Centre (with MCMP Architects) at Vancouver General Hospital, the Prince Rupert Complex Care Facility and the Victoria General Hospital Emergency Department Redevelopment.

Johnson Controls Limited Partnership: Johnson Controls is a leader in facility management services and the development, integration and installation of building automation systems and controls. Johnson Controls' recent experience includes the Abbotsford Regional Hospital and Cancer Centre and the Gordon and Leslie Diamond Health Care Centre in Vancouver.

Key Terms of the Project and Funding Agreements

There are two separate agreements to keep the role of the BC Cancer Agency as a funder during the design and construction phase separate from its responsibilities and obligations as project owner, under the specified terms of the project agreement. The private sector partner has incorporated a single purpose entity, Plenary Health Prince George General Partnership (Plenary Health), to enter into the project and funding agreements to undertake the project.

Project Agreement

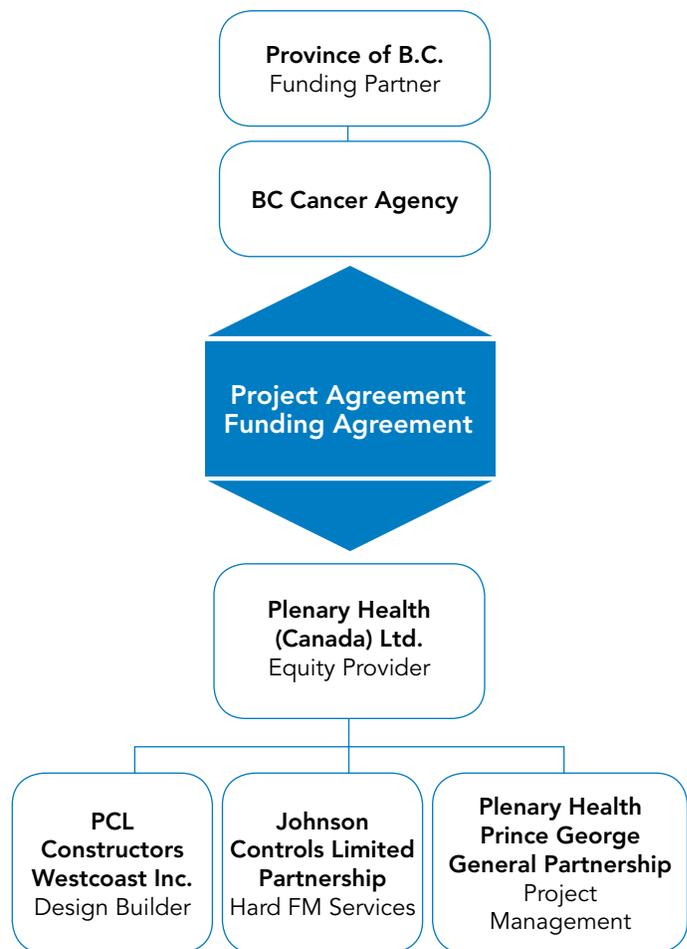
The project agreement is a contractual arrangement between the BC Cancer Agency and Plenary Health that is effective from financial close to 30 years after construction is complete. It contains provisions to govern all aspects of the project except for the BC Cancer Agency's financial contributions during construction. Plenary Health is responsible for the design, construction, facility operations and life cycle maintenance of the Centre for the North as defined in the project agreement. Plenary Health has been granted an exclusive license to undertake the construction of the Centre for the North, and then a non-exclusive license to provide the services as defined in the project agreement.

Funding Agreement

The funding agreement is between the BC Cancer Agency and Plenary Health; it replaces the credit agreement that would have existed between Plenary Health and commercial lenders in a typically financed public private partnership. The term of the funding agreement is from financial close to service commencement⁶. The agreement permits the BC Cancer Agency to contribute funds up to \$54.5 million during the design and construction period for eligible costs (e.g. construction). Funding is scheduled monthly, based on satisfactory documentation and completed construction progress, which is monitored by the authority technical adviser. This is the same process that commercial lenders employ when financing partnership projects.

In addition, the funding agreement specifies a number of positive and negative covenants that ensure Plenary Health provides the oversight and efficiency expected under the terms of the project agreement during the construction period. The agreement provides the BC Cancer Agency with provisions to mitigate construction risks that may materialize in the event that Plenary Health fails to comply with the positive and negative covenants during construction.

