Site C Clean Energy Project Announcement

Location: BC Legislature
Victoria, BC

Event Summary: Province Approves Site C Clean Energy Project, the third dam and hydroelectric generating station on the Peace River in Northeast B.C.
Action/Visual: technical briefing with media and validators, announcement
Venue Audience: invited stakeholders and media

Podium: Yes.
Dress: Business.
Date: Tuesday, December 16, 2014
Arrival Time: 9:30am Technical Briefing: 1:00pm Announcement: 2:30pm

ARRIVAL

Time	Event Itinerary
9:30am	BC Hydro Executive arrive at the Legislature and are greeted by Chris Sandve and proceed to Oak Room (303) for briefings: Jessica McDonald, President and CEO, BC Hydro Susan Yurkovich, Executive Vice President, Site C Clean Energy Project, Chris O'Riley, Executive Vice-President of Generation Steve Vanagas, BC Hydro Mina Laudan, Site C Clean Energy Project
11:30am	Press Theatre ready for technical briefing run through
12:00pm	Lunch break
12:55pm	Transfer to Press Theatre

TECHNICAL BRIEFING – PRESS THEATRE

Time	Event Itinerary
12:00pm onward	Media and guests arrive at the Legislative Buildings for technical briefing LOCK UP. Team members escort guests/visiting accredited media to the Press Theatre. Upon arrival: Sonia Lowe, Ashlea Wilson from GCPE media onsite to assist media and guests signing waivers and check in electronic devices.
12:55pm	David Haslam A/Director of Communication for Energy and Mines will brief the media regarding the format of the technical briefing Kyle Surovy on hand for photos and video.
1:00pm	Minister Bill Bennett, Jessica McDonald, Susan Yurkovich, Chris O'Riley, Dave Nikolejsin, Les MacLaren arrive for the technical Briefing. Also in attendance: • Doug Foster , Assistant Deputy Minister, Strategic Initiatives, Ministry of Finance • Scott MacDonald, Assistant Deputy Minister, Labour Market & Immigration, Ministry of Jobs, Tourism and Skills Training
1:01pm	Minister Bennett proceeds to the podium. Jessica, Susan, Chris, Dave and Les take their seats at the table next to the podium
1:02pm	David Haslam introduces the technical briefing participants and invites Minister Bennett to begin the presentation
1:04pm	Minister Bennett leads the power point presentation
1:34pm	David Haslam moderates the Q and A portion of the technical briefing. There will be an opportunity for media dialed in from Fort St. John to ask questions. Minister Bennett takes questions from the podium and refers questions to Jessica, Susan, Chris, Dave and Les as appropriate.
2:00pm	Technical Briefing concludes.
2:15pm	Staff to escort Media and Validators to the Legislative Library Rotunda Susan Yurkovich, Chris O'Riley, Les MacLaren proceed to Library Rotunda
2:25pm	Staff return electronic devices to media/validators once set up in the Library Rotunda with a reminder of embargo until the Premier makes announcement.

TECHNICAL BRIEFING/ANNOUNCEMENT – FORT ST. JOHN

LOCATION: **Site C Community Consultation Office (9948 – 100 Avenue)**

Time	Event Itinerary
MST	**BC Hydro Staff** set up Screen, laptop, Polycom
Btwn 1:00pm and 2:00pm MST	Media arrive for technical briefing LOCK UP at the Site C Community Consultation Office (9948 – 100 Avenue). Dave Conway from Site C Project Team on hand to assist with Media Relations. BC Hydro staff assist media signing waivers and phone check in.
MST	Media will listen to the technical briefing audio via the polycom set up in the room. **Dial in details**: [redacted] from Canada and USA Participant Code: [redacted]
1:55pm MST	**IN VICTORIA** - David Haslam A/Director of Communication for Energy and Mines will brief the media regarding the format of the technical briefing
2:00pm MST	Minister Bill Bennett, Jessica McDonald, Susan Yurkovich, Chris O'Riley, Dave Nikolejsin, Les MacLaren arrive for the technical Briefing. Also in attendance: • Doug Foster , Assistant Deputy Minister, Strategic Initiatives, Ministry of Finance • Scott MacDonald, Assistant Deputy Minister, Labour Market & Immigration, Ministry of Jobs, Tourism and Skills Training
2:01pm MST	Minister Bennett will proceed to the podium. Jessica, Susan, Chris, Dave and Les will take their seats at the table next to the podium
2:02pm MST	David Haslam introduces the technical briefing participants and invites Minister Bennett to begin the presentation
2:04pm MST	Minister Bennett leads the power point presentation
2:34pm MST	David Haslam moderates the Q and A portion of the technical briefing. There will be an opportunity for media dialed in from Fort St. John to ask questions. Minister Bennett takes questions from the podium and refers questions to Jessica, Susan, Chris, Dave and Les as appropriate.
3:00pm MST	Technical Briefing concludes. **BC Hydro Staff** – show the webcast to the embedded link on the https:newsroom.gov.bc.ca webpage.
3:30pm MST	Media watch the announcement and media availability via webcast. **BC Hydro staff** return phones to Media at approximately 3:25pm MST with a reminder regarding the embargo until the Premier has made the announcement.
4:10pm MST	Media availability ends
4:30pm MST	Minister Bennett to participate in regional media teleconference post announcement.

ANNOUNCEMENT: LEGISLATIVE LIBRARY ROTUNDA

Time	Event Itinerary
2:00pm	The following participants proceeds to the Premier's Office for pre-brief: • Hon. Bill Bennett, Minister of Energy and Mines • Jessica McDonald, President and CEO, BC Hydro • Dave Nikolejsin, Deputy Minister, Ministry of Energy and Mines
2:25pm	Premier Christy Clark, Hon Bill Bennett, Jessica McDonald and Dave Nikolejsin proceed to Legislative Library Rotunda.
2:29pm	Premier Christy Clark, Minister Bennet and Jessica McDonald take their places next to the podium. Seated in the front row are: • Susan Yurkovich, Executive Vice President, Site C Clean Energy Project, BC Hydro • Chris O'Riley, Executive Vice-President of Generation, BC Hydro • Pat Pimm, MLA for Peace River North • Mike Bernier, MLA for Peace River South • Dave Nikolejsin, Deputy Minister
2:30pm	Minister Bennett welcomes guests and introduces Premier Christy Clark
2:32pm	Premier Christy Clark gives remarks
2:42pm	Minister Bennett introduces Jessica McDonald
2:43pm	Jessica McDonald gives remarks on behalf of BC Hydro NOTE: at the end of her remarks, Jessica invites Susan Yurkovich to join her at the podium and recognize her for all her work on the project. Photos taken (order from Left to right) with Susan Yurkovich, Premier Christy Clark, Jessica McDonald, Hon. Bill Bennett
2:50pm	After photos are taken, Minister Bennett thanks everyone for coming
2:55pm	Premier participates in media availability moderated by Sam Oliphant, Press Secretary Minister Bennett and Jessica McDonald to remain at front in the event any questions are referred to them.
3:10pm	Media availability concludes.
3:15 -3:30pm	Event concludes. Guests depart.

