

1 **1.0 INTRODUCTION**

2 The British Columbia Transmission Corporation (BCTC) is proposing to construct a new  
3 255 km 500 kilovolt (kV) transmission line between the Nicola Substation (NIC) near  
4 Merritt, British Columbia (BC) and the Meridian Substation (MDN) in Coquitlam, BC  
5 (Figure 1-1). The Project would also consist of 500 kV circuit terminations and related  
6 equipment at NIC and MDN within the existing substation boundaries and a new 500 kV  
7 series capacitor station located at Ruby Creek in the Fraser Valley. This environmental  
8 assessment report has been prepared as an application for an Environmental Assessment  
9 Certificate (EAC) under the *British Columbia Environmental Assessment Act* (BCEAA),  
10 for the Interior to Lower Mainland (ILM) Transmission Project (ILM Project). For the  
11 purposes of the environmental assessment process, this report is referred to as the “EAC  
12 Application.”

13 **1.1 Proponent Identification**

14 BCTC is a provincial Crown corporation that was formed in May 2003 and began  
15 operations on August 1, 2003. BCTC’s head office is located at 1055 Dunsmuir Street in  
16 Vancouver.

17 Under the *Transmission Corporation Act* and a number of designated agreements  
18 between BCTC and BC Hydro, BCTC has the responsibility to manage, maintain and  
19 operate BC Hydro’s transmission assets. BCTC is also responsible for directing new  
20 investment in transmission infrastructure upon approval of the British Columbia Utilities  
21 Commission (BCUC). This responsibility includes planning, constructing and obtaining  
22 all regulatory approvals for enhancements, reinforcements and sustaining growth  
23 investments of BC Hydro’s transmission assets, and for entering into commitments and  
24 incurring expenditures for capital investments on the transmission system. BC Hydro  
25 continues to own the core transmission assets and is required to make capital  
26 expenditures to support these investments.

27 **1.1.1 Proponent Contact Information**

28 Communications with respect to this EAC Application should be addressed to:

29 Proponent - British Columbia Transmission Corporation (BCTC)

30 Name: Melissa Holland, Senior Project Manager, Major Projects  
31 Role: ILM Project, Program Manager  
32 Address: British Columbia Transmission Corporation (BCTC)  
33 11th Floor – 1055 Dunsmuir Street, Vancouver, B.C. V7X 1V5  
34 Phone: (604) 699-7323 Fax: (604) 699-7321  
35 e-mail: [melissa.holland@bctc.com](mailto:melissa.holland@bctc.com)

1            Agent (on behalf of BCTC) - Golder Associates

2    Name:     Don Gamble, MCIP, R.P.Bio  
3    Role:     ILM Project, Project Manager  
4    Address:  Golder Associates  
5             #500 – 4260 Still Creek Drive  
6             Burnaby, B.C. V5C 6C6  
7    Phone:   (604) 296-2878      Fax:        (604) 298-5253  
8    e-mail:   dgamble@golder.com

9    **1.1.2 Technical Capacity**

10   The transmission system managed by BCTC comprises an interconnected system of over  
11   18,000 kilometres (km) of transmission lines. These lines include 5,700 km of 500 kV  
12   transmission circuits, more than 12,100 km of 69 kV to 360 kV Alternating Current (AC)  
13   transmission circuits, and 125 km of 280 kV Direct Current (DC) transmission circuits.  
14   The system also includes 196 circuit km of submarine cable and 142 circuit km of  
15   underground cable at all system transmission voltages. As a result, BCTC operates,  
16   manages and maintains one of the largest high-voltage overhead, underground and  
17   submarine cable systems in North America.

18   BC Hydro has been directly responsible for planning, design and construction of  
19   generation, transmission and distribution facilities since 1962. With the formation of  
20   BCTC in 2003, employee transfers from BC Hydro’s Transmission Line of Business to  
21   BCTC ensured the continued technical expertise of the transmission business. In  
22   addition, the knowledge, experience and expertise of BC Hydro’s Engineering Services  
23   unit are available to BCTC under the terms of Support Services Agreements between  
24   BCTC and BC Hydro. BCTC has retained the services of specialized consultants to  
25   advise on various aspects of the Project, as required. A description of the services being  
26   provided to BCTC for the ILM Project is provided below.

27            Engineering Services and Operations

28   BCTC has retained BC Hydro Engineering Services to provide engineering support for  
29   the ILM Project. BC Hydro has been designing and constructing high voltage overhead,  
30   underground and submarine cable transmission systems since 1947 (through the original  
31   companies that were joined to form BC Hydro) and has pioneered several overhead and  
32   high voltage cable system developments.

1 BC Hydro transmission design engineers provide a complete range of engineering  
2 services for the development, design, installation and integration of high voltage  
3 transmission systems. These consist of overhead, underground and submarine electrical  
4 transmission systems, and include such specialized areas as:

- 5 • Building transmission lines in mountainous terrain;
- 6 • Constructing long water-crossing spans;
- 7 • Constructing infrastructure to withstand extreme snow and ice conditions;
- 8 • Avalanche protection;
- 9 • Lightning protection;
- 10 • Seismic loading;
- 11 • Designs for helicopter-assisted construction;
- 12 • Spatial data relevant to transmission systems; and,
- 13 • The upgrading of existing systems.

14 BC Hydro's transmission engineers have experience in every step of the design and  
15 construction process, including feasibility and cost studies, selection and development of  
16 technically and environmentally acceptable routes, design, equipment procurement,  
17 quality control, construction and project management.

#### 18 Properties and Aboriginal Issues

19 Under the Master Agreement between BCTC and BC Hydro, BC Hydro retains primary  
20 responsibility for properties and property rights and Aboriginal relations with respect to  
21 transmission system assets and operations, as well as new capital projects.

22 BC Hydro specialists in property matters and aboriginal relations work closely with  
23 BCTC and the ILM Project Team in planning and carrying through project activities  
24 including Aboriginal consultation, management of existing property rights, and the  
25 acquisition of any additional property rights required by the Project.

#### 26 Environmental Services

27 Golder Associates Ltd. (Golder) is serving as BCTC's environmental consultant for the  
28 environmental assessment of the ILM Project.

29 Golder is an international group of consulting companies, specializing in environmental  
30 services and ground engineering. Founded in Canada in 1960, Golder now employs over  
31 5,000 individuals in offices throughout North America, Europe, Australia/New Zealand,  
32 South America, Africa, and Asia. Employee-owned since its formation, Golder has  
33 created a unique culture with pride in ownership, resulting in long-term organizational  
34 stability. From a single office in Vancouver in 1963, Golder's BC operations have grown  
35 steadily. The firm currently has a provincial network of 12 offices, staffed by over  
36 500 people.

1 Golder is experienced in conducting rigorous and transparent multi-disciplinary  
2 environmental assessments that are necessary to satisfy regulatory, public, and First  
3 Nations scrutiny and to facilitate harmonized reviews under BCEAA and the *Canadian*  
4 *Environmental Assessment Act* (CEAA).

