

Diane RoyDirector, Regulatory Services

Gas Regulatory Affairs Correspondence Email: gas.regulatory.affairs@fortisbc.com

FortisBC Energy Inc. 16705 Fraser Highway Surrey, B.C. V4N 0E8 Tel: (604) 576-7349 Cell: (604) 908-2790

Fax: (604) 576-7074 Email: diane.roy@fortisbc.com

www.fortisbc.com

November 12, 2014

Via Email Original via Mail

British Columbia Utilities Commission Sixth Floor 900 Howe Street Vancouver, B.C. V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

Re: FortisBC Energy Utilities (FEU)¹

Application for Removal of the Restriction on the Location of Data and Servers Providing Service to the FEU, currently Restricted to Canada

Response to the British Columbia Utilities Commission (BCUC or the Commission) Information Request (IR) No. 1

On August 1, 2014, the FEU filed the Application as referenced above. In accordance with Commission letter (Exhibit A-4 Log No. 48300) dated September 29, 2014, the FEU respectfully submit the attached response to BCUC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

on behalf of the FORTISBC ENERGY UTILITIES

Original signed by: Ilva Bevacqua

For: Diane Roy

Attachment

cc (e-mail only): Registered Parties

Comprised of FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc.



1	1.0	Reference:	Application to Remove Data Location Restriction
2			Exhibit B-1, pp. 1-3; Order G-116-05, Order G-75-06, Letter L-30-06, Order G-112-06
4			Current Restriction
5 6 7 8 9		Orders G-116 G-49-07) incl to [the FEU]	estriction on the location of the FEU's data and servers (as established by 6-05, clarified by Order G-75-06 and Letter L-30-06, and continued by Order ude the phrase "any proposal to locate data and servers providing services (including data and servers providing back-up services) outside Canada will ommission's approval." [Emphasis added]
10 11 12 13 14		process and compliance process and compliance process.	of Order G-112-06 states: "[t]he Application to maintain Terasen Utilities' control documentation required for OSC [Ontario Securities Commission] ourposes on KMI's [Kinder Morgan Inc.] licensed software and to allow Internal Audit staff to store electronic document files on a shared server II and located in Houston, Texas is approved."
15 16			e explain why the FEU request that the current restriction be removed when udes a regulatory mechanism for the FEU to apply to locate data and

Response:

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This response also addresses BCUC IRs 1.1.1.1.1, and 1.1.1.1.2.

servers outside of Canada.

- 21 As explained in the Application (Ex. B-1), the Commission imposed the data/servers location 22 restriction, as part of the Kinder Morgan acquisition under section 54 of the UCA, mainly to 23 address "privacy concerns and other concerns" such as foreign ownership. As explained in the 24 Application (on pages 3 to 5), the concerns underlying the restrictive condition have been 25 addressed by other legislative requirements, changed circumstances, or the advancement in 26 technology. For instance, the privacy environment has evolved, ownership of the FEU has 27 returned to Canada, and the technological environment has advanced significantly in respect of 28 information systems and solutions which were not contemplated in 2005.
- The "regulatory mechanism" contemplates a process for the FEU to depart from the restriction imposed under section 54 of the UCA. This process has allowed the FEU to request and achieve specific exceptions to the restriction in the past. However, the changes and enhancements discussed in the Application and summarized above make the process to apply for an exception each time unnecessary and impractical. Furthermore, making an application each time a change is required has the following disadvantages:



- 1 First, it does not allow the FEU to manage information systems, platforms and solutions
- 2 efficiently and more cost-effectively. For instance, the FEU may not be able to efficiently
- 3 consider how the FEU need to consider information systems and software on a broad basis for
- 4 all the FortisBC companies. This can be particularly problematic for systems that can be
- 5 implemented across the environment or platform for all FortisBC companies, such as third-party
- 6 hosted software solutions.
- 7 Second, it results in limiting or excluding consideration of certain vendors or solutions solely on
- 8 the basis of this restriction on the FEU, and, therefore, may impede or prevent the FortisBC
- 9 utilities from being able to consider and take advantage of benefits or cost savings (potentially
- 10 both capital and O&M savings) that may result for customers from different technological
- 11 solutions available.
- 12 Third, it perpetuates inconsistencies between the FortisBC companies in the management of
- 13 information systems and platforms.
- 14 Finally, it results in regulatory inefficiencies and additional regulatory costs as the FEU may
- 15 need to initiate multiple regulatory exemption applications over time.
- 16 The FEU do not believe that the request to remove the data/servers location restriction is
- 17 inconsistent with what is contemplated in Order G-75-06 in that the Commission's review and
- 18 approval is needed in order for the FEU to locate their data and servers outside Canada. In the
- 19 FEU's view, the most effective and efficient way to achieve the result contemplated by Order G-
- 20 75-06 (cited in the preamble) is through this Application to remove the restriction.

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1.1.1 Please confirm that this regulatory mechanism was exercised in 2006 when Order G-112-06 approved Terasen Utilities (as FEU were formerly known) to store data on servers in Houston, Texas. If the regulatory

mechanism was not exercised in 2006 in relation to Order G-112-06,

please explain how the Order was approved.

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Response:

- 31 The FEU confirm that they (then Terasen Utilities) filed an application with the Commission
- 32 seeking to maintain their process and control documentation required for Ontario Securities
- 33 Commission (OSC) compliance on KMI's licensed software and to allow Internal Audit staff to
- 34 store electronic document files on a shared server owned by KMI and located in Houston,
- 35 Texas.



 1.1.1 If the regulatory mechanism was exercised in 2006, what specific element of the FEU environment and organization has changed that will make it more difficult to exercise today?

Response:

9 Please refer to the response to BCUC IR 1.1.1.

 1.1.1.2 Does the regulatory mechanism present a technical obstacle or issue to the FEU? What specific element of the regulatory mechanism requires clarification, explanation or amendment for the FEU to use it today?

Response:

19 Please refer to response to BCUC IR 1.1.1.

 1.1.2 Please specify any other proceedings or requests (and provide the corresponding Commission Orders, Decisions, or other outcomes) where the FEU requested data or servers to be located outside of Canada.