POST - ANNOUNCEMENT:

Time	Event Itinerary
3:30pm	Minister Bill Bennett returns his office for a regional media call

Contacts:

Tara Zwaan..... s 22
David Haslam..... 1-250 361-7989
Steve Vanagas..... s 22
Mina Laudan..... s 22

Site C Clean Energy Project Announcement

Location: BC Legislature
Victoria, BC

Event Summary: Province Approves Site C Clean Energy Project, the third dam and hydroelectric generating station on the Peace River in Northeast B.C.
Action/Visual: Premier gives remarks; takes group photo.
Venue Audience: invited stakeholders and media

Podium: Yes.
Dress: Business.
Date: Tuesday, December 16, 2014
Technical Briefing: 1:00pm **Announcement: 2:30pm**

ANNOUNCEMENT: LEGISLATIVE LIBRARY ROTUNDA

Time	Event Itinerary
2:00pm	The following participants proceed from the technical briefing to the Premier's Office for update and pre-brief: • Hon. Bill Bennett, Minister of Energy and Mines • Jessica McDonald, President and CEO, BC Hydro • Dave Nikolejsin, Deputy Minister, Ministry of Energy and Mines
2:25pm	Premier Christy Clark, Hon Bill Bennett, Jessica McDonald and Dave Nikolejsin proceed to Legislative Library Rotunda.
2:29pm	Premier Christy Clark, Minister Bennett and Jessica McDonald take their places next to the podium. Seated in the front row are: • Susan Yurkovich, Executive Vice President, Site C Clean Energy Project, BC Hydro • Chris O'Riley, Executive Vice-President of Generation, BC Hydro • Pat Pimm, MLA for Peace River North • Mike Bernier, MLA for Peace River South • Dave Nikolejsin, Deputy Minister
2:30pm	Minister Bennett welcomes guests and introduces Premier Christy Clark
2:32pm	Premier Christy Clark gives remarks
2:42pm	Minister Bennett introduces Jessica McDonald

2:43pm	Jessica McDonald gives remarks on behalf of BC Hydro NOTE: at the end of her remarks, Jessica invites Susan Yurkovich to join her at the podium and recognize her for all her work on the project. Photos taken (order from Left to right) with Susan Yurkovich, Premier Christy Clark, Jessica McDonald, Hon. Bill Bennett
2:50pm	After photos are taken, Minister Bennett thanks everyone for coming
2:55pm	Premier participates in media availability moderated by Sam Oliphant, Press Secretary Minister Bennett and Jessica McDonald to remain at front in the event any questions are referred to them.
3:10pm	Media availability concludes.
3:11pm	Premier takes photo with Hon. Bill Bennett and MLAs Pat Pimm and Mike Bernier before departing.
3:15 -3:30pm	Event concludes. Guests depart.

Contacts:

Tara Zwaan..... s 22
David Haslam.....1-250 361-7989
Steve Vanagas.....
Mina Laudan..... s 22

BRITISH COLUMBIA

The Province of British Columbia invites MLAs to attend an announcement.

DATE:
Tuesday, December 16, 2014

TIME:
Event: 2:30p.m.

LOCATION:
Legislative Library Rotunda
BC Legislature
Victoria, BC

*This invitation is intended for the original addressee. It is not for third party redistribution.

NEWS RELEASE

For Immediate Release
2014PREM0128-001896
December 16, 2014

Office of the Premier
Ministry of Energy and Mines and Responsible for Core Review

Site C to provide more than 100 years of affordable, reliable clean power

VICTORIA – Premier Christy Clark announced today the Province has approved the Site C Clean Energy Project, concluding it will provide British Columbia with the most affordable, reliable clean power for over 100 years.

“Affordable, reliable, clean electricity is the backbone of British Columbia’s economy. Site C will support our quality of life for decades to come and will enable continued investment and a growing economy,” said Premier Clark.

B.C.’s population and economy are growing, and the demand for power is expected to increase by 40% over the next 20 years. Site C will be required even with BC Hydro’s ambitious Power Smart programs that are targeted to meet 78% of future electricity growth.

“British Columbia has the third-lowest electricity rates in North America and we need to meet our future needs in a way that keeps rates down,” said Bill Bennett, Minister of Energy and Mines. “It’s clear that to keep rates low, we must choose the option of building Site C.”

Over the first 50 years of Site C’s project life, ratepayers will save an average of $650 to $900 million each year, compared to alternatives - this amounts to average annual savings of approximately six to eight per cent for the typical household. The project will generate a century of low-cost power, providing enough electricity for about 450,000 homes per year – an eight-per-cent increase in supply to BC Hydro’s system in 2024.

As the third project on the Peace River, the firm energy it provides will support the development of more independent power projects (IPPs) by backing-up intermittent resources, such as wind. IPPs currently provide 25% of B.C.’s electricity and will continue to play a vital role in meeting the province’s energy needs.

“Site C is essential to keeping the lights on while maintaining low rates for our customers,” said Jessica McDonald, president and CEO of BC Hydro. “This project will build on the success of our existing hydroelectric system and benefit British Columbians for generations to come.”

The capital-cost estimate for the project has been updated to $8.335 billion, and government has also established a project reserve of an additional $440 million to account for events outside of BC Hydro’s control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates, for a total of up to $8.775 billion. The reserve is subject to provincial Treasury Board approval.

The project, which has undergone a thorough and independent multi-year environmental assessment process, will start construction in summer 2015 and will provide approximately

10,000 direct construction jobs.

“Today’s announcement is a historic milestone and we look forward to building this important provincial project,” said Susan Yurkovich, executive vice-president responsible for Site C. “We will continue to work with First Nations, communities and landowners to ensure that we deliver on our commitments and realize the many benefits of this project.”

To view backgrounders, please visit:

- Growing Demand for Electricity: http://www.newsroom.gov.bc.ca/downloads/Growing_Demand_for_Electricity.pdf
- Site C Capital Cost Estimate: http://www.newsroom.gov.bc.ca/downloads/Site_C_Cost_Estimate.pdf
- Comparing the Options: http://www.newsroom.gov.bc.ca/downloads/Comparing_the_Options.pdf
- About Site C: http://www.newsroom.gov.bc.ca/downloads/About_Site_C.pdf
- Labour Requirements for Site C and LNG: http://www.newsroom.gov.bc.ca/downloads/Site_C_and_LNG.pdf

Media Contact:

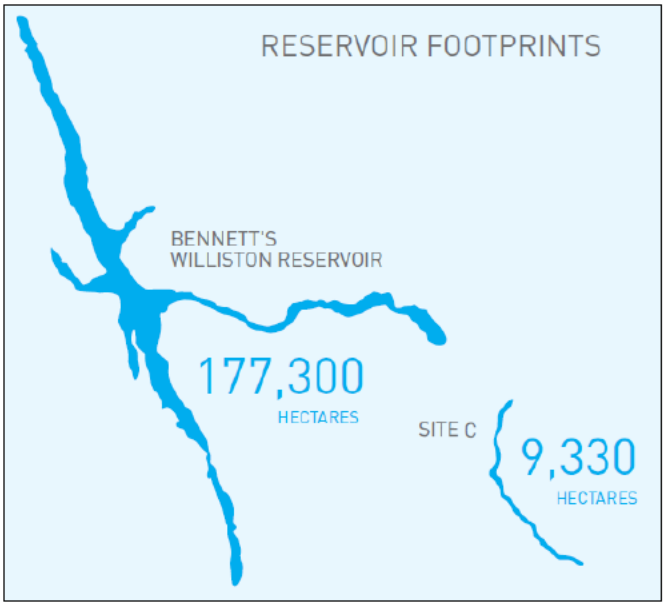
Media Relations
Ministry of Energy and Mines
250 952-0628

BACKGROUNDER

ABOUT SITE C

The Site C Clean Energy Project will provide 1,100 megawatts of capacity, and produce about 5,100 gigawatt hours of electricity each year – an eight-per-cent increase in energy supply to BC Hydro's system and enough to power about 450,000 homes per year.

As the third project on the Peace River, Site C will gain significant efficiencies by taking advantage of water already stored behind the existing W.A.C. Bennett Dam in the Williston Reservoir. This means that Site C will generate approximately 35% of the energy produced at the W.A.C. Bennett Dam with five per cent of the reservoir area.



Dam		Reservoir	
Type	Earthfill dam	Surface Area:	9,330 ha
Height	60 meters above riverbed	Flooded Land:	5,557 ha 93% public; 7% private
Length	1,050 meters		
Capacity	1,100 MW	Length:	83 kilometers
Energy	5,100 GWh / year	Width:	2-3 times current river

Construction is scheduled to begin in summer 2015, with project completion expected in 2024.

Affordable Electricity

Once built, Site C will be a source of affordable, reliable and clean electricity for more than 100 years.