The organization chart below depicts the relationship between the signatories to the final project agreement and funding agreement.



⁶Service commencement is scheduled for September 2012 when construction of the Centre for the North is expected to be complete and the annual service payments are scheduled to begin.

Scope Contracted with Plenary Health

The Centre for the North will be designed as a state-of-the-art cancer centre that provides a clinically efficient solution to facilitate the delivery of quality patient care. There are a number of design features that will help create a healing environment for patients and a great workplace for health care professionals. In addition, the Centre for the North will incorporate a number of Aboriginal elements in the landscaping, artwork and the design itself to ensure the building reflects and complements the cultural and community context of northern B.C. Key design features include:

- A new two-storey, 5,000-square-metre building, with underground parking;
- Reception;
- Systemic therapy (i.e. chemotherapy) unit that accommodates eight chairs and three stretchers;
- Radiation therapy unit that accommodates one computerized-tomography (CT) simulator used in cancer treatment planning and two linear accelerators which are used in the delivery of radiation therapy;
- Space for general outpatient clinics;
- A pharmacy for dispensing medication;
- Professional staff offices;
- A flexible design that allows for expansion to accommodate future health care demands including space for the delivery of brachytherapy;
- A green roof—the first of its kind in Prince George—comprised of local plants that will provide several benefits to the building including capturing rainwater, providing insulation and offering patients, staff and visitors a view of indigenous landscaping;
- Design and construction of the Centre for the North to achieve LEED® Gold certification;
- Extensive use of wood in both the exterior and interior of the Centre for the North;
- A two-storey, level link between the Centre for the North and UHNBC that keeps users of the facilities sheltered from the elements, and;
- A parking garage.

Refinancing

In the event Plenary Health restructures its portion of the financing of the project and there is a financial benefit, the BC Cancer Agency will be entitled to receive a 50 per cent share of any gains attributable to the refinancing.

Construction Schedule

Plenary Health is responsible for completing and commissioning the Centre for the North by September 2012.

Ownership

NH owns the site and grants a long-term lease to the BC Cancer Agency. The BC Cancer Agency grants a non-exclusive license to Plenary Health to enable provision of services specified in the project agreement. All clinical health services will be funded by the BC Cancer Agency and NH and will be provided by the BC Cancer Agency and NH, in keeping with the principles of the Canada Health Act.

Facilities Management Services

Plenary Health is required to provide facilities management services for the Centre for the North and parking garage throughout the term of the project agreement.

Plenary Health is responsible for delivering the following services:

- Plant services,
- Facilities management help desk services,
- Utility management services,
- Maintenance of the Centre for the North,
- Snow removal and maintenance of the parking garage, and
- Maintenance of the green roof.

Equipment

Plenary Health is responsible for designing and building the Centre for the North to accommodate the required medical equipment. Plenary Health is also responsible for the procurement, delivery, storage and installation of the required medical equipment. The BC Cancer Agency will assist in the selection of the medical equipment during procurement and will assume the price risk for medical equipment.

Term of the Project Agreement

The term of the project agreement is 33 years. This includes a construction period and 30 years of operation from the expected date of substantial completion, September 2012. The contractual expiry date remains fixed regardless of when service actually commences—that is, construction delays reduce the operating period while early delivery extends the operating period. At the end of the term, the Centre for the North must meet the hand-back standards specified in the project agreement.

Performance-Based Payment Principles

Once construction is complete, occupancy permits are in place and the facility is commissioned, the BC Cancer Agency is responsible for paying Plenary Health the ASP for 30 years. These payments will be made monthly and are based on Plenary Health's service performance, the availability of the facility to patients and staff and the quality of the maintenance services provided over the life of the agreement. Plenary Health's performance will be continuously monitored throughout the operating period based on key performance indicators, and the BC Cancer Agency may make deductions from the monthly payments if the standards in the project agreement are not met.

Payment deductions are based on the severity of the failure to meet performance indicators, the importance of the health care areas affected and their level of unavailability. Unavailability events apply when a room or department fails to comply with the availability condition specified in the project agreement. The amount of the deduction for each unavailability event is between \$50 and \$450 (index linked).

Adjustments to Payments

The ASP may be adjusted to reflect specific circumstances as defined in the project agreement, including:

- **Indexation:** The capital component of the ASP will not be indexed. The facilities management component of the ASP is indexed by the consumer price index (CPI) with periodic adjustments to the market through benchmarking.