Response:

In addition to Order G-112-06 as noted above, in Order G-116-06, the Commission approved an application filed by the FEU on August 22, 2006, requesting to record incident information on KMI's U.S. based Risk Event Management System (REMS) and to transfer employee contact information (primarily cell phone numbers and email addresses) required to support KMI's U.S. based Emergency Response Line (ERL) and REMS databases.



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2.0 Reference: Application to Remove Data Location Restriction

Exhibit B-1, p. 4; Letter L-30-06

FEU Plans

The FEU state: "the FEU will continue to own and control its data, to have access, if necessary, to the data on a 24 hours per day, 365 days per year basis, except for temporary system outages, and to comply with applicable provincial and federal privacy legislation. Additionally, the data would be just as secure as if the data were stored on servers in Canada as there are security standards in place that any vendor doing business with the FEU must adhere to."

2.1 In the current FEU situation, please describe what technology systems, if any, are currently used outside of Canada, or any data currently stored or processed outside of Canada. Please use the bulleted list of functions listed in Letter L-30-06 as guidance.

Response:

The FEU currently do not use technology systems or store any data outside of Canada. For clarity, the systems previously subject to the Commission Orders G-112-06 and G-116-06 are no longer in use by the FEU.

2.1.1 Where technology systems are currently used outside of Canada, or data that is currently stored or processed outside of Canada, please provide the full risk assessment that was performed. What cyber security controls have been developed and implemented, what specific cyber security framework or best practice guidelines have been followed, and what measures have been implemented to have assurance that the cyber security controls in place are sufficient and

Response:

Please refer to the response to BCUC IR 1.2.1.

effective?



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1 2 3 4	Response:	2.1.2 Do the FEU host back-up servers in Canada?
5	All of the FEL	J's servers are located in Canada, including back-up servers.
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8 9 10	2.2	This application is general in nature. Do the FEU have any planned proposal(s) to host servers outside of Canada? If yes, please specify:
11		 the type of data to be processed by these servers;
12		the volume of data;
13		the location of these servers;
14		 whether any back-up servers will be located in Canada;
15		 the name of the organization(s) managing the servers;
16		 the name of the country(ies) where these servers will be hosted;
17		the approximate number of servers (physical and virtual).
18 19	Response:	

Response:

The FEU do not currently have any plans to use host servers outside Canada. However, as discussed in the response to BCUC IR 1.1.1, the restriction imposed by the Commission has several disadvantages, including the inability for the FEU to consider all available technology platforms and solutions efficiently and cost-effectively. Thus, the FEU have requested the removal of the restriction in order for the Companies to consider available options and to achieve the most cost-effective solutions when the opportunities arise.

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- 2.3 Do the FEU have any planned proposal(s) to store data outside of Canada? If yes, please provide the following information for each of the functions in the bulleted list of functions in Letter L-30-06:
- the type of data;



	1 Toylding Service to the FES, currently Restricted to Carrada (the Application)
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	the volume of data;
	 whether any back-up data will be in Canada;
	 how the data will be processed or stored;
	 the name of the organization(s) managing the systems processing or storing the data; and
	the name of the country(ies) where the data will be stored or processed.
Response:	
The FEU do	not currently have plans to store data outside of Canada.
	refer to the responses to BCUC IRs 1.1.1 and 1.2.2 for a brief discussion about why ion has been submitted and removal of the restriction is being sought.
2.4	Do the FEU have any planned proposal(s) to <u>use software</u> that is hosted outside of Canada? If yes, please specify, using the list of functions in Letter L-30-06 as guidance:
	 the type of data that will be processed by this software;
	the volume of data;
	 the location of the software application servers (web servers, application servers and databases);
	 any back-up data or servers in Canada;
	 the name of the organization(s) or vendor(s) that develop and support the software;
	 the name of the organization(s) or vendor(s) managing the software application servers;
	 the name of the country where the software application servers will be hosted.

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Response:

2 The FEU do not currently have any plans to use software hosted outside of Canada. Please 3 also refer to the response to BCUC IR 1.2.2 for a brief discussion about why this Application has been submitted and removal of the restriction is being sought. 4

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2.5 Do the FEU have any planned proposal(s) to host any technology systems other than servers, data or software outside of Canada? If yes, please specify, using the list of functions in Letter L-30-06 as guidance:

- the type of data that will be processed by these systems;
- 12 the volume of data:
 - the location of these systems;
 - whether any back-up systems will be located in Canada;
 - the name of the organization(s) managing the systems;
 - the name of the country where these systems will be hosted.

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Response:

19 The FEU do not currently have any plans to host any technology systems outside of Canada. 20 Please also refer to the responses to BCUC IRs 1.1.1 and 1.2.2 for a brief discussion about why 21

this Application has been submitted and removal of the restriction is being sought.

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2.6 For any planned proposal(s), please provide a full description of the legislation in place to protect the privacy and security of the data, servers, software, or any other technology systems.

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Response:

There are currently no planned proposals. The relevant legislation which governs the protection of personal information in British Columbia is the provincial Personal Information Protection Act and the federal Personal Information Protection and Electronic Documents Act.



2.7 If there are no specific proposal(s) at this time, please explain how the FEU are sure they "will continue to own and control its data, to have access, if necessary, to the data on a 24 hours per day, 365 days per year basis, except for temporary system outages."

Response:

As noted in the response to BCUC IR 1.2.6, there are no specific proposals at this time. Any services the FEU considers for use, whether internal or external, need to meet service levels as defined by the FEU, which includes that the FEU will continue to own and control its data, to have access, if necessary, to the data on a 24 hours per day, 365 days per year basis, except for temporary system outages. Please also refer to the response to BCUC IR 1.2.8.

- 2.8 If there are no specific proposal(s) at this time, please provide a full risk assessment of moving the data and servers outside of Canada. Please specifically discuss the risks to: (i) customers' personal information and (ii) to the FEU's transmission, distribution, and/or gas supply systems, using the following assessment criteria, at the minimum:
- Segregation of system components and data;
- Physical security;
 - Logical access controls;
 - Encryption;
 - Security tools such as firewall, intrusion detection and prevention systems (IDS/IPS), anti-malware, log monitoring, etc.;
 - Management of security and privacy incidents;
 - Business continuity and disaster recovery;
 - Security and privacy training and awareness;
 - Policies and procedures;
- Human resources;



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Asset management;
Operations security;
Communication security;
System acquisition, development and maintenance;
Supplier relationships;
Compliance.