5 Golder coordinated the preparation of the environmental assessments undertaken in each  
6 of the Canadian and U.S. jurisdictions on behalf of BCTC for the Vancouver Island  
7 Transmission Reinforcement (VITR) Project, which received an EAC under BCEAA and  
8 a federal Screening Report under CEAA. Golder has also recently been involved in the  
9 preparation of EAC applications under BCEAA for several major projects including:

- 10 • Revelstoke Generating Station Unit 5 Project for BC Hydro;
- 11 • Gateway Program highway infrastructure projects, including the Port Mann  
12 Highway 1 Project, the North Fraser Perimeter Road Project, and the South Fraser  
13 Perimeter Road Project;
- 14 • Waneta Hydroelectric Expansion Project for Columbia Power Corporation;
- 15 • Fishtrap Island Collector Well Project for the City of Prince George; and,
- 16 • Ashcroft Ranch Landfill Project for Metro Vancouver (formerly the Greater  
17 Vancouver Regional District [GVRD]).

18 As the lead environmental consultant throughout the Definition Phase of the ILM Project,  
19 Golder was responsible for conducting many of the discipline-specific biological,  
20 physical, socioeconomic and cultural technical assessments comprising the EAC  
21 Application. Golder will continue to provide technical support during the post-  
22 Application phase of the environmental assessment process to respond to agency, public,  
23 and First Nations comments on the EAC Application.

24 Golder is working with the following sub-consultants who bring specialized expertise  
25 required for the full complement of discipline-specific technical studies required for the  
26 EAC Application (Table 1-1):

1

**TABLE 1-1: Environmental Sub-Consultants**

	<b>Sub-Consultant</b>	<b>Discipline</b>
1	Keystone Wildlife Research Ltd.	Wildlife and Vegetation
2	Urban Systems Ltd.	Urban Land Use
3	JCH Forestry Ltd.	Forestry Land Use
4	DVT Solutions Inc.	Electric and Magnetic Field (EMF) effects and Radio Interference (RI)
5	Grover, Elliott and Company Ltd.	Property Value Assessment
6	Commonwealth Historic Resource Management Ltd.	Historic component of the Heritage Resources Overview Assessment (HROA) and Archaeological Impact Assessment (AIA)
7	Alberta Palaeo-Resources Ltd.	Palaeontology component of the HROA and AIA.

2

***Keystone Wildlife Research Ltd.***

3

Keystone Wildlife Research Ltd. (KWR) provides biological and resource management consulting services to clients in the public and private sectors throughout BC. KWR's staff have worked throughout BC conducting field surveys in accordance with the appropriate Provincial Resources Information Standards Committee (RISC) guidelines.

7

KWR has recent and ongoing experience in providing wildlife impact assessments for projects subject to the BCEAA/CEAA environmental assessment review processes. These projects include hydroelectric developments such as the East Toba, Montrose and Rainy River Power Projects for Plutonic Power Inc., and open pit mines such as the Wolverine, Brule and Dillon Coal Mines for Western Canadian Coal Ltd.

12

KWR was responsible for conducting the terrestrial wildlife and vegetation assessments required for the EAC Application.

14

***Urban Systems Ltd.***

15

Urban Systems Ltd. is a multidisciplinary consulting firm founded in 1975, with offices in Richmond, Kamloops, Kelowna, Fort St. John, Nelson, Calgary, and Edmonton, and a complement of over 200 staff. With more than 15 community planners on staff, Urban Systems offers more planners than any other consulting firm in BC.

19

Urban Systems has been involved in several projects that have been subject to the provincial environmental assessment process, most recently assisting Metro Vancouver with the Ashcroft Ranch Landfill Project. Urban Systems also recently completed a Land

1 Inventory Plan for the Fraser Valley Regional District (FVRD) and led a  
2 multidisciplinary team providing land use planning expertise to the Ministry of  
3 Transportation (MoT) for the future development of the Cottonwoods lands in the District  
4 of Maple Ridge.

5 Urban Systems was responsible for conducting the urban land use assessment component  
6 of the EAC Application for the ILM Project.

7 ***JCH Forestry Inc.***

8 The main corporate focus of JCH Forestry Ltd. is providing cost-effective, turnkey,  
9 forestry and engineering services for small coastal licensees. JCH Forestry's  
10 responsibilities typically range from short-term project management to long-term harvest  
11 planning to full phase license management.

12 JCH Forestry also provides project-oriented services for larger licensees who choose to  
13 maintain overall management responsibility and delegate specific projects to JCH on an  
14 as-needed basis. Typically these projects involve road and block layouts, cutting permits,  
15 road permits, and site preparation.

16 Over the past few years JCH Forestry has been actively involved in the planning and  
17 design of forest access roads for several micro-hydro projects, including Miller Creek  
18 (Pemberton), Bear Creek (Sechelt), and the Mamquam River (Squamish). JCH Forestry  
19 has also been working with the Vancouver Olympic Organizing Committee to complete  
20 the survey and design of over 25 km of cross-country ski trails for the 2010 Olympic  
21 venues located in the Callaghan Valley.

22 JCH Forestry was responsible for conducting the forestry land use assessment component  
23 of the EAC Application for the ILM Project.

24 ***DVT Solutions Inc.***

25 DVT Solutions Inc. provides value-added solutions for Electric and Magnetic Fields  
26 (EMF), Radio Interference (RI), Electromagnetic Interference (EMI), electromagnetic  
27 compatibility, electrostatic discharge, antenna, power, distribution, shielding, grounding,  
28 lightning, electromagnetic pulse, and software challenges at all stages of product  
29 development. DVT Solutions' team brings 75 years of collective expertise on  
30 electromagnetic, power, and software-related projects.

31 DVT Solutions was responsible for conducting the EMF assessment and RI assessment  
32 components of the EAC Application for the ILM Project.

1                   ***Grover, Elliott and Company Ltd.***

2 Grover, Elliot & Company Ltd. (GECL) is an established real estate appraisal firm  
3 located in Vancouver, BC. The firm employs eight real estate appraisers who have  
4 extensive experience in all types of property valuation, new property analysis, consulting  
5 and forensic appraisal. Litigation and tribunal support also forms a large component of  
6 GECL's appraisal practice.

7 GECL has been continuously and exclusively involved with the professional practice of  
8 real estate appraisal, valuation and consulting since 1969. Assignments have included  
9 virtually every class of real estate property found in the metropolitan Vancouver area.  
10 GECL provided property value impact evidence for BCTC as part of the VITR Project  
11 proceeding.

12 GECL was responsible for conducting the property value assessment component of the  
13 EAC Application for the ILM Project.

14                   ***Commonwealth Historic Resource Management Ltd.***

15 Commonwealth Historic Resource Management Ltd. (CHRM) is an integrated planning,  
16 communication, design and management team offering solutions with a focus on  
17 heritage, nature and cultural tourism. CHRM offers a full spectrum of heritage services  
18 including planning and research, conservation design for historic buildings, landscape  
19 architecture, creative communication, and project management that provide the  
20 continuity that enables a vision to be carried through to a final product.