- **Variations:** If the BC Cancer Agency requires Plenary Health to make a physical change or amend the services, the BC Cancer Agency can either make a lump sum payment or have the cost of the change financed by Plenary Health. If the BC Cancer Agency chooses to have the change financed, the cost will be reflected in an adjusted ASP. The mechanism for developing and determining the cost of a variation is set out in the project agreement.
- **Change in Law:** If there is a discriminatory change in law, the ASP may be adjusted to leave Plenary Health in no better or worse position than if that change in law had not occurred.
- **Compensation Events:** If an event occurs that warrants compensation to Plenary Health, the amount may be provided by adjustment to the ASP.

Risk Allocation Summary

In projects that are procured using the traditional delivery model, the design, construction and maintenance are rarely integrated into one contract. Consequently, the public sector retains significant risk. One of the key advantages of the partnership delivery model is the sharing of the burden of risk. For example, the public sector is better able to determine the health care operational requirements of the facility and therefore retains that risk. The private sector is better able to determine the cost effectiveness of the design of the facility from a maintenance perspective, and therefore accepts that risk.

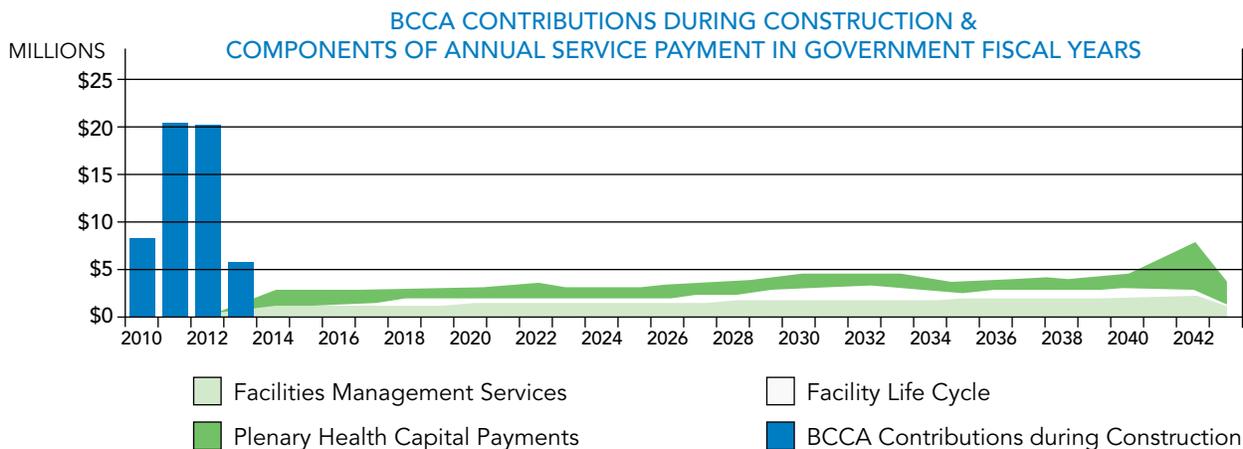
Some risks are shared, such as a relief event like an earthquake or flood. For every shared risk, the project agreement stipulates how the risk will be allocated, for example, by providing thresholds in some cases for each party's responsibility for a certain risk. There is a dispute resolution mechanism that applies in the event of any disagreements in the interpretation of the risk allocation.

This risk allocation is supported by the following provisions in the project agreement:

- The BC Cancer Agency begins making performance-based payments to Plenary Health only when an independent certifier confirms that the conditions for service commencement have been achieved;
- The expiry date of the project agreement is fixed, so any delays in completing construction will reduce payments to Plenary Health, providing them with a strong incentive for timely completion of the Centre for the North;
- Provisions are in place for payment reductions if Plenary Health does not meet agreed upon standards for facility availability and maintenance; and
- If Plenary Health fails to address a problem, such as replacement of a broken window within the specified time period, then the BC Cancer Agency can step-in and replace the window at Plenary Health’s expense.

Financial Summary

The graph below demonstrates the cash flows to Plenary Health that meet the affordability ceiling as defined in the RFP; the BC Cancer Agency’s contributions during construction are assumed to be amortized over 28 years during the operating period. The graph is expressed in nominal dollars, which assumes 2.5 per cent inflation for facilities management services. Payment projections assume no penalties or deductions.