8 Response:

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- The FEU cannot provide the kind of risk assessment requested in the absence of a specific proposal, but can assure the Commission that any future proposals or projects following the removal of the data restriction will address these kinds of concerns. Furthermore, as the FEU have noted in the response to BCUC 1.4.2, the FEU will remain accountable under Canadian private sector privacy legislation with respect to personal information regardless of where they store their data.
- When engaging third party services and where appropriate, the FEU address a majority of these requirements in their agreements, which include the FEU's requirements for security and privacy. As part of the assessment process of any proposal/project that will have a significant involvement with the collection, use or disclosure of personal information, a Privacy Impact Assessment is performed.
- 20 In a situation where the FEU's data would be sent offsite, regardless of whether the site is inside 21 or outside Canada, the storage of that data would be required to comply with the Personal 22 Information Protection and Electronic Documents Act (PIPEDA), and/or the British Columbia 23 Personal Information Protection Act (PIPA), and, where appropriate, the "Three Nines" of 24 availability and Security in Depth, which is an industry standard term referring to 99.9% system 25 availability. Security in Depth may include, but is not limited to, encryption, physical security, 26 firewalls (cyber security), criminal record checks, role based security and access of least 27 privilege.
- Please also refer to the response in BCUC IR 3.4.1 for a general description of the due diligence process which the FEU undertakes with respect to project assessment.



2.9 If there are no specific proposal(s) at this time, please provide a full security risk assessment of the potential harm to customers and the FEU in the event of a security breach or if a foreign jurisdiction requests access to the FEU's data.

Response:

The FEU have implemented a control environment for security of its enterprise wide network architecture and infrastructure. This includes physical and logical security systems and control components including ensuring applicable government laws and regulations pertaining to minimum security control requirements are met. Third parties are contractually required to meet and/or exceed the FEU's control environment. A security breach is therefore not impacted by the physical location of the FEU's data.

Foreign jurisdictions requesting access to the FEU's data would be provided that data in accordance with existing governmental laws and regulations to the extent applicable.

2.10 If there are no specific proposal(s) at this time, please explain why the FEU do not follow the current regulatory mechanism (referred to in question 1) when a specific proposal is in place.

Response:

Please refer to the response to BCUC IR 1.1.1.

2.11 Section 23 of the *Utilities Commission Act* (UCA) states that the Commission has general supervision of all public utilities and may make orders concerning the safety, convenience or service of the public. Further, the Commission may make regulations requiring a public utility to conduct its operations in a way that does not unnecessarily interfere with, or cause unnecessary damage or inconvenience to, the public. Please explain how the Commission is fulfilling its duties under section 23 of the UCA if it approves removal of the current restriction without a specific proposal and thus without knowing specific risks the FEU and its ratepayers may face if data and servers are located outside of Canada.



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Response:

- 2 In this Application, the FEU are requesting the removal of a condition previously imposed by the
- 3 Commission on the location of the Companies' data or servers as a result of the acquisition of
- 4 the FEU by Kinder Morgan, Inc.
- 5 The FEU are not requesting approval of a specific, proposed location for any of the Companies'
- 6 future data or server locations.
- 7 In full, Section 23 of the *Utilities Commission Act* (UCA) provides:
 - 23 (1) The commission has general supervision of all public utilities and may make orders about
 - (a) equipment,
 - (b) appliances,
 - (c) safety devices,
 - (d) extension of works or systems,
 - (e) filing of rate schedules,
 - (f) reporting, and
 - (g) other matters it considers necessary or advisable for
 - (i) the safety, convenience or service of the public, or
 - (ii) the proper carrying out of this Act or of a contract, charter or franchise involving use of public property or rights.
 - (2) Subject to this Act, the commission may make regulations requiring a public utility to conduct its operations in a way that does not unnecessarily interfere with, or cause unnecessary damage or inconvenience to, the public.

Granting the FEU's request to remove an existing condition on the data or server locations is not inconsistent with the Commission's "general" power under section 23 of the UCA for the following reasons.

- Section 23 does not impose a specific "duty" on the Commission as the question suggests; rather, it is a provision about the Commission's jurisdiction to exercise "general supervision".
- Section 23(2) refers to the Commission's power to make "regulations," which has no relevancy to the request made here.
- Section 23 provides a list of items relating to the Commission's general supervision over specific aspects of a utility's existing operations. The topic of this Application is not part of the list.



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- Although section 23(1)(g) uses general language, it cannot be read in isolation and must be construed against the rest of the section in which it is found. (See Reference re Broadcasting Regulatory Policy CRTC 2010 167 and Broadcasting Order CRTC 2010 168, 2012 SCC 69, para. 29.). When construed against the previous items of the list, this subsection does not include "data location".
- Section 23 does not grant a supervisory power over the utility's plans for the future. (See *BC Hydro v. British Columbia (Utilities Commission)* (1996), 20 B.C.L.R. (3d) 106, para. 32, where Mr. Justice Goldie (for the Court) interpreted section 23 (then section 28, same wording) as follows: "Two observations can be made of this section: the first is that the class of matters referred to in s-s. (1) relates to the existing service provided the public as distinct from future service. The second is that s-s. (2) also refers to present service, that is to say, the conduct of operations in relation to the public. Neither of these subsections refers to the utility's plans for the future.")
- The Commission is not left without means to fulfill its duties, as the FEU's activities and conduct are subject to review by the Commission where appropriate.

The FEU note that the Commission believed it was able to fulfill its duties without such a restriction on the FEU prior to the KMI acquisition. Furthermore, similar restrictions are not in place with respect to other regulated utilities. The FEU believe that, were it not for the KMI acquisition, the restriction on the location of data and servers was not required and would not have existed in the first place. Therefore, it is clear that the restriction was imposed to address, in part, concerns related to ownership of the FEU by a non-Canadian organization.