21 CHRM recently completed a Historical Land Use Study on the human history of  
22 Rosedale Flats for the City of Edmonton and is currently working with BC Hydro Power  
23 Pioneers to document the story of the people who worked on, or were affected by, the  
24 hydroelectric developments on the Peace and Columbia Rivers.

25 CHRM was responsible for conducting the Historic component of the Heritage Resources  
26 Overview Assessment (HROA) and Archaeological Impact Assessment (AIA) for the  
27 ILM Project.

28                   ***Alberta Palaeo-Resources Ltd.***

29 Alberta Palaeo-Resources Ltd. has over 60 years of combined palaeontological  
30 experience, with extensive background knowledge of the palaeontological resources and  
31 geological history of Western Canada. Experience includes the preparation, assessment,  
32 monitoring, and reporting of palaeontological resources throughout western Canada.  
33 Alberta Palaeo-Resources Ltd. provides a complete palaeontological evaluation service to  
34 complement Provincial regulations and to achieve compliance with the palaeontological  
35 portion of CEAA.

1 Alberta Palaeo-Resources Ltd. was responsible for conducting the Palaeontology  
2 component of the HROA and AIA for the ILM Project.

## 3 **1.2 Purpose and Organization**

### 4 **1.2.1 Purpose**

5 The purpose of this EAC Application is to identify and assess the potential environmental  
6 effects that may result from the proposed ILM Project, and to outline mitigation measures  
7 to avoid, minimize or otherwise manage those effects.

8 On December 18, 2006, the British Columbia Environmental Assessment Office  
9 (BCEAO) issued a Section 10 Order that designated the ILM Project as reviewable under  
10 BCEAA and required BCTC to obtain an EAC prior to the Project proceeding. The  
11 scope, procedures and methods for the EAC Application were specified in the Section 11  
12 Procedural Order issued by the BCEAO on May 31, 2007. The Section 11 Order  
13 required BCTC to prepare Terms of Reference (TOR) that identified the issues to be  
14 addressed and the information to be provided in the EAC Application. The TOR were  
15 supported by 18 detailed discipline-specific work plans that provided details on methods  
16 for how the studies identified in the TOR would be undertaken and completed.

### 17 **1.2.2 Terms of Reference**

18 Draft TOR and discipline-specific workplans were submitted to the BCEAO on February  
19 12, 2007 and circulated for review by First Nations and agency representatives at the first  
20 Project Technical Working Group (TWG) meeting held on February 21, 2007 (See  
21 Section 1.2.3). Following receipt of comments from the TWG, a revised version of the  
22 draft TOR was submitted to the EAO on May 31, 2007. This draft version of the TOR  
23 underwent a 30-day public comment period from June 1, 2007 to July 1, 2007.  
24 Following receipt of comments from the public during the review period, another revised  
25 version of the draft TOR was submitted to the BCEAO on September 17, 2007 and was  
26 circulated to the TWG at its second meeting on September 20, 2007 for further review  
27 and comment.

28 All written comments on the draft TOR for the EAC Application were formally recorded  
29 in tabular “Issues Tracking” documents; the tracking documents contained the comments  
30 provided by regulatory agencies, First Nations and the public, and BCTC’s responses.  
31 Amendments to the TOR were incorporated, where applicable, in the final draft version  
32 of the TOR which was submitted to the BCEAO. BCTC provided rationalization for  
33 where comments provided by the various stakeholders did not result in changes to the  
34 TOR. Comments on discipline-specific workplans received from the TWG were tracked  
35 similarly to those for the TOR, although amendments were made internally and  
36 subsequent revisions were not circulated to the TWG.

1 The TOR were formally approved by the BCEAO on May 23<sup>rd</sup>, 2008 and form the basis  
2 for the information requirements to be included in the EAC Application. The final TOR  
3 and TOR issues tracking documents are available on the BCEAO’s website  
4 (www.eao.gov.bc.ca).

5 **1.2.3 Technical Working Group**

6 A multi-stakeholder TWG was organized in February 2007 by the BCEAO to provide  
7 advice on issues related to the assessment of the Project. Meetings of the TWG provide  
8 group members with an opportunity to ask questions and to discuss potential issues  
9 associated with the Project with the proponent and with the BCEAO. The TWG is  
10 comprised of representatives from the following organizations<sup>1</sup>:

11 **TABLE 1-2: Composition of the ILM Project Technical Working Group**

Federal Agencies	
Canadian Environmental Assessment Agency	Indian and Northern Affairs Canada
Environment Canada	Industry Canada
Fisheries and Oceans Canada	Transport Canada
Health Canada	Agricultural Land Commission
Provincial Agencies	
Environmental Assessment Office	Ministry of Environment
Integrated Land Management Bureau	Ministry of Forests and Range
Ministry of Agriculture and Lands	Ministry of Tourism, Sport and the Arts
Ministry of Community Services	Ministry of Transportation
Ministry of Energy, Mines and Petroleum Resources	
First Nations	
Aitchelitz First Nation	Okanagan Nation Alliance
Ashcroft Indian Band	Oregon Jack Creek Indian Band
Boothroyd Indian Band	Osoyoos Indian Band
Boston Bar First Nation	Penelakut Tribe
Chawathil First Nation	Penticton Indian Band
Central Coast Consulting	Peters Band
Cheam First Nation	Popkum First Nation

<sup>1</sup> Please note that all members of the TWG do not actively participate in scheduled TWG meetings.

	<b>First Nations</b>	
12		
20	Chehalis Indian Band	Qayqayt First Nation
21	Chemainus First Nation	Scowlitz First Nation
22	Coldwater Indian Band	Seabird Island Band
23	Cook's Ferry Indian Band	Shackan Indian Band
24	Cowichan Tribes	Shxwha:y Village
25	Esh-kn-em Company	Shxw'owhamel First Nation
26	Halalt First Nation	Siska Indian Band
27	Hul'qumi'num Treaty Group	Skawahlook First Nation
28	Hwlitsum First Nation	Skowkale First Nation
29	Kanaka Bar Indian Band	Skuppah Indian Band
30	Katzie Indian Band	Skwah First Nation
31	Kwaw-kwaw-a-pilt First Nation	Soowahlie Indian Band
32	Kwantlen First Nation	Spuzzum First Nation
33	Kwikwetlem First Nation	Squamish First Nation
34	Lake Cowichan First Nation	Squiala First Nation
35	Leq'á:mel First Nation	Sto:lo Nation Society
36	Lower Nicola Indian Band	Sto:lo Tribal Council
37	Lower Similkameen Indian Band	Sumas First Nation
38	Lyackson First Nation	Tsawwassen First Nation
39	Lytton First Nation	Tsleil-Waututh Nation
40	Matsqui	Tzeachten First Nation
41	Musqueam Indian Band	Union Bar Indian Band
42	Naut'sa mawt Resources Group	Upper Nicola Indian Band
43	Naut'sa mawt Tribal Council	Upper Similkameen Indian Band
44	Nicola Tribal Association	Westbank First Nation
45	Nicomen Indian Band	Westland Resource Group
46	Nlaka'pamux Nation Tribal Council	Yakwekwioose First Nation
47	Nooaitch Indian Band	Yale First Nation
48	Okanagan Indian Band	

<b>Local Government Agencies</b>	
49	
50	Cascades Forest District
51	City of Coquitlam
52	City of Pitt Meadows
53	District of Kent
54	District of Maple Ridge
55	District of Mission
	Fraser Health Authority
	Fraser Valley Regional District
	Interior Health Authority
	Metro Vancouver
	Thompson-Nicola Regional District
	Village of Harrison Hot Springs

1 The first meeting of the ILM Project TWG was held on February 21, 2007 to introduce  
 2 the Project. The draft TOR for the EAC Application and associated discipline-specific  
 3 workplans were presented to the TWG at the meeting.