Accounting Treatment

B.C.’s Office of the Comptroller General, responsible for the overall quality and integrity of the government’s financial management and control systems, has established accounting guidelines for partnership projects. Based on the unique financial arrangement between the BC Cancer Agency and Plenary Health for the project, the fixed design-build capital cost of the Centre for the North is \$69.9 million, with financing arranged by the Province and Plenary Health.

Impact of the Harmonized Sales Tax

On July 1, 2010, B.C. proposes to adopt the harmonized sales tax (HST), combining a seven per cent provincial sales tax (PST) rate with the five per cent federal goods and services tax. To mitigate the impact of the HST, the Province intends to provide new provincial rebates for qualifying health authorities to ensure that, on average, health authorities pay no more tax after harmonization than they currently pay⁷.

⁷More information about the HST is available on the Ministry of Finance’s website: <http://www.gov.bc.ca/hst/>.

5. Ongoing Project Agreement Monitoring

The project agreement with Plenary Health includes public interest safeguards to ensure project delivery, performance and high quality standards. Monitoring spans every phase of the project, from financial close through design and construction, and facility operations and maintenance over the term of the agreement. There are a number of major phases in the project-monitoring schedule, with roles and responsibilities assigned to project participants at each stage.

Self Monitoring by the Partner

The project agreement is designed to motivate the partner to ensure delivery, performance and high standards of quality given the monetary consequences of not achieving these requirements.

Plenary Health is required to have a performance monitoring program during the operating period that will monitor the delivery of services. All reports generated from this program and supporting data are readily available to the BC Cancer Agency at any time for audit purposes. Monthly reports delivered to the BC Cancer Agency will contain a variety of information, including: summary of calls made to the facilities management help desk and their resolution; summary of unavailability events and service failures; calculation of the monthly service payment owed to Plenary Health; and, a summary of all life safety actions and statutory testing (i.e. fire extinguisher inspections). Failure to deliver these monthly reports will trigger a \$150 penalty for Plenary Health on the first day, which increases to \$450 for each day thereafter. There are strict penalties if Plenary Health misrepresents the monthly report, potentially leading to contractor default.

Monitoring by the BC Cancer Agency

The Project Management Office that manages the BC Cancer Agency Centre for the North on behalf of the BC Cancer Agency has retained an authority technical adviser to provide services, up to the end of the construction period, in connection with construction milestone payments to be made by the BC Cancer Agency to Plenary Health under the funding agreement. These services are similar to those services ordinarily provided if commercial lenders were involved.

The authority technical adviser will monitor the progress of the Centre for the North during construction on a monthly basis and as per the funding agreement, will report the following on a monthly basis to the BC Cancer Agency:

- Actual project costs incurred within the period, including a break down by major expense category;
- Details of any variances from the construction budget and schedule;
- The estimated date of service commencement; and
- Confirmation that remaining project costs to be incurred or already incurred, but not yet paid for, do not exceed available construction funds.

Design and Construction Phase

The project agreement stipulates that the BC Cancer Agency will designate a design and construction representative. This representative has authority to act on behalf of the BC Cancer Agency during the design and construction phases of the project, and to review, approve, accept or confirm Plenary Health's activities, in accordance with the project agreement. The BC Cancer Agency representative will have full access to the construction site, drawings and specifications, and will report their observations to the BC Cancer Agency. In addition, an independent certifier will monitor and report on the construction progress and will provide certification that the conditions for service commencement have been achieved.

Operations and Maintenance Phase

The project agreement stipulates that the BC Cancer Agency must assign a representative to serve as a member of the Operations and Maintenance Committee over the 30-year term of the agreement. The committee is a formal forum for the parties to consult and cooperate on all matters related to the facility during the operational term.

In addition, Plenary Health will be required to provide annual service plans and five-year maintenance plans to the BC Cancer Agency throughout the operating period.