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1	3.0	Refere	ence:	Application to Remove Data Location Restriction
2				Exhibit B-1, pp. 4-5; Letter L-30-06
3				FEU Controls and Risk Assessments
4		On pa	ges 4-5	, the FEU state:
5 6 7 8 9			to the systen legisla stored	EU will continue to own and control its data, to have access, if necessary, data on a 24 hours per day, 365 days per year basis, except for temporary noutages, and to comply with applicable provincial and federal privacy tion. Additionally, the data would be just as secure as if the data were on servers in Canada as there are security standards in place that any redoing business with the FEU must adhere to."
11 12 13 14 15 16 17 18 19			FEU f softwa consid evalua FEU's FEU n service	y, the current data/server geographical location restriction prevents the rom considering any third-party service provider that results in data or re being hosted on servers outside Canada. The FEU should be able to er all feasible and applicable hosted options when new products are sted or existing systems are upgraded to find a solution that best fits the business and services to customers. Moreover, the restrictions on the may hinder opportunities for investment in information systems, software, a providers, and technology platforms which may result in benefits for mers as well as cost savings."
20 21 22		3.1	third-p	y future projects (planned or unplanned) involving in-house systems and/or arty service providers, have the FEU performed a full risk assessment to the country or location outside of Canada, including:
23 24 25 26 27			a f Pa ins	litical risk – Risks of espionage; Risks of foreign legislation that could allow oreign government or organization to access the FEU data, such as the US triot Act and the EU/US Safe Harbour Agreement; Risks related to political tability, population unrest or any other threats presented by this foreign untry.
28 29 30 31 32			da a l en	mpliance, prevention and enforcement risk — Risks related to an history of ta breach or a lack of environment controls to protect data; Risks related to ack of privacy legislation; Risks related to a lack of police or legislative forcement powers; Risks related to an history of poor controls or legislation place to protect data.
33 34 35			en	rrorism risk – Risks related to active organizations that would disrupt the vironment controls in the foreign countries, including threats to people, ocess and infrastructure.

If not, please explain why not.



12 Response:

The FEU performs and will continue to perform a full risk assessment on any initiatives that would involve in-house or third-party providers. External providers would be subject to a complete risk assessment, as well as the terms and conditions regarding the FEU requirements for reliability and security. Please also refer to the responses to BCUC IRs 1.2.8 and 3.1.1

3.1.1 Have the FEU identified any specific controls to address the political, compliance and terrorism risks related to the country or location outside of Canada?

Response:

The FEU has a Disaster Recovery Plan (DRP) which addresses any critical system failure that arises as a direct result of a DRP intervening event that cannot reasonably be rectified within 72 hours after the critical system failure has been identified. This DRP directly interacts with the FEU's back-up and recovery procedures to ensure business continuity. Responses to critical system failure events are not impacted by the physical location of the FEU's data.

 3.1.2 Have the FEU implemented such controls to address the political, compliance and terrorism risks related to the country or location outside of Canada?

Response:

Please refer to the response to BCUC IR 1.3.1.1.

32 3.1.3 Have the FEU implemented a process to ensure that the controls deemed necessary to address the political, compliance and terrorism



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1 risks related to the country or location outside of Canada are sufficient 2 and effective? 3 4 Response: Please refer to the response to BCUC IR 1.3.1.1. 5 6 7 8 For any future projects (planned or unplanned) involving in-house systems and/or 9 3.2 10 third-party service providers, have the FEU performed a full risk assessment related to the management of the technology systems used outside of Canada, 11 or data stored or processed outside of Canada, including a Threat and Risk 12 13 Assessment (TRA) and Privacy Impact Assessment (PIA)? 14 15 Response: 16 For all initiatives, a Threat Risk Assessment is done based on the type of initiative. A Privacy 17 Impact Assessment is completed for any significant initiatives which would give a third party access to personal information. Please also refer to response to BCUC IR 1.2.8. 18 19 20 21 22 3.2.1 If yes, did the risk assessment follow industry best practice or recommended frameworks, such as: 23 24 the Royal Canadian Mounted Police (RCMP) harmonized TRA 25 methodology. 26 • the Information Security Forum Information Risk Analysis 27 Methodology (IRAM) framework; 28 the US Department of Homeland Security Cyber Security Evaluation 29 Tool (CSET) tool:

Privacy Commissioner (OIPC);

(OPC) of Canada.

· the PIA guidelines issued by the BC Office of the Information an

the PIA guidelines issued by the Office of the Privacy Commissioner



Response:

Unlike public sector organizations, private sector organizations in British Columbia are currently not under any legal obligation to complete a Privacy Impact Assessment. The guidelines jointly issued by the federal Office of the Privacy Commissioner and provincial Office of the Information and Privacy Commissioner are directed at Privacy Impact Assessments for the public sector. That being said, the FEU have reviewed and where applicable have used the concepts and guiding principles developed by the commissioners offices in completing Privacy Impact Assessments for appropriate projects.

3.2.1.1 If not, please explain which of these best practices were not used and why.

Response:

As a private sector organization, the FEU follow privacy best practices which are designed for private sector organizations. The FEU have reviewed and do implement best practices that are recommended by the British Columbia Office of the Information and Privacy Commissioner and the federal Office of the Privacy Commissioner as applicable. The best practices listed in the response to BCUC IR 1.3.2.1 were designed for public sector bodies or bodies that fall outside of British Columbia and accordingly are not practices best suited for the FEU. Please also refer to the response to BCUC IR 1.3.2.1.

- 3.2.2 If yes, did the risks assessment cover the following risk areas:
- Segregation of system components and data;
 - Physical security;
 - Logical access controls;
 - Encryption;
 - Security tools such as firewall, intrusion detection and prevention systems (IDS/IPS), anti-malware, log monitoring, etc.;
 - Management of security and privacy incidents;



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	 Business continuity and disaster recovery; Security and privacy training and awareness; 	
	 Policies and procedures; 	
	Human resources;	
	Asset management;	
	 Operations security; 	
	 Communication security; 	
	 System acquisition, development and maintenance 	•
	 Supplier relationships; 	
	Compliance.	
of project-sp	act Assessment that has been completed for past FEU projects concerns which may contain assessments and a secific issues and concerns which may contain assessments and a second in the question above.	•
	3.2.2.1 If not, why not?	
Response:		
Please refe	to the response to BCUC IR 1.3.2.2.	
3.3	For any future projects (planned or unplanned) involving in-hous third-party service providers, have the FEU identified any sp address the risks related to the management of the technology	ecific controls to