Over the first 50 years of Site C's project life, ratepayers will save an average of $650 to $900 million each year, compared to a portfolio of Independent Power Projects (IPPs) backed up by natural gas.

This amounts to average annual savings of approximately six to eight per cent for the typical household, compared to alternatives.

Economic Development and Labour

Site C will provide approximately 10,000 direct construction jobs. Construction will also provide significant opportunities for businesses of all sizes.

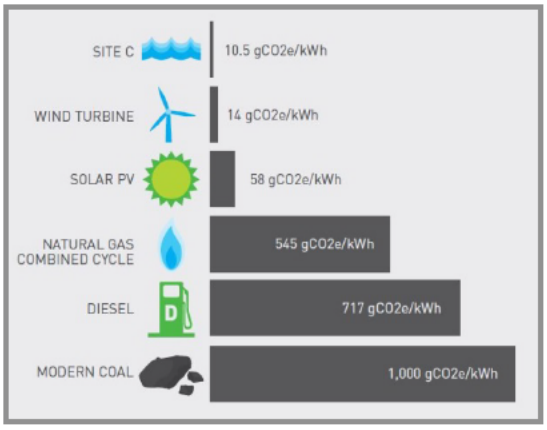
The construction of Site C is expected to result in an increase of $3.7 billion to provincial gross domestic product (GDP), including a $130 million increase in regional GDP during construction. Construction of Site C will result in increased government revenues at the regional, provincial and federal levels, including a total of $40 million in tax revenues to local governments.

BC Hydro's labour strategy for Site C will promote local and Aboriginal hiring and BC Hydro has supported opportunities for skills training through funding to: Northern Lights College Foundation, Northeast Native Advancing Society, Northern Opportunities Apprenticeship Program, School District No.60, and the College of New Caledonia.

Low Greenhouse Gas Emissions

Site C will produce among the lowest greenhouse gas emissions (GHGs), per gigawatt hour, when compared to other forms of electricity generation. The project will produce significantly less GHGs than fossil fuel sources such as natural gas, diesel or coal.

Emissions from Site C will fall within the ranges expected for wind, geothermal and solar energy.



Integrating Intermittent Energy

Site C will help integrate intermittent energy resources by quickly increasing or decreasing generation to match the availability of resources such as wind and run-of-river. For example, Site C generation could be increased when intermittent resources are not available (e.g., when the wind is not blowing), and decreased when intermittent resources are available.

Contact: Jake Jacobs
Media Relations
Ministry of Energy and Mines and Responsible for Core Review
250 952-0628

Connect with the Province of B.C. at: www.gov.bc.ca/connect

BACKGROUNDER

COMPARING THE OPTIONS

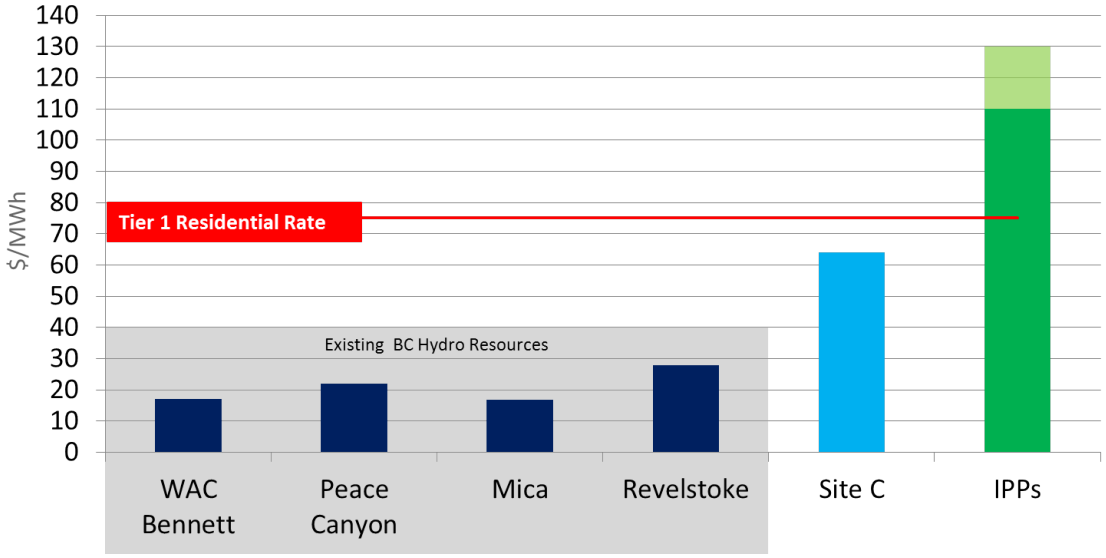
Site C provides the lowest cost electricity compared to alternatives and will deliver significant benefits for ratepayers.

Hydroelectric Dams are Cost Effective

Large hydro projects are cost-effective because after an upfront capital cost, they have low operating costs for more than 100 years and their costs to ratepayers decrease over time.

Today, the cost of electricity produced by B.C. Hydro's large hydroelectric facilities is far lower than the rate that residential customers pay for their power. BC Hydro's large hydroelectric facilities offset the costs of other more expensive new generation in the system.

Site C will provide more than a century of the same affordable, reliable and clean electricity that the W.A.C. Bennett, Peace Canyon, Mica and Revelstoke dams provide today, and will help keep overall electricity costs down and rates low.

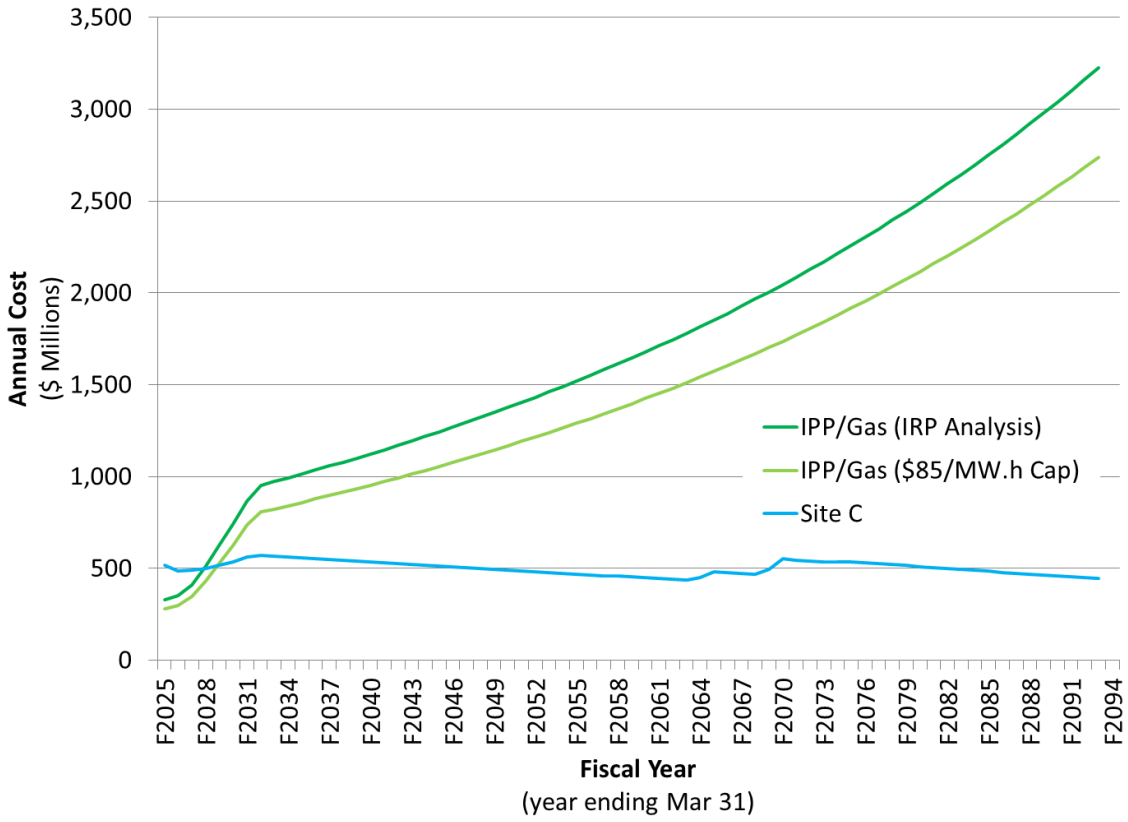


Site C - Significant Ratepayer Benefits

Like BC Hydro's other large hydroelectric facilties, the cost advantages of Site C will grow over time, resulting in significant benefits to ratepayers, compared to alternatives.