Long-Term Project Agreement Review

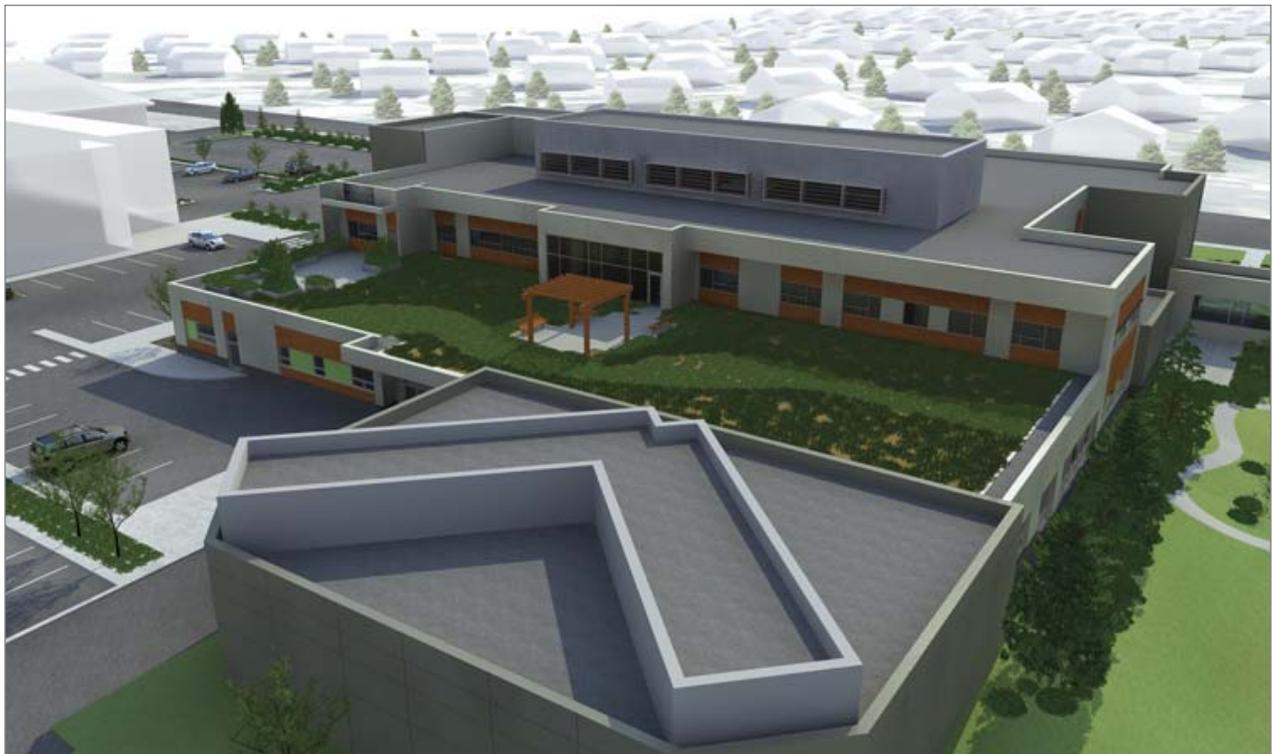
Partnerships BC will work with the BC Cancer Agency and the Ministry of Health Services to design a process for reviewing the project agreement at appropriate intervals from the start of operations. The review process will enable the Province to establish whether the project agreement is functioning as intended, and whether the expected benefits have been realized.

Hand-Back Survey

Three years prior to the expiry date of the operating term, the BC Cancer Agency and Plenary Health will jointly appoint and pay for an independent party to conduct an inspection and survey of the facilities in conjunction with the preparation of that year's regular annual service plan. Plenary Health is responsible for meeting the hand-back requirements at the end of the project term.

Role of Project Management Office

The BC Cancer Agency and Northern Health have established a Project Management Office responsible for leading the oversight and monitoring efforts for the Strategy, including the Centre for the North. An experienced project officer, along with experts in design and construction, clinical services, facilities management services and technical requirements, will serve full-time roles in the Project Management Office. The Project Management Office is responsible for reporting to a project board on all aspects of the Centre for the North, and is required to adhere to a detailed Design and Construction Plan based on Project Management Institute best practices.



Artist's rendering of the green roof planned for the BC Cancer Agency Centre for the North. The green roof—the first of its kind in Prince George—will provide several benefits to the building including capturing rainwater, providing insulation and offering patients, staff and visitors a view of indigenous landscaping, and access to the outdoors.

6. Project Benefits and Key Features

The design provided by Plenary Health is expected to achieve the four key project objectives for the BC Cancer Agency Centre for the North. The corresponding benefits and key features of Plenary Health's proposal are outlined below.