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DTIC DO	FortisBC Energy Utilities (consisting of FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc. (the FEU)	Submission Date:
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	outside of Canada, or data stored or processed outside of Canot? If yes, are these controls based on industry best practice,	• •
	 The International Organization for Standardization (standard; 	ISO) 27002:2013
	 the National Institute of Standards and Technology Publication (SP) 800-53; 	(NIST) Special
	 the SANS 20 Critical Security Controls; 	
	 the Organization for Economic Co-operation and Deve Guidelines governing the Protection of Privacy and Tran Personal Data; 	. , ,
	 the guidelines issued by the BC Office of the Inform Commissioner (OIPC); 	nation an Privacy
	 the guidelines issued by the Office of the Privacy Comm Canada; 	nissioner (OPC) of
	the guidelines issued by the Cloud Security Alliance (CSA),	etc.
Response:		
for security compile appressablish se	oes not follow one prescribed set of guidelines to establish the conflict of its enterprise wide network architecture and infrastructure. Elicable key components from the various industry best practices ecurity, find solutions that best fit the FEU's business and servitaneously ensuring we remain compliant with applicable governments.	Rather, the FEU and guidelines to ces to customers,
	3.3.1 Have the FEU implemented such controls to address the management of the technology systems used out	

data stored or processed outside of Canada?



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Response:

The FEU currently do not store any data outside Canada. All third parties are contractually required to meet and/or exceed the FEU's control environment for security of its enterprise wide network architecture and infrastructure.

 3.3.2 Have the FEU implemented a process to ensure that the controls deemed necessary to address the risks related to the management of the technology systems used outside of Canada, or data stored or processed outside of Canada are sufficient and effective?

Response:

Regardless of whether the data/servers are to be outside or inside Canada, third parties are (or future vendors will be) contractually required to meet and/or exceed the FEU's control environment for security of its enterprise wide network architecture and infrastructure. Contractual obligations will require control validation independent of the third party vendor and a report the findings to the FEU.

3.3.2.1 If yes, is this process aligned with industry best practice such as: Annual independent external Service Organization Controls (SOC) or Systrust audits, based on the SSAE16 standard, or any other type of annual independent cyber security and privacy assessment? If not, please explain.

Response:

Yes. The FEU's control environment for security of its enterprise wide network architecture and infrastructure is subject to annual control validation by multiple independent parties. Independent control validation is a contractual obligation for third party service providers with reporting of findings to the FEU.



 3.4 In the case that a third party service provider hosting the FEU data and servers outside of Canada has a breach of information, what are the FEU's and the third party's processes to handle such a breach? Do these processes include the following domains: incident detection, classification, escalation, immediate reaction and containment, investigation and mitigation, communication (internal and external), lessons learned and improvement of preventative controls?

Response:

The FEU have an incident response protocol that addresses incident detection, classification, escalation, immediate reaction and containment, investigation and mitigation, communication (internal and external), lessons learned and improvement of preventative controls. For security reasons, the FEU cannot disclose this protocol publicly. The process is audited each year.

3.4.1 What is the FEU diligence process to select a third party service provider? Does this process include criteria such as: security screening and professional qualifications, capabilities to perform the required services, financial stability, reputation, existing litigation, existing cyber security insurance?

Response:

The FEU have a comprehensive due diligence process that begins as early as the Request for Proposal stage. This due diligence process includes risk assessments on both the privacy and security risks associated with a proposed project. If a project is initially assessed as having privacy or security concerns or deals with the disclosure of sensitive personal information, the project manager will seek to have a privacy impact assessment completed. In addition, the process can include (if appropriate) background checks, reference checks and assessments completed by independent third parties. For instance, for major information systems initiatives, a recognized technology consultant will often be retained to assist in assessing a particular vendor. Finally, there are contractual terms in agreements with vendors which would help to mitigate any privacy or security risks that may be identified as part of the due diligence process by including representations, covenants, and insurance and indemnity provisions.



Have the FEU identified specific clauses related to privacy and cyber security in contracts, Statements of Work (SOW), or any other agreement with the third party service provider? Do these clauses include criteria such as: right to audit or inspect, compliance with privacy laws and the FEU security policies, detailed service levels and reporting including immediately reporting of any cyber security and privacy incidents, and confidentiality and non-disclosure agreements?

Response:

3.4.2

Where applicable, the FEU will include in contracts with third parties clauses that set forth requirements regarding privacy, cyber security, right to audit or inspect, compliance with privacy laws and the FEU's security policies, detailed service levels and reporting including immediately reporting of any cyber security and privacy incidents, and confidentiality and non-disclosure agreements.



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1	4.0	Reference:	Application to Remove Data Location Restriction
2			Exhibit B-1, pp. 3-4; Appendix A, p. 3
3			Privacy Concerns
4 5 6 7 8		there is an ab Privacy Com legislation ar	re: "the privacy regime in British Columbia is in a far more robust stateand bundance of guidance and case law from the [BC and Federal Offices of the nmissioner]The FEU believe that the provincial and federal privacy and framework in place today, along with the FBCU's [FortisBC Utilities] y, sufficiently address any and all privacy concerns"
9 10 11		Information	rivacy Policy states: "From time to time, we may store your Personal outside of Canada, where it may be subject to the lawful access of the jurisdiction in which it is being held."
12 13 14 15 16		maintain in yo property add birth, credit h	rivacy Policy also states: "The type of Personal Information we collect and our customer file, may include, but is not limited to your: name, mailing and ress, email address, telephone number, social insurance number, date of listory, transaction history, electricity consumption, driver's license number yment and billing information."
17		4.1 Pleas	e confirm that data and servers are subject to the privacy laws and all other

Response:

The FEU confirm that if data and servers are stored outside of Canada, they may be subject to the laws of the jurisdiction in which they are held, including privacy laws. As noted, this is reflected in FortisBC's Privacy Policy (vis-à-vis "personal information"). The FEU cannot say more than this about the application of foreign laws, as the application of foreign laws to data held in other jurisdictions will vary from state to state.

legislation of the jurisdiction where they are held.

4.2 Please explain whether data held in a jurisdiction outside of BC or outside Canada are subject to the privacy laws and other legislation of BC and Canada.