Over the first 50 years of Site C's project life, ratepayers will save an average of $650 to $900 million each year, compared to a portfolio of Independent Power Projects (IPPs) backed up by natural gas. This amounts to average annual savings of approximately 6 to 8 per cent for the typical household, compared to alternatives.

Over the long-term, as the capital costs of the project are paid down, the annual ratepayer savings will continue to increase each year for more than 100 years.



Impact on Ratepayers

The cost to ratepayers of the energy produced by a project depends on the capital costs as well as the ongoing operating costs and expected service life.

The cost to ratepayers for Site C reflects changes implemented as part of the government's 10 Year Plan for BC Hydro, as well as the updated capital cost estimate.

Site C Cost to Ratepayers (before changes)	**$83 / MWh**
Under the 10 Year Plan, the amount of net income that BC Hydro is required to earn each year will now be tied to inflation and will no longer increase when new assets like Site C are added to the system.	**- $26 / MWh**
The 10 Year Plan also reduced water rental charges for BC Hydro.	**- $1 / MWh**
The capital cost estimate for Site C has been updated from $7.9 billion to $8.335 billion.	**+ $2.25 / MWh**
Government has established a project reserve of an additional $440 million to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates. The reserve will be managed by the provincial Treasury Board.	**+ $2.50 / MWh** (if fully utilized)
Updated Site C Cost to Ratepayers	**$58 - $61 / MWh**

BC Hydro's Integrated Resource Plan, approved in November 2013, calculated a cost to ratepayers for IPPs of $96 / MWh. Government also conducted extensive consultations with the independent power industry to ensure its analysis reflected recent advances in technology and efficiency. Following these consultations, government adopted a cost of $85 / MWh for IPPs in its analysis.

When considering the impact on ratepayers, the costs of delivering the electricity must be accounted for. In addition, as IPPs are intermittent, the cost of backing them up with firm energy sources (e.g., natural gas) must be included. Also, IPPs do not have the same ability to store energy and take advantage of high prices on the export market, which reduces trade revenues.

Accounting for all of these factors, the final cost to ratepayers is $64 to $67 / MWh for Site C and $110 to $130 / MWh for IPPs.

Contact: Jake Jacobs
Media Relations
Ministry of Energy and Mines and Responsible for Core Review
250 952-0628

Connect with the Province of B.C. at: www.gov.bc.ca/connect

Site C Clean Energy Project Announcement

Location: BC Legislature
Victoria, BC

Event Summary: Province Approves Site C Clean Energy Project, the third dam and hydroelectric generating station on the Peace River in Northeast B.C.
Action/Visual: technical briefing with media and validators, announcement
Venue Audience: invited stakeholders and media

Podium: Yes.
Dress: Business.
Date: Tuesday, December 16, 2014
Arrival Time: Technical Briefing: 1:00pm Announcement: 2:30pm

ARRIVAL

Time	Event Itinerary
	BC Hydro Executive arrive at the Legislature and are greeted by XXX proceed to Hemlock Room (TBC) for calls/briefings Jessica McDonald, President and CEO, BC Hydro Susan Yukovich, Executive Vice President, Site C Clean Energy Project, Chris O'Riley, Executive Vice-President of Generation
11:30am	OPTIONAL: Press Theatre ready for technical briefing run through with participants: • Hon. Bill Bennett, Minister of Energy and Mines and Minister Responsible for Core Review • Dave Nikolejsin, Deputy Minister, Ministry of Energy and Mines • Les MacLaren, Assistant Deputy Minister, Ministry of Energy and Mines • Jessica McDonald, President and CEO, BC Hydro • Susan Yukovich, Executive Vice President, Site C Clean Energy Project, BC Hydro • Chris O'Riley, Executive Vice-President of Generation
12:00pm	Briefing in Premier's Office Minister Bill Bennett, Jessica McDonald, DM Dave Nikolejsin

TECHNICAL BRIEFING – PRESS THEATRE

Time	Event Itinerary
12:00pm onward	Media and validators arrive at the Legislative Buildings for technical briefing LOCK UP. Team members (Names TBC): to escort guests/visiting accredited media to the Press Theatre. Upon arrival: Sonia Lowe, Ashlea Wilson from GCPE media onsite to assist media and validators signing waivers and check in electronic devices.
12:55pm	David Haslam A/Director of Communication for Energy and Mines will brief the media regarding the format of the technical briefing Kyle Surovy on hand for photos and video. Technical Briefing will NOT be webcast. Can be made available online after the announcement.
1:00pm	Minister Bill Bennett, Jessica McDonald, Susan Yurkovich, Chris O'Riley, Dave Nikolejsin, Les MacLaren arrive for the technical Briefing. TBC onhand to provide support if needed: • Doug Foster , Assistant Deputy Minister, Strategic Initiatives, Ministry of Finance • Scott MacDonald, Assistant Deputy Minister, Labour Market & Immigration, Ministry of Jobs, Tourism and Skills Training • Brian Hansen, ADM and Lead Negotiator, Energy and LNG Initiatives, Natural Gas Development
1:01pm	Minister Bennett proceeds to the podium. Jessica, Susan, Chris, Dave and Les take their seats at the table next to the podium (TABLE CARDS in position)
1:02pm	David Haslam introduces the technical briefing participants and invites Minister Bennett to begin the presentation
1:04pm	Minister Bennett leads the power point presentation (23 slides; 16:9 ratio)
1:34pm	David Haslam moderates the Q and A portion of the technical briefing. There will be an opportunity for media dialed in from Fort St. John to ask questions. Minister Bennett takes questions from the podium and refers questions to Jessica, Susan, Chris, Dave and Les as appropriate.
2:00pm	Technical Briefing concludes.
2:15pm	Sonia and Ashlea return phones to Media/Validators (Time TBC) Staff to escort Media and Validators to the Legislative Library Rotunda

TECHNICAL BRIEFING/ANNOUNCEMENT – FORT ST. JOHN

LOCATION: Site C Community Consultation Office (9948 – 100 Avenue)

Time	Event Itinerary
MST	**BC Hydro Staff** set up Screen, laptop, Polycom
Btwn 1:00pm and 2:00pm MST	Media arrive for technical briefing LOCK UP at the Site C Community Consultation Office (9948 – 100 Avenue). Dave Conway from Site C Project Team on hand to assist with Media Relations. BC Hydro staff assist media signing waivers and phone check in.
MST	Media will listen to the technical briefing audio via the polycom set up in the room.
1:55pm MST	**IN VICTORIA** - David Haslam A/Director of Communication for Energy and Mines will brief the media regarding the format of the technical briefing
2:00pm MST	Minister Bill Bennett, Jessica McDonald, Susan Yurkovich, Chris O'Riley, Dave N kolejsin, Les MacLaren arrive for the technical Briefing. TBC onhand to provide support: • Doug Foster , Assistant Deputy Minister, Strategic Initiatives, Ministry of Finance • Scott MacDonald, Assistant Deputy Minister, Labour Market & Immigration, Ministry of Jobs, Tourism and Skills Training • Brian Hansen, ADM and Lead Negotiator, Energy and LNG Initiatives, Natural Gas Development
2:01pm MST	Minister Bennett will proceed to the podium. Jessica, Susan, Chris, Dave and Les will take their seats at the table next to the podium
2:02pm MST	David Haslam introduces the technical briefing participants and invites Minister Bennett to begin the presentation
2:04pm MST	Minister Bennett leads the power point presentation
2:34pm MST	David Haslam moderates the Q and A portion of the technical briefing. There will be an opportunity for media dialed in from Fort St. John to ask questions. Minister Bennett takes questions from the podium and refers questions to Jessica, Susan, Chris, Dave and Les as appropriate.
3:00pm MST	Technical Briefing concludes. **BC Hydro Staff** – change the webcast to the embedded link on the https:newsroom.gov.bc.ca webpage.
3:15pm MST	**BC Hydro staff** return phones to Media (Time TBC)
3:30pm MST	Media watch the announcement and media availability via webcast.
4:10pm MST	Media availability ends
4:30pm MST	Minister Bennett to participate in regional media teleconference post announcement.