1. Support the BC Cancer Agency's initiatives in northern B.C.

The design of the Centre for the North fully meets all the identified criteria for the BC Cancer Agency's initiatives in northern B.C. by providing the same active treatment elements of radiation therapy and systemic therapy (i.e. chemotherapy) available in other regional cancer centres and supporting the network of cancer control initiatives throughout the north.

2. Create a centre which allows the delivery of quality cancer care in an efficient and effective manner

There are many aspects to the design of the Centre for the North that will support the delivery of effective and efficient cancer care and treatment. For example, a level link between the Centre for the North and UHNBC will allow for easy patient and staff flow from one building to the next, encouraging resource sharing between the Centre for the North and the hospital and leading to more efficient work flows and patient care. The design of the atrium is expected to improve wayfinding in the building, which makes the patient experience easier and less intimidating.

Furthermore, the tight clinical program layout creates short distances between departments allowing for excellent patient and staff flows throughout. Intra and interdepartmental adjacencies have been optimized for this small scale cancer centre to encourage interdisciplinary team work and resource sharing where appropriate.

3. Create a centre which blends seamlessly into the existing campus

The main feature of the Centre for the North is a two-storey atrium that mirrors the atrium in UHNBC. Although smaller in scale, the atrium in the Centre for the North includes similar wood beams and wood paneling to create a warm and welcoming feel when patients, health care professionals and

visitors enter the building. The exterior of the Centre for the North, while predominantly wood, reflects the architecture of UHNBC through the use of accent materials and lush landscaping wrapping around the building, thereby creating a seamless transition from one building to the other. The similarities in architecture reinforce the impression of an integrated campus while the separate entrance on the north side of the site gives the Centre for the North a distinct identity.

4. Create a centre that reflects and complements the community, including consideration of Aboriginal culture and the use of wood in the facility

The BC Cancer Agency Centre for the North has been designed to complement UHNBC and the neighbouring community. B.C. wood will enhance the building exterior and the interior atrium to emphasize the importance of this material to northern B.C. communities. First Nations, Métis and Inuit representatives have been engaged in focus groups to identify the appropriate Aboriginal influences to be incorporated in the landscaping, artwork and design of the Centre for the North to help create a healing environment. The design of the Centre for the North is intended to elicit a warm and less institutional feel that is intended to make patients feel more comfortable and at ease.

The following three objectives were identified by the Province as key deliverables for the Centre for the North. The corresponding benefits and key features of Plenary Health's design and how the design is expected to achieve the Province's objectives are outlined below.

i. The centre must be designed and built to achieve LEED® Gold certification

Plenary Health has committed to meeting the LEED® Gold standard and intends to undertake the following in support of that commitment:

- The Centre for the North's energy consumption is targeted to be reduced by 38 per cent when compared to the Model National Energy Code for Buildings and all of the facility's electricity will be supplied by renewable energy sources.

- A green roof comprised of local plants will provide several benefits to the building including capturing rainwater, providing insulation and offering patients, staff and visitors a view of indigenous landscaping.
- Detailed planning will encourage the use of local materials and materials with recycled content.
- Fifty per cent of construction waste will be diverted from the landfill by recycling or reusing construction materials.
- The use of potable water will be reduced by 30 per cent through the use of water-efficient plumbing fixtures.
- Materials will be selected that emit low amounts of volatile organic compounds (VOCs). To promote the health of patients, staff and visitors, materials used in interior spaces (e.g. paint, carpets, adhesives, sealants and wood products) will be reviewed to ensure they contain reduced levels or no VOCs.
- A strategy will be implemented to ensure the Centre for the North attains a high level of indoor air quality, including the adoption of voluntary industry guidelines, frequent changes of filtration media and the testing of air contaminants prior to building occupancy.
- A system will be installed to monitor and provide rapid feedback to the building operator for temperature, airflow and humidity levels throughout the facility to provide maximum comfort to the staff, patients and visitors.

ii. The project must meet the affordability ceiling

The final negotiated deal with Plenary Health meets the affordability ceiling and provides the best value for taxpayers' dollars.

iii. Wood First Act

The design and construction of the Centre for the North will use significantly more wood than was envisioned in the design and construction specifications. Wood will be showcased in both the interior and the exterior of the building in structural, acoustic, decorative, millwork and doors and exterior cladding elements. The heavy lumber incorporated in the atrium and main entrance canopy and the timber used for the exterior cladding are the most visible and are used in large-scale elements that highlight the warmth and beauty of wood. These major wooden features are

complemented by finished carpentry and wood interior wall finishes. In total, construction of the Centre for the North will use nearly 656,000 board feet of wood which, if laid end to end, would stretch from Prince George to Mackenzie. In all locations, every effort has been made to use local species available in B.C., such as Western red cedar and Douglas fir, and products manufactured in the province.