Response:

The FEU assume that this question is referring to the storage of "personal information" and the extent to which privacy laws such as BC's Personal Information Protection Act and the Federal



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- 1 Personal Information Protection and Electronic Documents Act govern an organization that
- 2 stores personal information that it has collected outside of BC or Canada.
- 3 Generally speaking, under Canada's private sector privacy legislation, an organization remains
- 4 accountable for the "personal information" that it collects, uses and discloses, even if it stores
- 5 that information outside of Canada.
- The FEU contractually obligate vendors which have access to personal information to comply with British Columbia and Canadian privacy laws as well as the FEU's Privacy Policy.

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4.3 Please explain whether the BC and Federal Offices of the Privacy Commissioner govern: (i) customer information, and/or (ii) Distribution, Transmission, and Gas Supply information. If they govern customer information only, what mechanisms exist to protect the privacy of the FEU's Distribution, Transmission, and Gas Supply information?

15 16 17

Response:

- 18 The British Columbia Personal Information Protection Act ("PIPA") and the federal Personal
- 19 Information Protection and Electronic Documents Act ("PIPEDA") govern all "personal
- 20 information".
- 21 PIPA defines 'personal information' in section 1 which states:
- "personal information" means information about an identifiable individual and includes employee personal information but does not include
- 24 (a) contact information, or
- 25 (b) work product information;

- 27 PIPEDA defines 'personal information in section 2 which states:
- 28 "personal information" means information about an identifiable individual, but does not include the name, title or business address or telephone number of an employee of an organization.



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- 1 Examples of the personal information that FEU collects can be found in section 4.1 of the FEU's
- 2 Privacy Policy which the FEU believe would be considered "customer information" as
- 3 referenced in the question.
- 4 It is unclear what is meant by "Distribution, Transmission and Gas Supply information" as
- 5 referenced in the question; however, the FEU can advise that the provincial and federal privacy
- 6 commissioners only govern personal information and non-personal information of public bodies.
- 7 They do not govern information that would not be considered personal information in the context
- 8 of private sector organizations.
- 9 The Supervisory Control and Data Acquisition (SCADA) system, with which the FEU controls
- 10 the transmission and distribution gas supply system, is operated on an independent network
- with specific requirements regarding physical and cyber access.

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4.4 Please specifically list "all privacy concerns" that the FEU believe are sufficiently addressed by provincial and federal privacy legislation and the FortisBC privacy policy.

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Response:

- The "privacy concerns" noted in the quote from the FEU Application are those concerns that were raised by stakeholders at the time of the granting of Order G-116-05, which were focused
- on concerns over foreign ownership and control of customer personal information. As noted in
- on concerns over foreign ownership and control of customer personal information. As noted in
- the application, the privacy regime in B.C. (and at the federal level) is now in a far more robust
- 24 state than it was when the orders at issue in this application were granted, and address these
- 25 concerns.
- 26 The 2007 Fortis Inc. acquisition of Terasen Inc. and its subsidiaries meant that there was no
- 27 longer a concern over 'foreign ownership' of customer personal information as Fortis Inc. is a
- 28 Canadian company.
- 29 The other privacy related concern was over 'foreign control' of customer personal information.
- 30 The British Columbia Personal Information Protection Act ("PIPA") and the federal Personal
- 31 Information Protection and Electronic Documents Act ("PIPEDA") have specific provisions that
- 32 state that an organization is responsible for the personal information under its control including
- information that is not in its custody, meaning that an organization is responsible for any
- personal information that is collected, used or disclosed on its behalf.
- 35 Section 4(2) of PIPA states:



An organization is responsible for personal information under its control, including personal information that is not in the custody of the organization.

Section 4.1.3 of PIPEDA states:

An organization is responsible for personal information in its possession or custody, including information that has been transferred to a third party for processing. The organization shall use contractual or other means to provide a comparable level of protection while the information is being processed by a third party.

The FEU's Privacy Policy is in compliance with the PIPA and PIPEDA. As a result, it is the FEU's position that the privacy concerns initially raised by stakeholders have been sufficiently addressed by the privacy legislation and the FEU's Privacy Policy.

4.5 Please discuss whether the FEU's data and servers, currently located in Canada, have ever experienced a security breach. If so, please discuss the processes and procedures that the FEU took to remedy the situation.

Response:

There have never been any security breaches of the FEU data or servers.

4.6 Please confirm which category of data, among the list detailed in the FortisBC Privacy Policy, is currently either stored, processed or transmitted outside of Canada; please specify the volume of data in scope, the name of the foreign country, and the reason why this data is not stored, processed or transmitted strictly inside of Canada.

Response:

The Commission orders were specific to the location of data, which, in turn, was determined by the server location. The FEU can confirm that none of the FEU data is currently located or stored outside of Canada.



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4.7

Please confirm which category of data, among the list detailed in the FortisBC Privacy Policy, the FEU are planning in the near or long term future to either store, process or transmit outside of Canada; please specify the volume of data in scope, the name of the foreign country, and the reason why this data cannot be stored, processed or transmitted strictly inside of Canada.

Response:

The Commission orders were specific to the location of data, which, in turn, was determined by the server location. The FEU can confirm that it currently does not have any short term plans to locate or store data outside of Canada. As noted in the Application (at page 5), the FEU seek to have the current restrictions removed so that they may consider vendors who may store relevant FEU data outside of Canada in any future procurement processes and can procure the most cost-effective solutions. These vendors and any proposed solutions would be vetted through the FEU's process of reviewing proposals, which would include various risk assessments such as privacy and security assessments. Please also refer to the response to BCUC IR 1.3.4.1.



1	5.0	Reference:	Application to Remove Data Location Restriction
2			Exhibit B-1, p. 4
3			Foreign Ownership Concern
4		The FEU stat	e: "Since then, all the FEU data have been moved and are stored on
5		servers locate	ed in Canada as directed by Order G-112-06, and potential concerns
6		regarding fore	gn ownership and control were resolved.

Moreover, in absence of the current restriction, the FEU will continue to own and control its data, to have access, if necessary, to the data on a 24 hours per day, 365 days per year basis, except for temporary system outages, and to comply with applicable provincial and federal privacy legislation. Additionally, the data would be just as secure as if the data were stored on servers in Canada as there are security standards in place that any vendor doing business with the FEU must adhere to."