ANNOUNCEMENT: LEGISLATIVE LIBRARY ROTUNDA

Time	Event Itinerary
2:00pm	Participants TBC Platform Party proceeds to the Premier's Office for pre-brief with: • Premier Christy Clark • Hon. Bill Bennett, Minister of Energy and Mines • Jessica McDonald, President and CEO, BC Hydro • Susan Yukovich, Executive Vice President, Site C Clean Energy Project, BC Hydro • Chris O'Riley, Executive Vice-President of Generation
2:25pm	Platform party proceeds to Legislative Library Rotunda Take their seats next to the podium. TBC In audience • Doug Foster , Assistant Deputy Minister, Strategic Initiatives, Ministry of Finance • Scott MacDonald, Assistant Deputy Minister, Labour Market & Immigration, Ministry of Jobs, Tourism and Skills Training • Brian Hansen, ADM and Lead Negotiator, Energy and LNG Initiatives, Natural Gas Development
2:30pm	Minister Bennett welcomes guests and introduces Premier Christy Clark
2:32pm	Premier Christy Clark gives remarks
2:42pm	Minister Bennett introduces Jessica McDonald
2:43pm	Jessica McDonald gives remarks on behalf of BC Hydro
2:48pm	Minister Bennett thanks everyone for coming and asks platform party to remain in position for a group photo
2:50pm	Group photo with: Premier Christy Clark, Minister Bill Bennett, Jessica McDonald, Susan Yurkovich and Chris O'Riley
2:55pm	Premier participates in media availability moderated by Sam Oliphant, Press Secretary *Platform part members remain onhand in the event any questions are referred to them.
3:10pm	Media availability concludes. Premier Departs.
3:15 -3:30pm	Event concludes. Guests depart.

POST - ANNOUNCEMENT:

Time	Event Itinerary
3:30pm	Minister Bill Bennett returns his office for a regional media call

Contacts:

s 13

QUESTIONS AND ANSWERS

Site C FID 2014

- **British Columbia's electricity rates are among the lowest in North America.**
- **Low cost, reliable, clean electricity is one of B.C's key advantages – it means we can attract investment, grow our economy and have a better quality of life.**
- **We're building Site C because we believe in B.C. and because it is the most responsible thing we can do to maintain our low-cost, reliable and clean power advantage.**

TOP TEN:

1) What is the reason for the cost increase?

The Site C capital cost estimate of $7.9 billion was developed in 2010 and included all construction, development, inflation and interest costs, as well as contingencies. The bottom-up estimate was completed by a team of internal and external engineering and construction experts, and underwent an external peer review by KPMG LLP to validate the methodologies and assumptions.

In 2014, BC Hydro conducted a cost refresh to reflect the advanced stage of project design and engineering and to prepare for a final investment decision by government. The refresh showed that while some costs had increased due to factors such as a longer environmental assessment process, enhancements to worker accommodation and larger diversion tunnels, the original cost estimate remained appropriate as these increases were largely offset by lower than anticipated interest rates, efficiencies in project design and reduced excavation requirements. As part of government's due diligence, the capital cost estimate was reviewed and updated to $8.335 billion. Government also decided to establish a project reserve of an additional $440 million to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates, for a total of up to $8.775 billion. The reserve is subject to Treasury Board approval.

The increase to the capital cost estimate reflects:

- Costs associated with the change from the harmonized sales tax (HST) to the provincial sales tax (PST). If the capital cost estimate had not been updated to reflect this cost, BC Hydro would have been required to use funds from the project contingency budget. Government felt that it was prudent to increase the capital cost estimate so that the full contingency could be maintained.

- A revised construction start date of summer 2015 to allow more time to complete the permitting process. The revised start date results in a longer construction period which increases inflation and interest costs during construction.

With the updated capital cost estimate, Site C remains the most cost-effective option to meet B.C.'s long-term electricity needs.

2) BC Hydro has known about the switch back to the PST for years. Why just add this cost now?

The $7.9 billion was a 2010 estimate and the HST was in place at the time so it reflected HST. Since 2010, BC switched back to the PST.

If the capital cost estimate had not been updated to reflect this cost, BC Hydro would have been required to use funds from the project contingency budget. Government felt that it was prudent to increase the capital cost estimate so that the full contingency could be maintained.

3) Why build Site C?

Site C will provide clean, renewable, dependable, and affordable power for over 100 years.

And we need the power. BC will need 40% more electricity over the next 20 years as our population will grow by more than a million people and residential customers will use more power for new electric devices.

New activity is expected in mining, oil and gas and the LNG sector.

Site C will provide 1,100 MW of capacity and produce 5,100 gigawatt-hours per year of clean, reliable energy – about an 8% increase in supply to the BC Hydro system and enough electricity to power about 450,000 homes.

By using the existing Williston reservoir for storage, Site C can generate 35% of the electricity produced by the WAC Bennett dam with only 5% of the reservoir area.

There is no more cost effective way to acquire the new electricity BC will need than Site C. The energy cost for Site C for power delivered to the lower mainland would be $64 per megawatt hour compared to a cost of $110-130 per megawatt hour for independent power projects.

4) Why do we need more power?

Demand is expected to increase by 40% over the next 20 years.

BC will need 40% more electricity over the next 20 years as our population is expected to grow by more than a million people and the economy expands.

We are also using more power than ever before because of new electronic devices like tablets, smartphones, PVRs and big screen TVs, and new technologies like electric vehicles.

New activity is expected in mining, oil and gas and the LNG sector.

Even after one of the most ambitious energy conservation programs in North America, and after investments of $1.7 billion per year for the next 10 years to maintain and upgrade our existing hydro facilities, we still need new sources of dependable energy and capacity.

5) Why are you going with Site C instead of independent power projects?

The cost to ratepayers was our most important determining factor. This made Site C is the best choice for British Columbians.

Site C gives us a proven, firm, dependable source of power that we can rely upon to meet peak demand always, whereas IPPs are intermittent - for example when the wind isn't blowing, or the rivers are running at seasonal lows, and need additional firm generation sources to back them up.

Because Site C power is such a dependable source it enables the integration of more intermittent renewable resources in the future.

6) How will the project impact hydro rates?

There is no significant effect on today's BC Hydro rates from Site C, as costs of the project are deferred until the project begins generating electricity, which is projected to be in 2024.

This ensures that the costs for Site C are paid by the ratepayers who are benefiting from the project.

When it does come into rates, the costs of the project will be amortized over many years to reduce the impact on ratepayers.

And the costs of large hydro-electric projects decrease over time, Site C will bring long-term savings to ratepayers.

Over the first 50 years of Site C's project life, ratepayers will save an average of $650 to $900 million each year, compared to alternatives. This amounts to annual average savings of approximately 6 to 8 per cent for the typical household.

7) What are the impacts on the provincial debt?

There is no impact on the Province's debt.

The net incremental increase to BC Hydro's debt from building Site C is expected to be approximately $6.4 billion.

8) What about the Province's credit rating?

BC Hydro's debt is self-supported debt and most credit rating agencies do not include self-supported debt in their analysis of the Province's credit rating. Standard and Poors has indicated that they will start including self-supported debt in their analysis of provincial credit ratings.