Local Economic Benefits

In addition to the health care benefits offered, a number of positive economic benefits for Prince George and surrounding communities can be expected. At the peak of construction, there will be up to 160 workers on the site each day, the majority of whom will be from northern B.C. In addition, the majority of construction costs will be spent locally with more than 90 per cent of the trades coming from the north. For example, the following local Prince George companies have been hired as part of the design and construction team for the Centre for the North:

- Civil engineering: L&M Engineering Ltd.,
- Civil works: IDL Projects Inc.,
- Concrete placing: KVS Concrete Finishing Inc.,
- Concrete supplier: Inland Concrete,
- Electrical: Houle Electric,
- Enlarged project images: IRL Signs and Graphic Design,
- Environmental Consultant: Pacific Environmental,
- Geotechnical consultant: GeoNorth Engineering Ltd.,
- Landscape architect: Jay Lazzarin Landscape Architect,
- Mechanical: Equity Plumbing & Heating Ltd.,
- Miscellaneous safety and construction equipment: Northern Industrial Sales,
- Parkade roofing: Admiral Roofing Ltd.,
- Reinforcing steel: LMS Reinforcing Steel Group, Vancouver, B.C. (utilizing 65 per cent local workforce), and
- Surveying quality control: McElhanney Consulting Services Ltd.

7. Achieving Value for Money

Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality. To determine whether or not a project offers the best value for taxpayers' dollars, a broad range of factors are examined including comparison of the final project agreement to other benchmarks. For the BC Cancer Agency Centre for the North, the expected results of a hypothetical traditional delivery model and the expected results of the actual partnership delivery model were compared.

Quantitative Benefits

Financial value for money is the difference between the NPC of the ASP that will be paid to Plenary Health over the life of the project agreement and the expected NPC of the capital cost, facilities management and operating costs, life cycle maintenance costs and transferable risk costs included in the public sector comparator (PSC). The RFP included an affordability ceiling, set at \$72.2 million. The wide-equity financing approach was used to deliver the project within the \$72.2 million amount.

The NPC of the Centre for the North delivered traditionally (the PSC) is an estimated \$83.6 million. The final project agreement, utilizing the wide-equity model with Plenary Health, has an NPC of \$78.7 million. A high-level comparison of these numbers is provided in the table below. In financial terms, the final project agreement is estimated to achieve value for taxpayers' dollars of \$4.9 million, when compared to the PSC.

(MILLIONS)	FINAL PROJECT AGREEMENT	PSC
Capital Costs		\$ 54.9
Life Cycle and Operating Costs		\$ 14.5
Risk Adjustment	\$ 1.8	\$ 9.6
Project management costs including GST, insurance and procurement	\$ 6.6	\$ 4.6
Payments to Plenary Health	\$ 70.3	
Total	\$ 78.7	\$ 83.6
Cost Differential		\$ 4.9
Percentage savings from PSC		6.3%

The significant factors contributing to value for money include efficiencies from competitive construction pricing, integrating the design, build and finance teams and an efficient allocation of risk. The risk adjustments were made following Partnerships BC's quantitative analysis best practices⁸. The NPC figures above were developed using a discount rate, which represents the costs of capital over time taking into account factors such as inflation and interest rates. The discount rate used for the calculation of value for money is 7.43 per cent. Sensitivity analysis of the discount rate showed that the NPC of the final project agreement would have been approximately \$1.8 million less than the public sector comparator if the discount rate was 50 basis points lower, and about \$7.7 million less if the discount rate was 50 basis points higher.

⁸A discussion paper is available at Partnerships BC's website: www.partnershipsbc.ca.