4 The second TWG meeting was held on September 20, 2007 . At this meeting the  
 5 proponent presented:

- 6 • An updated version of the draft TOR;
- 7 • An overview of the issues tracking documents;
- 8 • An update on technical studies being undertaken;
- 9 • An overview of the Project corridor including areas where Right-of-Way (ROW)  
 10 widening and new ROW may be required; and,
- 11 • A description of clearing requirements within and adjacent to the ROWs.

12 **1.2.4 Organization**

13 The structure of this EAC Application follows the format and structure of the approved  
 14 May 23<sup>rd</sup>, 2008 TOR for the Project. Following the layout of the TOR facilitates review  
 15 of the document and reflects the process by which the environmental assessment has been  
 16 conducted. Although a formal environmental review under CEAA is not required for the  
 17 Project, Cumulative Environmental Effects, Effects of the Environment on the Project,  
 18 Project Purpose, Review of Alternatives and Accidents and Malfunctions assessments  
 19 required for a review under the Act have also been included (Section 1.5.1).

20 This EAC Application has been prepared on behalf of BCTC by Golder in association  
 21 with BCTC, BC Hydro Engineering Services, BC Hydro Aboriginal Relations and  
 22 Negotiations (AR&N), KWS, Urban Systems, JCH Forestry, DVT Solutions, GECL and  
 23 CHRM.

1 The contents of the EAC Application are as follows:

2 • **Section 1: Introduction** – Provides general background information on BCTC,  
3 the Project and its purpose, the applicable regulatory regimes, and the purpose and  
4 organization of the EAC Application.

5 • **Section 2: Information Distribution and Consultation** – Summarizes BCTC’s  
6 past and proposed notification, information distribution, and consultation  
7 activities with First Nations, the public, and regulatory agencies in relation to the  
8 Project.

9 • **Section 3: Review of Alternatives** – Provides a description of Project  
10 alternatives, including the process used to comparatively evaluate construction  
11 alternatives based on environmental, engineering and economic considerations.  
12 The assessment reflects the nature of the “alternatives to” and “alternative means  
13 of carrying out” the Project. It describes the technical and economic feasibility of  
14 the alternatives and why certain alternatives were eliminated from further  
15 consideration. This analysis rationalizes the preferred means of achieving the  
16 Project objectives.

17 • **Section 4: Project Description, Scope & Rationale** – Describes the facilities and  
18 the activities associated with the construction and operation of the Project  
19 including: Project components and operations, construction activities and  
20 schedule, and capital costs and labour force required to complete the Project.

21 • **Section 5 – Environmental Assessment Methods** – Identifies and describes the  
22 methods used to identify and assess the potential effects that may result from the  
23 Project and measures to avoid, reduce or otherwise mitigate or manage those  
24 potential effects. Methods used to determine the scope and boundaries of the  
25 assessment for each of the technical disciplines are included.

26 • **Section 6 – Environmental Effects Assessment** – Provides an assessment of  
27 potential effects of the proposed Project for each of the identified technical  
28 disciplines. An overview of baseline conditions, an assessment of potential  
29 environmental effects of the Project, proposed mitigation measures to minimize or  
30 preclude adverse effects, and an assessment of residual effects (i.e. effects  
31 following implementation of mitigation measures), are provided, where  
32 applicable.

33 • **Section 7 – Environmental Effects of the Project** – Provides an assessment of  
34 the potential effects of the environment, including those from landslides,  
35 earthquakes, snow avalanches, climate, wildfires and flooding, on the Project

1 consistent with Section 2(1)(c) of CEAA which defines “environmental effects”,  
2 in part, as “any change to the Project that may be caused by the environment,  
3 whether any such change or effect occurs within or outside Canada.”

4 • **Section 8 – Accidents and Malfunctions** – Provides an assessment of potential  
5 environmental effects of accidents and malfunctions following implementation of  
6 mitigation measures (i.e., post-mitigation), that may occur in connection with the  
7 Project.

8 • **Section 9 – Significance of Residual Effects** – Identifies and evaluates the  
9 significance of potential residual effects after mitigation measures have been  
10 applied to each of the geophysical, biological, archaeological, cultural, and socio-  
11 economic technical disciplines.

12 • **Section 10 – Cumulative Effects Assessment** – Provides an assessment of  
13 cumulative effects, consistent with Section 16(1)(a) of CEAA, which evaluates  
14 the potential for Project-related residual effects to combine and act cumulatively  
15 with similar effects from other past, present and likely projects or activities;

16 • **Section 11 – Environmental Management Program** – Provides a framework of  
17 an Environmental Management Program that reflects BCTC’s environmental  
18 policies, mitigation measures recommended in Chapter 6.0 of the Application,  
19 Best Management Practices (BMPs), and commitments made by the proponent.  
20 The Environmental Management Program includes a series of environmental  
21 protection documents that describe the practices and procedures to be applied  
22 during construction and operation of the Project.

23 • **Section 12 – Environmental Monitoring and Follow-up Programs** – Provides  
24 the framework for environmental monitoring and follow-up programs to be  
25 undertaken during and following construction. Environmental monitoring  
26 programs are outlined to evaluate the performance of the environmental  
27 mitigation and compensation (if required) strategies in achieving regulatory  
28 compliance, and in minimizing potential adverse effects.

29 • **Section 13 – Conclusions and Commitments** – Provides a summary of the  
30 conclusions of the environmental assessment, as well as a summary of  
31 commitments made to avoid, reduce or otherwise mitigate potential effects of the  
32 Project through design features, BMPs, and other mitigation measures.

33 • **Section 14 – List of References and Supporting Documentation** – Provides a  
34 list of references and personal communications cited in the EAC Application.

35 The EAC Application also includes a Table of Concordance which indicates where each  
36 of the information requirements specified in the approved TOR is found within the  
37 Application, as well as a Table of Commitments and Assurances which outlines measures

1 that would be undertaken by the proponent as conditions of receipt of an EAC for the  
2 Project. Appendices to the EAC Application include environmental and socio-economic  
3 technical reports (Appendices C through T) as well as consultation tracking logs  
4 (Appendices A and B).