That said, recent discussions with Standard and Poors indicate that commercial borrowing for Site C would have a neutral impact on the agency's assessment of the province's credit rating, although that final determination of any rating is made by the S&P Credit Committee.

9) Why didn't you refer the project to BCUC for further review or approval?

The decision to proceed with Site C is a major public policy decision, most appropriately made by the elected government, not the utilities commission.

The BCUC does not actually have the capacity to do the kind of work that has been done by BC Hydro in analysing and reviewing the project, particularly the costs.

The costs of Site C have been independently reviewed by KPMG and an independent panel of contractors – work that the commission would have contracted out itself regardless.

BC Hydro has been developing Site C for 35 years and has spent $225 million on engineering work and field investigations. As a result, we have a far greater level of information about Site C than other BC Hydro projects typically have at the final investment phase.

To provide additional transparency on the project's capital costs, BC Hydro will be required to provide regular reports to the British Columbia Utilities Commission during construction.

10) How can the project proceed in the face of strong opposition from First Nations?

We recognize that some First nations are opposed to this project.

We remain committed to working with First Nations to achieve accommodation and benefit agreements.

Now that we have made our final investment decision we're confident that negotiations with First Nations will move forward as some First Nations indicated they would not sign impact benefit agreements prior to a final decision on the project from government.

11) How can you justify the environmental impacts of Site C?

All major infrastructure projects have environmental impacts and Site C is no different. We recognize that the project will have effects on fish and wildlife, and of course on landowners and First Nations.

In providing environmental certification the provincial and federal governments have concluded that the impacts of the project are justified by the benefits the project provides. The EA

decision comes with a set of conditions that BC Hydro must meet to build and operate the project.

By relying on the Williston reservoir for storage, Site C will produce 35% of the electricity generated by the WAC Bennett dam with a reservoir just 5% of the size. In addition, the project would have among the lowest greenhouse gas emissions, compared to other options.

Site C will provide a source of clean, renewable and cost-effective electricity in B.C. for more than 100 years.

DEMAND:

- **Our electricity needs are growing and we're taking a responsible approach to meeting them**
- **Demand for electricity is expected to increase by 40% over the next 20 years as our population grows by 1.1 million people and our economy expands.**
- **Even with one of the most ambitious conservation programs in North America there will still be a need for additional power to meet B.C's growing demand for electricity.**
- **We are planning to meet just 22% of demand growth through new supply – the rest will be met through conservation.**

What's the estimate on how much demand for power is expected to grow in the coming decades?

Demand is expected to increase by 40 per cent over the next 20 years as our population grows, by 1.1 million people and the economy expands.

We are already using more power than ever before because of new electronic devices like tablets, smartphones, PVRs and big screen TVs, and emerging technologies like electric vehicles.

There is also new industrial activity in mining, oil and gas and an emerging liquefied natural gas (LNG) sector.

How can you be sure those numbers are accurate?

BC Hydro's load forecasting methodology has already been independently reviewed through a number of BCUC proceedings. The BCUC has accepted BC Hydro's load forecasting methodology.

In addition, as part of a due diligence process, a third-party review was commissioned by BC Hydro from an independent energy consultant with over 30 years of experience in load forecasting who concluded that "BC Hydro is using state-of-the-art methodologies for forecasting sales."

Will Site C result in a surplus of power?

BC Hydro has a need for new energy and capacity resources before Site C even comes into service.

For the first few years after Site C begins operation we expect a portion of the energy from Site C to be surplus that BC Hydro will sell on the open market.

Site C will generate clean, renewable power for generations of British Columbians.

Will this power have to be sold for less than it costs to produce?

In the short term, Site C will have a surplus that will need to be sold on the market. The flexibility of large hydro means that Site C surplus can be shaped to be sold in higher priced periods. However, Site C will have a 100 year life span during which time rates and demand are expected to increase and more than compensate for any shortfalls that are incurred at the front end of the business plan.

Over the first 50 years of Site C's project life, ratepayers will save an average of $650 to $900 million each year, compared to alternatives.

How much will selling surplus power at a loss cost ratepayers?

The costs associated with the energy surplus were fully accounted for when we conducted our analysis of Site C versus IPPs.

Based on that analysis, Site C can deliver power to ratepayers at a lower cost than IPPs.

Over the first 50 years of Site C's project life, ratepayers will save an average of $650 to $900 million each year, compared to alternatives.

Why build Site C now if it's going to result in surplus power?

BC Hydro has a need for new energy and capacity resources before Site C even comes into service.

With regard to energy, we expect to be in a surplus for a relatively short period after Site C comes into service.

For example, the last major hydroelectric project in B.C. was the Revelstoke Dam. It was built some years before needed and sold surplus electricity the first several years of operations.

Then demand caught up with supply and today the Revelstoke Dam, like other heritage dams, provides steady supply of clean renewable electricity at a current cost of under $30 per megawatt-hour.

What if the LNG industry does not materialize and 10 years from now we have all this power and no LNG plants to use it and pay for it?

Electricity from Site C would not be targeted to a single customer or sector; it would serve all customers as part of an integrated grid. The long-term load forecast showing the demand for electricity is expected to increase by 40% over the next 20 years excludes any load from LNG facilities (before BC Hydro's aggressive conservation and efficiency initiatives).

What other measures are you taking to meet the demand?

Conservation is still the most important way we can meet growing demand. BC Hydro has already embarked on an ambitious power saving campaign with the goal of meeting 78 per cent of forecast additional demand by 2021.

BC Hydro is also investing $1.7 billion per year to maintain its existing system, including making investments that maximize the capacity of current facilities such as adding new and upgraded turbines at GM Shrum and Revelstoke.

There's also a number of Independent Power Projects that are in development but have not yet come on line, and more will come into service as part of BC Hydro's Standing Offer Program for small, renewable resources.

Should the need for more energy increase more than BC Hydro expects, for example due to expanded industrial activity, BC Hydro will acquire more power from the independent power sector.

How do we compare to others in the area of conservation?

BC Hydro's target for conservation is among the most aggressive of any utility in North America.

Is Site C being built just to subsidize the oil and gas industry?

No. This is not about building Site C for any specific industry, we are meeting overall demand growth with a prudent mix of demand reduction initiatives and cost-effective new supply.

What if we didn't build Site C? Couldn't we just increase conservation?

No. BC Hydro already has an aggressive target of 78 percent reduction through conservation. Even if the target is met load is still expected to grow at approximately 1 percent per year.

We need new supply as well to meet growing demand. Site C is the most affordable long-term solution.

Why not force major users to conserve more? Wouldn't that have an economic benefit in that those companies could increase investment in green technologies?

BC Hydro already has programs for large industrial customers to meet its aggressive conservation targets.

For example, this past summer BC Hydro announced a new Power Smart program that will reduce electricity costs for pulp and paper producers.

The new program builds on existing initiatives for industrial customers where BC Hydro provides a financial incentive of up to 75% of the project cost to support investments in more energy efficient equipment.

Under the new program, thermo-mechanical pulp and paper producers, which have electricity costs that account for as much as 30% of their operating budgets and represent 10% of BC

Hydro's annual power sales, will be eligible for increased incentives ranging from $5 million to $25 million for projects that can reduce their power consumption.

The program is expected to reduce electricity consumption by 300 gigawatt hours per year which will save pulp and paper producers $17.5 million in annual power costs

In terms of demand for electricity in BC, the reported record of sales by BC Hydro has flat-lined at about 50,000 GWhrs between 2008 and now. So then is this project being built simply as a legacy project?

Domestic sales of power have grown 6% since 2010, and are expected to continue to increase with population growth and expansion of the economy.