Please confirm that Order G-112-06 approved Terasen Utilities¹ to store data on 5.1 servers in Houston, Texas. If confirmed, please explain the statement above "as directed by Order G-112-06."

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Response:

Confirmed. In Order G-112-06, the Commission, under sections 54(9) and 23(1) of the UCA, approved the FEU to store data on servers in Houston, Texas for one specific, defined purpose, which was process and control documentation for OSC compliance information. Please refer to the response to BCUC IR 1.1.1.1.

Comprised of Terasen Gas Inc., Terasen Gas (Vancouver Island) Inc., Terasen Gas (Whistler) Inc., and Terasen Gas (Squamish) Inc.



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6.0 Reference: Application to Remove Data Location Restriction

Exhibit B-1, pp. 4-5

Technology Advancement

The FEU state: "As an example, Microsoft Office 365 is a commonly used third-party service that provides the Office suite of tools, including email, as a service. If this service is used, it can remove the need for in-house FEU servers for these systems and the associated costs of operating them...

In addition, many of the vendors that the FEU may wish to use for services other than technology services may have servers located outside of Canada. For example, if the FEU wished to engage a talent sourcing firm we would be restricted to those firms which store all data on Canadian servers and accordingly, the FEU has been faced with restrictions on which vendors can be retained for various services. As technology continues to advance and more and more businesses take advantage of third-party software services, the FEU will be faced with decreasing responses from vendors able to provide the services we require."

6.1 Please specify what data and/or functions (as per the bulleted list of functions in Letter L-30-06) the FEU would host on a service such as Microsoft Office 365. Would the data include any personal data? Please provide in order of volume.

Response:

As an example and for illustrative purposes only, Microsoft Office 365 can provide email as a service. In the case of hosted email it would contain the same data that the FEU have on the existing in-house email server. This could include personal information.

6.2 Please explain, if any, the difference in security and privacy features of Microsoft Office 365 in Canada or otherwise.

Response:

Microsoft Office 365 is, at this time, only hosted in the US. The Microsoft Office 365 product was mentioned as an example of products available that might at some time in the future be evaluated or considered for use by the FEU. The FEU have not performed an analysis of the differences and the risks associated with using a product like Microsoft Office 365. Prior to



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1 considering implementation of any products or applications such as this, the FEU would perform 2 an appropriate analysis. 3 4 5 6 6.3 Please explain how using a service such as Microsoft Office 365 could remove 7 the need for in-house FEU servers. 8 9 Response: 10 Services such as Microsoft Office 365 email can displace in-house email servers as the product 11 is hosted on the service-provider's servers, rather than in-house. Please also refer to the 12 Application, page 5, paragraph 2. 13 14 15 16 6.4 Please explain how the current restriction prevents the FEU from engaging 17 certain vendors for services other than technology services. 18 19 Response: 20 Under the current restriction, the FEU are unable to consider vendors whose services will 21 require, or result in having, the FEU's data located outside Canada without applying to the 22 Commission for exemptions as each circumstance arises, which can be inefficient and costly for 23 customers. Please also refer to the response to BCUC IR 1.1.1. 24 25 26 27 6.5 Please explain the example of the FEU using a talent sourcing firm. What 28 specific FEU data would a talent sourcing firm have to store?

Response:

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There are numerous vendors who offer solutions and software that might not be available in Canada as they are often non-Canadian entities and will store data on servers outside Canada. The current requirement restricts the FEU's ability to use vendors who will store the FEU data on severs outside Canada even if those solutions or software are the most appropriate ones for



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the FEU to implement. The example given in the Application with respect to a talent sourcing firm is one where the FEU may want to employ a firm located outside of Canada to collect, review, and analyze, on behalf of the FEU, prospective candidates' resumes to fulfil a specific role. The resumes contain information such as name, address and other information which would be considered personal information and would likely be stored by the talent sourcing firm on servers outside Canada.

Prior to retaining any such firm, the FEU would need to complete a risk assessment which would include consideration of the sensitivity of the personal information and the necessity of providing such information.

6.5.1 In the event that the FEU use a talent sourcing firm, would FEU know where the FEU data is stored and do FEU have control over where the data travels?

Response:

The FEU would complete a risk assessment with respect to privacy and security concerns over any personal information that would be disclosed to the third party. As a result, the FEU would know the location of where the data is stored. In addition, the FEU contractually obligates third parties with access to personal information to comply with the British Columbia and Canadian privacy legislation, as applicable, as well as the FEU's Privacy Policy.

6.5.2 In the event that the FEU use a talent sourcing firm, describe the case scenario and the process when this data is transferred between the FEU and the talent sourcing firm.

Response:

This type of analysis would be completed as part of a risk assessment which would be completed at the time an actual project is proposed. As this was given as an example only and there is no actual project at this time, the FEU are unable to provide a detailed response. Please refer to the response to BCUC IR 1.5.2 for a general discussion of the employment of a talent sourcing firm.



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1	7.0	Refere	ence: Appli	cation to Remove Data Location Restriction		
2			Exhib	oit B-1, pp. 4-5		
3			Poter	ntial Cost Savings		
4 5 6	The FEU state: "[m]oreover, the restrictions on the FEU may hinder opportunities for investment in information systems, software, service providers, and technology platforms which may result in benefits for customers as well as cost savings."					
7 8		7.1	Please speci	fy the benefits which may result for customers.		
9	Resp	onse:				
10 11 12	The FEU would develop a business case for any potential opportunities in regards to third party services. Benefits would be identified on a case-by-case based evaluation. There are no specific opportunities that have been evaluated to date.					
13						

7.2 Please quantify the cost savings which may result for customers. Where specifically would the cost savings come from and how would they flow through to ratepayers?

Response:

Please refer to the response to BCUC IR 1.7.1.

The FEU are unable to quantify potential cost savings at this point in time. As discussed in the response to BCUC IR 1.7.1, the quote in the question preamble was in the context of potential benefits and/or cost savings that may result from potential third party services. The flow through to customers will depend on the nature of the benefits or savings, the timing of the benefits or savings and whether a PBR or cost of service approach to setting rates is in place. For example, in the context of a PBR, any savings will be part of the Companies' efforts to achieve the stretch factor that is built into rates. In the context of a cost of service environment, expected savings would be embedded in the operating and maintenance expense or capital spending forecasts that are built into rates.