### 5 **1.3 Project Overview**

#### 6 **1.3.1 Project Route**

7 The ILM Project consists of a new 500 kV Single Circuit Steel Tower (SCST)  
8 transmission line between NIC near Merritt, BC and MDN located in Coquitlam, BC.  
9 The Project is being proposed to ensure that BCTC is in a position to provide reliable  
10 transfer capability of the ILM grid by 2014. The new transmission line would parallel an  
11 existing 500 kV transmission line (5L82) for most of its approximately 255 km length.  
12 At the time the existing lines were constructed in the early 1970s, additional ROW was  
13 acquired, anticipating the addition of one or two future lines. Existing access roads  
14 would be used wherever possible; however some new access roads would be required.  
15 Logging and clearing would be required before construction.

16 The Project corridor has been divided into a number of segments between NIC and  
17 MDN, including route alignment options. The segments have been labelled A through V.  
18 The preferred alignment presented in the EAC Application is based on the results from  
19 environmental and engineering technical studies and input from First Nations  
20 (Figure 1-1). An analysis of the other route alignment options considered during the  
21 preferred alignment determination process is included in the review of alternatives in  
22 Section 3.0 of the EAC Application and in the discipline-specific technical reports  
23 appended to the application (Appendices C through T).

24 Statutory Right-of-Way (SRW) already exists for portions of the route, including 59 km  
25 between NIC and the headwaters of Uztlius Creek and 71 km between Hicks Creek and  
26 MDN. Based on the preferred alignment, several separate sections along the existing  
27 transmission corridor would require widening adjacent to the existing ROW to  
28 accommodate an additional line. The total length of the sections requiring widening is  
29 approximately 60 km. Widening adjacent to the existing ROW would be situated mainly  
30 on Crown land.

31 Based on the preferred alignment, there are several locations where the line would need  
32 to be located on new ROW not adjacent to the existing corridor (i.e., the new line would  
33 depart the existing ROW and then return). The length of new ROW not adjacent to the  
34 existing corridor is approximately 74 km, mainly situated in the Fraser Canyon between  
35 the headwaters of Uztlius Creek and Emory Creek (Nodes C1-N). New ROW would be  
36 situated mainly on Crown land.

1 No Project components are expected to be located on First Nations Reserve land. 1.3 km  
2 of new ROW would be required on three private parcels (see Section 4.2.4). Some ROW  
3 widening would also be required on private parcels to locate individual towers and  
4 achieve adequate conductor spacing from the existing line(s). Construction would also  
5 occur on private parcels where BC Hydro possesses existing SRW agreements. Use of  
6 roads located on private lands would likely be required to access individual tower sites  
7 during construction of the Project. No use of roads on First Nations Reserve land would  
8 be required during construction and maintenance of the Project.

### 9 **1.3.2 Project Components**

10 The ILM Project scope, as defined by the Section 10 and 11 Orders issued by the EAO  
11 (Section 1.2.1), consists of the following specific components:

- 12 1. Approximately 255 km of new single circuit 500 kV transmission line between  
13 NIC and MDN following an existing SRW for most of the corridor. However,  
14 ROW widening would be necessary in some areas and new ROW would be  
15 required through sections of the Fraser Canyon;
- 16 2. A 500 kV single circuit termination at NIC, including a line termination structure,  
17 circuit breakers, and associated equipment within the existing substation property  
18 boundaries;
- 19 3. A 500 kV single circuit termination at MDN, including a line termination  
20 structure, circuit breakers, and associated equipment within the existing substation  
21 property boundaries; and,
- 22 4. A 500 kV series capacitor station located at Ruby Creek near Node O in the  
23 Fraser Valley to assist in maintaining the voltage of the new line within  
24 acceptable limits.

25 The Project would also require:

- 26 1. Upgrades to existing access roads and construction of new access roads;
- 27 2. Laydown and material storage areas; and,
- 28 3. Ongoing operational phase ROW and infrastructure maintenance.

29 The capital cost of the Project is estimated at \$602 million, while operation/maintenance  
30 costs are estimated at \$316,000 per year. The labour force required for construction of  
31 the Project is estimated at 543 person/years. During the operational phase of the Project,  
32 280-420 person/hours would be required annually, mainly for vegetation and line  
33 maintenance activities.

1 A detailed description of Project components, construction activities, operations,  
2 scheduling and costs is included in Section 4.0 of this Application.

3 Due to the long-term nature of the operational phase of the Project, of 50 years or greater,  
4 this Application does not include a detailed evaluation of potential effects associated with  
5 the dismantling or decommissioning phase of the Project. However, it is anticipated that  
6 a separate environmental assessment would be required prior to the eventual dismantling  
7 and decommissioning of any part of the Project to evaluate potential effects based on  
8 resource values, public interests, site characteristics, and legislative requirements at that  
9 time. Prior to the end of the life of the Project, a Decommissioning Management Plan  
10 would be completed prior to any de-construction and removal works being undertaken.  
11 The Decommissioning Management Plan would be prepared in accordance with all  
12 applicable regulations and guidelines at that time.

## 13 **1.4 Project Purpose**

### 14 **1.4.1 Limits of the Existing ILM Transmission Grid**

15 The ILM grid, shown in Figure 1-2, is the most critical transmission path in BC. The  
16 ILM grid transmits electricity from the Interior, where the majority of generation is  
17 located, to the Lower Mainland and Vancouver Island, which together comprise  
18 approximately 70% of provincial demand. The ILM grid is also a key transmission path  
19 for both firm and non-firm trading activity.

20 The existing ILM transmission network transfer capability is limited during winter peak  
21 power transfer. The ILM network has a total transfer capacity of 5,800 Megawatts (MW)  
22 and a thermal limit of 6,300 MW. During peak load hours in 2006/2007, the sum of (1)  
23 Lower Mainland and Vancouver Island loads, (2) firm transmission commitments on  
24 circuits connecting the BC system to the US, and (3) transmission losses from the ILM  
25 system, is projected to reach approximately 7600 MW and continue to grow after that.  
26 Until additional capacity is added to the ILM transmission system, the difference between  
27 the demand and the existing ILM capacity, 1300 to 1800 MW, must be met by local  
28 generation in the Lower Mainland or on Vancouver Island, or by imports from the US.  
29 Any retirements of existing coastal generating facilities, such as Burrard Generating  
30 Station, would exacerbate this short fall.

31 Since 2004, BCTC has performed numerous studies to examine the need and timing of  
32 increased transfer capability on the ILM grid. Based on BC Hydro's 2006 Amended  
33 Long-Term Acquisition Plan (LTAP) Portfolios, there will be a dependable capacity  
34 shortfall of approximately 850 MW to serve the Lower Mainland and Vancouver Island  
35 by the winter of 2015. In addition, the majority of other resource portfolios studied over  
36 the past four years have indicated the need to increase the transfer capability of the ILM  
37 grid at its earliest in-service date. In total, 43 portfolios were examined.

1 Without an increase in transfer capability, the existing ILM grid will not be adequate for  
2 the reliable transfer of Interior generation resources to serve load in the Lower Mainland  
3 and on Vancouver Island. By 2014, the system will not meet appropriate planning  
4 standards for most of the portfolios considered. Failure to increase the transfer capability  
5 of the ILM grid when required will increase the unreliability of the system and increase  
6 the risk of cascading outages and blackouts. As a result of the growing demand for  
7 electricity, firm export commitments, and the need for a reliable and efficient  
8 transmission system, BCTC needs to plan the transmission system to meet those  
9 load/resource scenarios that require additional ILM transfer capability as early as 2014.