BC will need 40% more electricity over the next 20 years as our population will grow by 1.1 million people and the economy expands. After conservation, demand is expected to increase by approximately 1% per year

ALTERNATIVES TO SITE C:

- **We conducted extensive due diligence on alternative options including natural gas and independent power sources and it is clear that the most affordable, most dependable, and the cleanest option is Site C.**
- **Site C can deliver power to ratepayers at a considerably lower cost than other options.**
- **Site C gives us a proven, firm, dependable source of power that we can relied upon to meet peak demand always, whereas IPPs are intermittent for example when the wind isn't blowing, or the rivers are running at seasonal lows.**

What other sources of power generation have you looked at and why did you settle on Site C as the preferred option?

BC Hydro and government conducted extensive due diligence on alternative options including IPPs such as wind and run of river, and natural gas.

In the end it was clear that Site C provides the most cost-effective, reliable and cleanest options for the Province of British Columbia.

Site C gives us a proven, firm, dependable source of power that we can relied upon to meet peak demand always, whereas IPPs are more intermittent for example when the wind isn't blowing, or the rivers are running at seasonal lows.

Because Site C power is such a dependable source it enables further opportunities for IPPs which are often intermittent.

What's your reaction to claims from the IPP industry that they are cheaper than and just as efficient as Site C?

We worked closely with Clean Energy BC and reviewed their studies. In the end, we have determined that Site C is the most affordable option for ratepayers.

But what about the study by Clean Energy BC that said they could provide power at $74/MWh?

Clean Energy BC commissioned London Economics International to conduct a study that concluded IPPs could provide energy at a cost of $74 per megawatt hour.

The study was based on the capital costs of recent projects completed in the United States and did not include environmental assessment, permitting or First Nations accommodation costs. It also didn't include adjustments to reflect B.C.'s higher labour costs or construction costs due to

the more challenging landscape and terrain in our province, as well as other adjustments to deliver the power to customers and firm up intermittent resources.

Even with these adjustments Site C is still significantly cheaper than alternatives.

How do the costs of power from Site C compare with the costs of power from independent power producers?

The cost of energy produced by a project depends on its capital costs as well as its operating life and ongoing operating costs. This is known as the unit energy cost which accounts for all of these costs and is the best way to compare options.

Site C can provide power delivered to the lower mainland for $64 - $67 per megawatt hour compared to a cost of $110 - $130 per megawatt hour for a portfolio of IPPs.

How did you arrive at those figures?

Site C:

For Site C the starting point was BC Hydro's Integrated Resource Plan (IRP).

The IRP determined a unit energy cost of $83 for Site C. That included recovery of the cost of building the project, operating costs, ongoing maintenance, and net income. Net income is the return or profit that BC Hydro must generate for taxpayers on its assets.

In 2013 government introduced a number of measures to reduce the amount of net income that BC Hydro is required to generate. In addition, government made changes to reduce water rental rates for BC Hydro.

Taken together these changes reduced the operating costs for Site C and in turn reduced the unit energy cost for the project from $83 per megawatt hour to $56 per megawatt hour.

The increase in the capital cost estimate for Site C translated into an additional $2.25 to the energy cost for Site C bringing it to $58.25

Government also established a project reserve of an additional $440 million to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates. If the project reserve were to be fully utilized that would add $2.50.

Taken together the cost to ratepayers of the energy from Site C goes from $83 to $58 megawatts per hour to $61 per megawatt hour if the full reserve is used.

IPPs:

For IPPs, the unit energy cost determined in the analysis for the IRP was $96 per megawatt hour. This was based on consultations with the industry and on the costs as reflected in recent power calls.

Following release of the IRP, the IPP industry suggested that additional analysis was required to reflect recent advances in technology and efficiency.

Government conducted further extensive consultations with the IPP industry and, based on this due diligence process, reduced the unit energy cost for a suite of IPPs from $96 per megawatt hour to $85 per megawatt hour for its analysis.

Comparing Site C to IPPs:

When comparing options, the costs of delivering the electricity to customers must be accounted for.

We have to look at additional factors beyond the cost of the energy where it is generated, including:

- With both Site C and IPPs there is a cost to deliver that energy to customers.
- With IPPs, because they are intermittent and not always available there are also two additional costs:
  - First – you need to back up IPPs with firm energy sources so that power is available even when the wind isn't blowing or rivers aren't flowing.
  - And second, IPPs limit the amount of trade revenue that BC Hydro can generate because BC Hydro has to hold back a portion of its system to back-up fluctuating and intermittent IPP generation.

After accounting for these factors you end up with a final cost to ratepayers of $64 – 67 MWh for Site C and $110 to $130 / MWh for IPPs.

Why does the increase of almost $400 million to the Site C capital budget only increase its unit energy cost by $2.25?

The capital costs of Site are only part of the overall costs – there are other costs such as water rentals, taxes/grants in lieu and operating costs. And those costs are amortized over 70 years.

The long-term costs for Site C will decrease over time as the capital cost is repaid resulting in very low costs to ratepayers over the long term.

For example, today the WAC Bennett dam, completed in 1968, produces electricity for $17 per megawatt hour, and the Revelstoke Dam – BC Hydro's most recent dam, completed in 1984 – produces electricity at $28 per megawatt hour.

Have your unit energy cost comparisons for Site C and the IPP/gas option been independently verified?

Synapse Energy Economics has independently reviewed and verified BC Hydro's methodology for assessing alternatives. Synapse concluded that BC Hydro's alternatives analysis methodology and tools are consistent with good utility practice

The unit energy cost used for the IPP option is based on consultations with the independent power industry.

This decision makes it clear that government wasn't convinced by the arguments set forth in the London Economics International study that Clean Energy BC produced. Why not?

London Economics International (LEI) estimated the cost of IPP electricity at $74 per megawatt hour.

However, the study was based on the capital costs of recent projects completed in the United States and didn't include environmental assessment, permitting or First Nations accomodation costs or adjustments to reflect B.C.'s higher labour costs or construction costs due to the more challenging landscape and terrain in our province, as well as other adjustments to deliver the power to customers and firm up intermittent resources.

Even with these adjustments Site C is still significantly cheaper than alternatives.

Clean Energy BC also produced a KPMG study on the economic benefits of IPPs. Was that considered?

The economic benefits of Site C and of IPPs are an important consideration and government carefully considered Clean Energy BC's study as well as the work that BC Hydro has done on the economic benefits of Site C, as part of making a decision.

However, the overriding consideration was what would keep rates as low as possible and it is clear that to keep rates low, Site C is the best option.

Site C also will be a source of firm, dependable power for more than 100 years.

What about natural gas?

Filling our future power needs with natural gas generation would increase greenhouse gas emissions by 1.6 million tonnes per year and government would have to abandon its commitment to ensuring 93% of our energy is clean or renewable.

This option would also be vulnerable to gas prices and carbon price uncertainties.

Despite these challenges, government did an analysis of the unit energy cost for natural gas plants as part of its due diligence process which concluded that natural gas plants would have a higher unit energy cost than Site C, with significantly higher greenhouse gases. (Analysis concluded $75 / MWh for natural gas)

You let LNG producers use natural gas to generate power for their facilities – why not allow gas-fired generation for other customers?

LNG is a new industry – to establish it, we need to be competitive. Mandating electric compression would discourage investment.

We're giving LNG proponents a choice on the energy sources used to run their facilities. Allowing natural gas as an option for LNG facilities does not mean it is the only option.

Some facilities – Tilbury (Fortis), Woodfibre, will be fully electric – both e-drive for compression and grid power for ancillary needs. We also expect some facilities will use grid electricity for large ancillary needs.

LNG is the single greatest step we can take to fight climate change. China accounts for 25% of the world's carbon emissions, and relies on coal to generate power. A small percentage change from coal to natural gas in China would reduce emissions by over 90 megatons per year - more than the total emissions produced in BC in a year and a half.

What about wind power?

BC currently has four wind energy projects in operation and another one in development and it is certainly a supply source we're interested in to meet our growing power demand.

Recent advances in technology and efficiency have made wind projects more affordable. During its due diligence, government consulted with companies in the wind power industry who indicated they could provide power in the range of $80 - $90 per megawatt hour. However, this is still more expensive than Site C and is only possible for projects located in the northwest, where BC has some of its best and most efficient wind resources.