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7.3 As Fortis Inc. is the parent company of the FEU, and Fortis Inc. owns regulated utilities in Canada, United States, and the Caribbean and other non-regulated assets in Canada and outside Canada, do the FEU have any plans to share platforms (such as customer information) with any Fortis Inc. affiliated companies to achieve greater economies of scale? Please explain.

Re

Response:

There are currently no plans to share platforms between the Fortis companies outside of British Columbia. The FEU do share platforms with FBC.



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ı	0.0	Reference: Application to Remove Data Location Restriction		
2 3 4		Exhibit B-1, p. 5; BCUC's July 23, 2013 Decision in the Matter of FortisBC Inc. Certificate of Public Convenience and Necessity for the Advanced Metering Infrastructure Project		
5 6 7		Consistency, p. 139; Section 44 of the <i>Utilities Commission Act</i> ; Section 6.4.2 of the October 2009 Mandatory Reliability Standards Rules of Procedure		
8 9 10		The FEU state: "The data/server location restriction on the FEU also creates a inconsistency in practices between the FEU and FortisBC Inc. (FBC), which has no similar general restriction."		
11 12 13 14		The FEU state: "this restrictioncreates an additional obligation for the FEU that do not apply to other private sector companies and creates an inconsistency between his the FEU and other private sector companies operate in British Columbia with respect location of their data and servers and the vendors and services which they can use."		
15 16 17 18 19 20		Page 139 of the Commission's July 23, 2013 Decision in the Matter of FortisBC Inc. Certificate of Public Convenience and Necessity for the Advanced Metering Infrastructure Project states: "[t]here is no evidence that there is a business need for storage of FortisBC customer information outside Canada. Accordingly, the Panel directs FortisBC to store customer information only in Canada and update its Privacy Policy to reflect this."		
21 22 23		Section 44(1) of the UCA states: "A public utility must have in British Columbia an off in which it must keep all accounts and records required by the commission to be kept British Columbia."		
24 25 26 27 28	Section 6.4.2 of the October 2009 Mandatory Reliability Standards Rules of Proced state: "The Administrator must not remove Personal Information from British Colum and Applicable Entities are not required to provide Personal Information to Administrator if doing so would require the Applicable Entity to send Personal Information outside of British Columbia."			
29 30 31		8.1 Please explain the FEU's statement that FBC has no similar general restriction given the directive in the 2013 AMI decision.		

Response:

The AMI Decision on the location for AMI data was specifically directed at the storage of customer information as it relates to the AMI Project. That restriction does not apply to any other systems or data of FBC.



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8.2 Does FBC host data and servers outside Canada? If so, using the list of functions in Letter L-30-06 as a comparator, please list the function and its location.

Response:

FBC does not host data/servers outside of Canada.

8.2.1 Please provide a complete description of how the security of any FBC data held outside Canada is controlled and monitored.

Response:

Please refer to the response to BCUC IR 1.8.2.

 8.2.2 Have any FBC data held outside Canada been subject to a security breach? If so, please describe the circumstances and the actions the FBCU² took to remedy the situation.

Response:

Please refer to response to BCUC IR 1.8.2.



8.3 Please specify whether Canadian utilities in jurisdictions other than BC have provisions similar to section 44 of the *Utilities Commission Act* – Duty to keep records.

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Response:

- The FEU have not conducted an analysis of the legislation in other Canadian jurisdictions as those are not relevant to the FEU's Application. The applicability of any provisions regarding the duty to keep records in another jurisdiction will require consideration of that province's privacy and other legislation. With these comments in mind, the following is a list of the acts regulating utilities in other Canadian jurisdictions which contain language similar to section 44 of the UCA:
- Alberta Utilities Commission Act
- Manitoba Public Utilities Board Act
- New Brunswick Energy and Utilities Board Act
- Newfoundland and Labrador Public Utilities Act
- Nova Scotia Public Utilities Act
- Ontario Energy Board Act
- Prince Edward Island Electric Power Act
- Quebec Act respecting the Régie de l'énergie
- Yukon Public Utilities Act

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8.4 Please specify if the FEU are aware of any Canadian regulated gas distribution utilities outside BC that have customer or operational data/functions stored or hosted outside Canada.

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Response:

- Based on the FEU's understanding, some gas distribution companies in Canada do have data and software hosted outside of Canada. These utilities have respectfully declined to specify what data and software is hosted outside of Canada.
- The FEU note that the request for approval in this Application is specific to a situation pertinent to the FEU as a result of a previous acquisition by a foreign entity and is made considering the



	tilities (consisting of FortisBC Energy Inc., FortisBC Energy and) Inc. and FortisBC Energy (Whistler) Inc. (the FEU)	Submission Date:
	noval of the Restriction on the Location of Data and Servers to the FEU, currently Restricted to Canada (the Application)	November 12, 2014
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governing statutory provisions in British Columbia. The location of data/server of other gas distribution utilities in Canada is subject to the jurisdiction of other regulatory Commissions or Boards and potentially to different privacy legislative regimes.

8.5 Please specify where other Fortis utilities (such as Fortis Alberta) locate their data and servers. If wholly or partially outside Canada, please specify which data is hosted outside Canada.

Response:

- Based on the FEU knowledge, other FortisBC affiliates outside B.C. do store data outside Canada. The affiliates do not wish to provide the details of these arrangements.
 - The Companies note that the request for approval in this Application is specific to a situation pertinent to the FEU as a result of a previous acquisition by a foreign entity and is made considering the governing statutory provisions in British Columbia. The location of data/servers of other Fortis affiliates in Canada is subject to the jurisdiction of other regulatory Commissions or Boards and potentially to different privacy legislative regimes.

8.6 Please specify where other BC utilities host their data and servers. If wholly or partially outside Canada, please specify which data is hosted outside Canada.

Response:

The FEU do not have knowledge of where other non-FortisBC public utilities in British Columbia host their data and servers, other than that in Order G-192-11, the Commission under the authority of section 54(9) of the UCA ordered as a condition for acquisition by AltaGas of PNG's issued and outstanding common shares that, "The books and records of PNG and its subsidiary shall remain in British Columbia unless otherwise approved by the Commission."