#### 10 **1.4.2 Project Benefits**

11 The following are potential benefits of the ILM Project:

- 12 • The Project would ensure a continued safe and reliable source of electricity for  
13 BC's growing communities in the Lower Mainland and on Vancouver Island;
- 14 • The Project would reduce the risk of future disruptions and outages on the system  
15 province-wide;
- 16 • The Project would increase the transfer capability of clean, renewable energy  
17 from large hydroelectric facilities on the Columbia and Peace Rivers to the Lower  
18 Mainland. The Project would provide additional capacity to account for upgrades  
19 and expansions at the Mica and Revelstoke Dam generating stations and reduce  
20 stranding of generation resources that cannot be dispatched from the Interior;
- 21 • The Project would reduce reliance on less environmentally-friendly, costly and  
22 reliable sources of energy such as the Burrard Generating Station;
- 23 • The Project would provide employment opportunities during construction and for  
24 ongoing operations; and,
- 25 • Absent of other constraints, the Project would provide an increase in trade  
26 benefits, since it would allow an increase in exporting when prices are high.

#### 27 **1.5 Regulatory Framework**

28 The following section provides:

- 29 • A summary of applicable regulatory approvals required for the Project;

- 1 • Provincial permits and approvals that are being submitted for concurrent review  
2 under Section 23 of BCEAA, and in accordance with the *Concurrent Approval*  
3 *Regulation* (BC Reg. 271/2002);
- 4 • Permits, approvals and authorizations that were obtained during completion of  
5 technical studies in support of the EAC Application; and,
- 6 • Statutory licenses, permits and other authorizations required for Project  
7 construction and operation.

8 The ILM Project is subject to regulatory review and approvals under BCEAA, but does  
9 not require formal environmental review under CEAA. A discussion of CEAA and  
10 BCEAA triggers for the Project is included in Sections 1.5.1 and 1.5.2, respectively.

11 *Under the Canada – British Columbia Agreement on Environmental Assessment*  
12 *Cooperation* (2004), projects that are subject to review under both federal and provincial  
13 environmental assessment legislation would undergo a single, harmonized assessment,  
14 meeting the legal requirements of both governments while maintaining their respective  
15 existing roles and responsibilities. However, since the ILM Project only triggers an  
16 environmental review under BCEAA, it will only follow the provincial process. Federal  
17 agencies will have an opportunity to review and comment on the EAC Application as  
18 members of the TWG for the Project.

### 19 **1.5.1 Federal Regulatory Framework**

#### 20 Canadian Environmental Assessment Act (CEAA)

21 CEAA is the legal basis for the federal environmental assessment process. CEAA is  
22 administered by the Canadian Environmental Assessment Agency (CEA Agency), an  
23 independent federal body accountable to Parliament through the federal Minister of  
24 Environment. The CEA Agency is responsible for providing support and coordination  
25 with other federal, provincial, and local government regulatory agencies, First Nations,  
26 industry, and public stakeholders. Although the CEA Agency does not administer or  
27 authorize any federal permits, approvals, or authorizations for proposed projects or  
28 activities, it does provide a coordination role with other federal departments and  
29 regulatory review processes, such as the BCEAA process. It also provides administrative  
30 and advisory support for review panels, mediations, and Comprehensive Studies, and  
31 promotes the development of class screenings.

32 Proposed projects and activities are subject to an environmental assessment and  
33 regulatory review under CEAA whenever a federal authority has a specified decision-  
34 making responsibility in relation to a project, known as a “trigger”. Specifically, CEAA  
35 is “triggered” whenever one or more of the following conditions apply:

- 1       • A federal authority provides a license, permit, approval or authorization that is  
2       identified in the *Law List Regulations* that enables a project to be carried out.  
3       Examples of federal approvals include, but are not limited to, a Habitat  
4       Authorization Agreement under the *Fisheries Act* and an Approval under the  
5       *Navigable Waters Protection Act*;
- 6       • The federal government provides financial assistance to a proponent to enable a  
7       project to be carried out;
- 8       • A federal authority sells, leases, or otherwise transfers control or administration of  
9       federal land to enable a project to be carried out; or,
- 10      • A federal authority is the proponent.

11 It is anticipated that the proposed ILM Project would require formal approvals from  
12 Transport Canada under Section 5(1) of the *Navigable Waters Protection Act* for  
13 construction of access road bridge crossings over several watercourses along the Project  
14 corridor. However, these approvals are not expected to trigger an environmental  
15 assessment under CEAA since all bridge crossings are expected to meet the following  
16 requirements for exemption specified in Section 50 of the *Exclusion List Regulations*,  
17 2007 (SOR/2007-108):

18       *“The proposed construction, installation, operation, expansion, modification,*  
19       *decommissioning, removal or abandonment of a single-span bridge and any*  
20       *supporting structures if the project*

21       *a) results in a bridge that is no more than 30 m long and 20 m wide;*

22       *b) does not involve the installation of any supporting structures in a water*  
23       *body;*

24       *c) is not to be carried out in a water body; and,*

25       *d) does not involve the likely release of a polluting substance into a water*  
26       *body.”*

27 A radio license would be required from Industry Canada under Section 5(1)(a)(i) of the  
28 *Radiocommunication Act* for communication equipment required at Ruby Creek  
29 Capacitor Station (RYC). However, the proposed facility is expected to meet the  
30 following requirements for exemption from a CEAA environmental review under Section  
31 20(1) of the *Exclusion List Regulations*, 2007 (SOR/2007-108):

1       *“The proposed construction, installation, operation, expansion or*  
2       *modification of a radiocommunication antenna and its supporting structure*

3       a) *if*

4           (i) *the antenna and supporting structure are either affixed to a building*  
5           *or located entirely within 15 m of a building, or*

6           (ii) *the antenna, its supporting structure, or any of its supporting lines*  
7           *has a footprint of no more than 25 m<sup>2</sup>;*

8       b) *if the project is not to be carried out within 30 m of a water body; and*

9       c) *if the project does not involve the likely release of a polluting substance*  
10       *into a water body.”*

11       Work assessments are also expected to be required from Transport Canada for the  
12       installation of bridge and transmission line crossings over other navigable watercourses,  
13       and a DFO letter of advice is expected to be issued for the Project; however, these do not  
14       constitute formal approvals and are not specified in the *Law List Regulations* requiring  
15       environmental assessment under CEAA.

16       Accordingly, the ILM Project is not expected to trigger review under CEAA since the  
17       only formal approvals required for the Project would meet the requirements for  
18       exemption from environmental review specified in the *Exclusion List Regulations*. Other  
19       mechanisms by which a review under CEAA could have been triggered would apply if  
20       the Project were to occupy or to require access through federal land (such as First Nations  
21       reserves), and/or if BCTC were to be applying for financial support from the federal  
22       government for implementation of the ILM Project. These cases do not apply to the ILM  
23       Project.