Qualitative Benefits

Aboriginal Engagement

First Nations, Métis and Inuit have been engaged in the design process, and regional representatives have participated in user group meetings to provide input to culturally appropriate design. Cultural aspects are evident in the use of exposed wood in the atrium of the facility, the inclusion of Aboriginal art throughout the Centre for the North, the presence of a circular spiritual care room, fireplaces in waiting areas and numerous species of plants known for their healing properties in the Centre for the North's therapeutic gardens. Moreover, waiting rooms and treatment areas are designed to accommodate larger groups of people thereby allowing patients to remain with their families throughout treatment.

Design of the Centre for the North

The Plenary Health team proposed a superior clinical design that will enable the delivery of quality patient care. The design reflects intuitive wayfinding and excellent patient and staff flow throughout the Centre for the North.

Examples of the quality of the clinical design are:

- **Proximity of the departments:** Groups that have high interaction levels are located immediately adjacent to each other, such as the pharmacy and the chemotherapy unit.
- **Matching circulation to function:** Areas that are frequented by people in distress or needing counseling or advice are located away from major traffic areas and reinforce the quiet, reflective nature of the department.
- **Efficiency:** The configuration of the spaces both within the components as well as between them minimizes travel distances for staff and maximizes group activities. This will make the building more clinically efficient for the length of the building's life span.
- **UHNBC linkage:** Aligning the floors of the Centre for the North to those of UHNBC creates long-term efficiency not only within the Centre for the North, but also in the connections with the hospital. Hospital staff supporting the Centre for the North will not be impeded by stairs or elevators to access to the Centre for the North with supplies or material.

- **Future expansion:** One of the design innovations provided as part of Plenary Health's proposal includes additional space for a brachytherapy treatment room. As well, the radiation therapy and systemic therapy (i.e. chemotherapy) units can be expanded in the future.
- **Cash allowance:** The final agreement with Plenary Health includes a small cash allowance that can be used for items such as costs associated with design changes from user consultation meetings or medical equipment.

Construction Challenge

With a required completion date of 2012, Plenary Health was challenged to provide a solution that would both meet the construction completion date and minimize disruption to UHNBC staff, with the displacement of more than 200 parking spots on an already constrained site. Therefore, to minimize the impact and inconvenience caused by construction for staff, patients and visitors who need access to UHNBC, Plenary Health proposed a phased construction schedule that begins with the development of temporary parking at Alward Park followed by construction of the parking garage. At no time during construction will the total number of parking spots on the site fall below the current number.

The parking garage will be four-and-a-half storeys high (including one level below ground) and contain a total of 302 parking spaces. As well, there will be an additional 87 spaces in a heated underground parking garage directly below the Centre for the North. This will be linked by a heated underground corridor to the parking garage and UHNBC, thereby offering protection to staff during inclement weather.

One of the innovations provided by Plenary Health as a result of the competitive process was 40 additional surface parking spaces for UHNBC staff.

Once the parking garage is complete in late summer 2010, the existing parking lot will be available for construction of the Centre for the North, which is scheduled for completion in September 2012.

Energy

Plenary Health is expected to achieve significantly reduced rates of energy consumption compared to average hospital energy consumption. For example, hospitals generally consume about 2.68 GJ/m² whereas the Centre for the North is targeted to consume 0.98 GJ/m² or a difference of 63 per cent; when compared to the Model National Energy Code for Buildings, the Centre for the North is targeted to consume 38 per cent less energy.

In addition, Plenary Health proposed an innovative use of UHNBC's hot water heating system and will connect directly into the hot water return lines of the hospital, thereby eliminating the need to build long pipes that run back to the boilers. This will not impact UHNBC's ability to meet the demand for heating hot water within the existing hospital and will help keep capital and operating costs to a minimum.

Partnership projects typically provide the following qualitative benefits:

- **Competition and innovation:** The competitive nature of the bidding process encourages the private partner teams to develop innovative solutions in all aspects of the project from design, construction and through to operations.
- **Schedule and cost certainty:** The private partner is only paid once the facilities are available for use, thereby providing a financial incentive to complete the project on time and on budget.
- **Integration:** Because the private partner is responsible and accountable for the design, construction, long-term maintenance and rehabilitation of the facilities, there are opportunities and incentives to integrate these functions in order to optimize performance of the facilities over the duration of the project agreement.
- **Life cycle maintenance:** The private partner is responsible and accountable for ensuring the facilities are maintained and rehabilitated over the duration of the project agreement, with financial penalties for non-compliance.