#### 24       Navigable Waters Approvals and Work Assessments

25       Applications for formal approvals and work assessments from Transport Canada for  
26       bridge and transmission line crossings would be made following submission of the  
27       EAC Application, but prior to construction. Detailed designs for specific bridge and  
28       transmission line crossings are not currently available; however, conceptual bridge  
29       drawings are included in Appendix U.

30       Navigable watercourses requiring bridge crossings or upgrades are identified in Table  
31       6.5-1 in Section 6.5. No new or upgraded crossings structures are proposed for large  
32       watercourses along the Project corridor such as the Fraser River, Pitt River and Harrison  
33       River. All bridge crossings would be less than 30 m in length and 20 m in length and  
34       would be constructed to avoid any works occurring below the High Water Mark (HWM).  
35       All bridges would be constructed to maintain a minimum overhead clearance of 1.5 m.

1 Navigable watercourses requiring transmission line crossings are also identified in Table  
2 6.5-1 in Section 6.5. All transmission line crossings would be constructed at a height  
3 equal to or greater than the height of the existing transmission line crossings for circuits  
4 5L41, 5L81 and 5L82. Overhead clearance heights of approved transmission line  
5 crossings of navigable watercourses for the existing circuits are included in Table 6.5-2 in  
6 Section 6.5.

7 Mitigation measures, marking requirements and further detail regarding the potential  
8 effects of the Project on navigation are included in Section 6.5 of the Application.

9 DFO Letter of Advice

10 Based on meetings and site visits conducted with DFO, it was determined that a formal  
11 *Fisheries Act* authorization will not be required for the ILM Project. All instream work  
12 would be avoided; therefore, all direct effects to fisheries and aquatic habitat resulting  
13 from works associated with the ILM Project would not be significant. However, BCTC  
14 will obtain a letter of advice from DFO for clearspan bridges. For each site, BCTC will  
15 include descriptions of the work and designs proposed within the fisheries sensitive  
16 zones, photos of the site, and a description of the location of the proposed works. It is  
17 anticipated that DFO will issue a letter of advice, specific to the works, to ensure  
18 appropriate mitigation measures are considered and implemented (pers. comm., Suzanne  
19 Thorpe, Senior Habitat Biologist, DFO, 28 April 2008).

20 Further discussion of potential effects of the Project on Fisheries and Aquatic Habitat is  
21 included in Section 6.1 of the Application.

22 Industry Canada Radio License

23 The proposed RYC station would communicate via a broadband digital microwave  
24 system, requiring a radio frequency licence from Industry Canada in the 7 Gigahertz  
25 (GHz) and/or 11 GHz frequency bands. The total footprint of the proposed  
26 communication tower would be less than 25m<sup>2</sup>, it would be located more than 30 m from  
27 any waterbody, and it would be designed with proper containment and follow spill  
28 management procedures, as required. Application for the radio license will be made to  
29 Industry Canada following detailed design of the capacitor station, but prior to  
30 construction.

1 **1.5.2 Provincial Regulatory Framework**

2 British Columbia Environmental Assessment Act (BCEAA)

3 Environmental assessments for large capital projects in BC are governed by BCEAA.  
4 BCEAA requires that certain major projects in BC obtain an EAC before they can  
5 proceed. The ILM Project requires an EAC under the Act, since it meets the threshold  
6 for a transmission line project as defined by the *Reviewable Projects Regulation*.  
7 Specifically, the ILM Project is reviewable since it consists of “a new electric  
8 transmission line of  $\geq 40$  km in length on a new right of way.” Under the regulation,  
9 electric transmission lines are defined as “a transmission line of 500 kV or greater.”

10 BCEAA is administered by the BCEAO, an independent provincial agency that  
11 coordinates assessment of the effects of projects under BCEAA. The BCEAO is  
12 responsible for ensuring that project assessments:

- 13 • Are comprehensive and technically sound;
- 14 • Involve all potentially interested parties;
- 15 • Are conducted in an open, timely and efficient manner; and,
- 16 • Adhere to the legislation.

17 Environmental assessment time limits for an environmental review under BCEAA are  
18 imposed through the *Prescribed Time Limits Regulation* which determine the  
19 approximate length of an environmental review. BCEAA also provides a mechanism for  
20 concurrent application for provincially administered permits and approvals at the time of  
21 submitting the EAC Application (see below).

22 Certificate of Public Convenience and Necessity (CPCN)

23 The BCUC is the provincial regulatory agency responsible for ensuring customers  
24 receive safe, reliable and non-discriminatory energy services at fair rates from utilities  
25 falling under its jurisdiction. The Commission also has responsibilities under the *Utilities*  
26 *Commission Act* for electricity transmission facilities; BCTC is regulated under the  
27 *Utilities Commission Act*. As part of its mandate, the BCUC reviews the need and  
28 justification for a project, the alternatives, capital and operating costs, and a broad range  
29 of socio-economic and non-financial factors. Approval of facilities such as those  
30 proposed is achieved through issuance of a Certificate of Public Convenience and  
31 Necessity (CPCN) under subsection 45(1) of the *Utilities Commission Act*.

32 BCTC submitted a CPCN application to the BCUC on November 5, 2007. Following a  
33 written review process, a CPCN was issued for the Project on August 6, 2008. A copy of  
34 the application, as well as all correspondence regarding review of the Project by the  
35 BCUC, is available on the BCUC website at [www.bcuc.com](http://www.bcuc.com) and on BCTC’s website at  
36 [www.bctc.com](http://www.bctc.com).

1 An application for a CPCN cannot be submitted for concurrent approval under BCEAA.

2 Concurrent Permitting

3 The *Concurrent Approval Regulation* under BCEAA allows for the concurrent review of  
4 provincial permits and approvals at the time of filing the EAC Application. The  
5 regulation applies to all provincial permits, authorizations and approvals, with the  
6 exception of a CPCN, necessary to undertake works that are within the scope of the  
7 assessment under the Act. Under the *Concurrent Approval Regulation*, provincial  
8 ministries must issue a decision on any applications for permits, approvals or  
9 authorizations applied for concurrently with an EAC Application within 60 days of the  
10 date the EAC is issued for the project, as long as the proponent follows the required  
11 procedures for soliciting concurrent permitting.

12 Provincial Permits and Approvals

13 BCTC has identified the following permits and approvals that would be required prior to  
14 construction of the ILM Project (Table 1-3). Since detailed design and surveying has not  
15 been undertaken to date, applications for several permits cannot be submitted  
16 concurrently with the Application. Those that have been submitted for concurrent  
17 permitting are identified in Table 1-3 and described in further detail below. Where  
18 applications for permits and approvals are not being submitted concurrently, submissions  
19 will be made following completion of detailed design and/or surveying, but prior to  
20 construction.

1  
2

**TABLE 1-3: Summary of Provincial Permits and Approvals  
 Required for the ILM Project**

	<b>Enabling Legislation</b>	<b>Agency</b>	<b>Permits, Approval or Authorization</b>	<b>Concurrent Permitting</b>
1	<i>Heritage Conservation Act</i> (Section 12)	Ministry of Sustainable Resources Management (Archaeology Branch)	<i>Heritage Alteration Permit</i> to remove and/or relocate a cultural resource or artifact (should any be identified) <sup>2</sup>	N/A
2	<i>Forest Act</i> (Section 47.6)	Ministry of Forests and Range	<i>Licenses to Cut</i>	
3	<i>Forest Act</i> (Section 117)	Ministry of Forests and Range	<i>Road Use Permits</i> for use of forest service roads	
4	<i>Forest Act</i> (Section 115)	Ministry of Forests and Range	<i>Road Permit</i> for any new permanent roads required for the Project	
5	<i>Forest Act</i> (Section 85)	Ministry of Forests and Range	<i>Timber Marks</i> for transport and utilization of timber	
6	<i>Wildfire Act – Wildfire Regulation</i> (Section 24(1))	Ministry of Forests and Range	<i>Burning Registration Number</i> for wood waste burning	
7	<i>Water Act – Water Regulation</i> (Section 44(1))	Ministry of Environment	<i>Notification</i> for changes in about a stream where the change can be made in accordance with the regulation	
8	<i>Transportation Act</i>	Ministry of Transportation	<i>Highway Right-of-Way Use Permit</i> for structures and alignments within provincial highway rights-of-way	
9	<i>Transportation Act</i>	Ministry of Transportation	<i>Industrial Access Permit</i> for any new roads that join onto roads controlled by the Ministry of Transportation (if required)	
10	<i>Land Act</i>	Ministry of Agriculture and Lands	<i>Crown Land License of Occupation</i> required for construction and operation activities on Crown Land	✓

<sup>2</sup> No requirement for a Heritage Alteration Permit for the ILM Project has currently been identified. All archaeological sites presently identified along the Preferred Alignment (Section 6.15) can be avoided through appropriate design and tower placement. However, new sites may be identified during detailed design, surveying and other activities that may require application for a Heritage Alteration Permit if avoidance of these sites is not possible.

1                   **Crown Land License of Occupation**

2   A Crown Land License of Occupation application was submitted concurrently with this  
3   Application to the Integrated Land Management Bureau (ILMB) for new and expanded  
4   SRW and areas for temporary clearing required for the ILM Project. The total Crown  
5   Land application is for 1882.9 ha, of which 720.7 ha is SRW and 1162.2 ha is temporary  
6   clearing area. The application distance is for a total of 120.96 km, of which 72.4 km is  
7   new ROW and 48.6 km is ROW widening. Temporary clearing areas are based on a  
8   worst case scenario of 78 m from the alignment centerline.

9   Lengths and areas of new and expanded SRW required for the ILM Project are provided  
10  in Table 1-5 below. Crown and private land requirements for the ILM Project, including  
11  temporary clearing areas, required for the ILM Project are provided in Tables 4-5 and 4-6  
12  in Chapter 4.

13                   **1.5.3 Local Government Approvals**

14  Under the *Hydro and Power Authority Act*, BCTC is exempt from requirements  
15  established through municipal zoning and community plan by-laws. However, wherever  
16  possible, BCTC intends to comply with the intentions of local bylaws for noise, waste  
17  management and other local community jurisdictions.

18  A review of potential effects of the Project on local government and regional planning  
19  and zoning initiatives was undertaken as part of the urban land use assessment  
20  (Section 6.6).

21                   **1.5.4 Approvals Required during Preparation of the EAC Application**

22  The following approvals, permits and authorizations were obtained during completion of  
23  technical studies in support of the EAC Application (Table 1-4):

1 **TABLE 1-4: Permits, Approvals and Authorizations Required during Preparation**  
 2 **of the EAC Application for the ILM Project**

Permit, Approval or Authorization	Enabling Legislation	Permit Holder	Purpose	Location
1 Park Use Permit LM0710788	<i>Park Act</i>	Keystone Wildlife Research	Non-intrusive wildlife studies and surveys within Provincial Parks	Pinecone-Burke Provincial Park, Sasquatch Provincial Park and Golden Ears Provincial Park
2 Park Use Permit LM08116336	<i>Park Act</i>	Golder Associates	Archaeological Impact Assessment (AIA) work within Provincial Parks	Pinecone-Burke Provincial Park and Golden Ears Provincial Park
3 Heritage Inspection Permit 2008-034	<i>Heritage Conservation Act (HCA)</i>	Andrew Mason, Golder Associates	Archaeological Impact Assessment (AIA)	Along the entire Project corridor

3 In addition to *Heritage Conservation Act (HCA)* Permit 2008-34 and Park Use Permit  
 4 LM08116336, the AIA was conducted under Chehalis Indian Band Cultural Heritage  
 5 Investigations Permit 2008-004, Kwantlen Heritage Investigation Permit 3-43, Squamish  
 6 Nation Archaeological Investigation Permit 08-0108, Stó:lō Heritage Investigation  
 7 Permit 2008-03, and BC Ministry of Environment Park Use Permit LM08116336.  
 8 Golder applied for a Musqueam Indian Band Agreement to Conduct Archaeological  
 9 Research within Musqueam Traditional Lands and an Okanagan Indian Band Cultural  
 10 Heritage Investigation Permit, but these documents had not been issued at the time of  
 11 writing. Following a yet to be scheduled meeting with the Upper Nicola Band, Golder  
 12 intends to apply for an Upper Nicola Band Cultural Investigation Permit for the Project.

13 **1.5.5 Statutory Right-of-Way Requirements**

14 New or expanded SRW would be required for the Project in the following locations  
 15 (Table 1-5):

1 **TABLE 1-5: New Statutory Right-of-Way Requirements for the ILM Project**

	Segment	New SRW over Crown Land		SRW Widening over Crown Land	
		Length (km)	Area (ha)	Length (km)	Area (ha)
1	A – B	0.5	5.4	1.4	2.7
2	B – C	9.1	53.4	3.7	16.5
3	C – C1	0	0	2.2	14.9
4	C1 – C2	7.9	55.3	0	0
5	C2 – C3	3.5	17.7	0	0
6	C3 – D	6.1	35.7	0	0
7	D – E	4.6	25.6	0	0
8	E – F	1.9	10	0.9	4.4
9	F – F1	4.2	27.6	2.5	10.9
10	F1 – G1	4.7	49.7	0	0
11	G1-H	5.5	27.4	0	0
12	H – J1	5.4	36.9	0	0
13	J1 – L	13.7	92.2	0	0
14	L – N	5.3	33.6	0	0
15	N – O	0	0	7.4	36.3
16	O – O1	0	0	9.8	89.3
17	O1 – P	0	0	1.56	3.2
18	P – Q	0	0	13.3	52.6
19	Q – R	0	0	5.8	19.4
20	R – S	0	0	0	0
21	S – T	0	0	0	0
22	T – U	0	0	0	0
23	U – V	0	0	0	0
24	<b>TOTAL</b>	<b>72.4</b>	<b>470.5</b>	<b>48.56</b>	<b>250.2</b>

2