Wind energy is also intermittent (the wind does not always blow), and so it must be backed up by other firm energy sources, which increases its cost.

Why not geothermal?

While geothermal energy has a role to play in British Columbia, it has been slow to develop and has not developed the track record to reliably meet today's growing demand.

The Ministry of Energy and Mines has issued 12 permits for geothermal development in recent years, but none of those projects have bid into BC Hydro's recent power calls.

The identification of geothermal resources requires extensive drilling which can be very expensive and risky.

Is the government at least studying the possibility of geothermal as a possibility for the future?

Geoscience BC recently announced that they're going to do a study over the next few years to identify the 18 most potentially successful geothermal resources around the province and try to encourage the private sector to develop these resources.

It is a good resource. We do want to use it. It will be important in BC in the future. However, it's not a way to get the electricity that we need today.

IPP INDUSTRY:

- **Independent power projects have been a key part of our electricity system since the 1980s and will continue to play an important role in powering our province.**
- **Independent power producers provide 25% of B.C.'s electricity and support jobs throughout British Columbia, including many in First Nations communities.**
- **Government sees the IPP industry as a partner in powering the province and growing the economy.**

Why is the government moving away from IPPs for new power generation?

We aren't. IPPs have been a key part of our electricity system since the 1980s, supply 25% of our electricity today, and will continue to play an important role in powering our province.

Our number one concern at the end of the day is the ratepayer. After extensive analysis we have concluded that meeting future need through IPPs is more expensive than Site C.

Should the need for more energy increase more than BC Hydro expects, for example due to expanded industrial activity, BC Hydro will purchase more power from the independent power sector.

Won't your decision to go with Site C kill the IPP industry?

No. IPPs provide close to 25% of BC's power supply today and they will continue to play a critical role in BC's electricity system going forward. Clean Energy BC reports that there are 13 projects under construction worth $3.8 billion that will sell power to BC Hydro under already existing contracts.

BC Hydro's Integrated Resource Plan supports Site C and calls for a review of IPPs that are not yet in commercial operation. But it also calls for the renewal of cost-effective electricity purchase agreements with existing IPPs, and expands the Standing Offer Program for smaller projects under 15 megawatts.

How much would it cost BC Hydro to procure additional power from IPPs?

This would depend on the amount purchased and the demand that these purchases were intended to address.

The expected unit energy cost for IPPs is around $85 - $100 per megawatt hour before accounting for additional costs such as transmission upgrades, the delivery of the electricity, decreased trade revenues and the need to back-up with firm power sources.

Recent consultations for BC Hydro's Standing Offer Program, which is targeted towards small projects under 15 MW in capacity, have indicated a price above $100 per MWh is required for

those IPPs to be economic but larger IPPs could gain efficiencies that would allow them to bid in at a lower price.

Isn't approving Site C an admission of failure for the government's decade-old policy of promoting IPPs?

Not at all. IPPs provide 25% of B.C.'s electricity and support jobs throughout British Columbia, including many in First Nations communities.

IPPs have been a key part of our electricity system since the 1980s and will continue to play an important role in powering our province.

New projects that have come on stream in recent years – hydroelectric, wind and biomass - represent an important diversification of the power sources feeding onto the BC Hydro grid. IPPs are one aspect of B.C.'s diverse portfolio of power resources.

Critics claim that BC Hydro paid too much per megawatt for the power that IPPs produce. Is that the reason the province is shifting its focus to Site C?

No. It's important that new power generation facilities are built as cost effectively as possible, and IPPs have been acquired through competitive procurement processes. Electricity purchase agreements with IPPs also help ensure we have clean, reliable power at predictable prices for the long-term. Today we have 84 clean energy projects operating across the province.

The IPP industry has made incredible progress over the years going from supplying 4% of BC's power in 2001 to about 25% in 2014.

Government sees the IPP industry as a partner in powering the province and growing the economy.

Doesn't the approval of Site C undermine the work that's been done with IPP partnerships and First Nations?

IPP partnerships between proponents and First Nations have proven very successful and we are committed to encourage the formation of these partnerships whenever possible. The Standing Offer Program, which was expanded under the BC Hydro Integrated Resource Plan that government approved in 2013, is designed to acquire power from smaller projects (less than 15 megawatts) that include First Nations partnerships.

There are a number of impact benefit agreements being negotiated with First Nations who will be most impacted by Site C.

We are committed to working hard to identify ways that First Nations can benefit from the economic opportunities provided by the Site C project.

IMPACT ON RATES:

- **The impact on rates was our most important consideration in deciding to proceed with Site C – it is the most affordable option to meet our growing electricity needs.**
- **Site C will help maintain low rates – today, they are the third lowest in North America.**
- **There is no effect on today's BC Hydro rates from Site C as costs of the project are deferred until the project begins generating electricity around 2024 – ensuring that the costs for Site C are paid by the ratepayers who are benefitting from the project.**
- **And Site C will bring huge savings to ratepayers over the long-term as the upfront capital costs of the project are repaid and financing costs decrease.**

How will Site C affect my hydro bill?

There is no effect on today's BC Hydro rates from Site C as costs of the project are deferred until the project begins generating electricity around 2024.

This ensures that the costs for Site C are paid by the ratepayers who are benefiting from the project. Once the project is in operation, costs will be recovered from BC Hydro ratepayers over many decades.

Over the first 50 years of Site C's project life, B.C. ratepayers will save an average of approximately 6% to 8% for the typical household, compared to alternatives.

What about the impact on rates over the long term?

When the project does come into rates the costs will be amortized over a long period to reduce the impact on customers.

Site C will improve predictability in customer rates. Operating costs will be stable and predictable because the majority of costs are incurred during construction and development.

And Site C will bring huge savings to ratepayers over the long-term as the upfront capital costs of the project are repaid and financing costs decrease.

Over the first 50 years of Site C's project life, B.C. ratepayers will save an average of approximately 6% to 8% for the typical household, compared to alternatives.

What will Site C actually look like on my bill?

Specific rate impacts of Site C, and the timing of those impacts, will be determined as part of a future regulatory process by the British Columbia Utilities Commission.

Generally, B.C. ratepayers will save an average of approximately 6% to 8% for the typical household, compared to other projects we would have to pursue if we did not build Site C.

BUDGET (DUE DILIGENCE):

- **Our due diligence process led us to revise the budget to address issues that were not present when the original budget was set in 2010.**
- **BC Hydro has spent 35 years and $225 million on field work and engineering studies to develop the Site C cost estimate.**
- **We know way more about this project than we have ever known about any other BC Hydro project at the final investment phase.**

What is the reason for the cost increase?

The Site C capital cost estimate of $7.9 billion was developed in 2010 and included all construction, development, inflation and interest costs, as well as contingencies. The bottom-up estimate was completed by a team of internal and external engineering and construction experts, and underwent an external peer review by KPMG LLP to validate the methodologies and assumptions.

In 2014, BC Hydro conducted a cost refresh to reflect the advanced stage of project design and engineering and to prepare for a final investment decision by government.

The refresh showed that while some costs had increased due to factors such as a longer environmental assessment process, enhancements to worker accommodation and larger diversion tunnels, the original cost estimate remained appropriate as these increases were largely offset by lower than anticipated interest rates, efficiencies in project design and reduced excavation requirements.

As part of government's due diligence, the capital cost estimate was reviewed and updated to $8.335 billion.

Government also decided to establish a project reserve of an additional $440 million to account for events outside of BC Hydro's control, such as higher than forecast inflation or interest rates, for a total allocation of up to $8.775 billion. The reserve is subject to Treasury Board approval.

The increase to the capital cost estimate reflects:

- Costs associated with the change from the harmonized sales tax (HST) to the provincial sales tax (PST). If the capital cost estimate had not been updated to reflect this cost, BC Hydro would have been required to use funds from the project contingency budget. Government felt that it was prudent to increase the capital cost estimate so that the full contingency could be maintained.

- A revised construction start date of summer 2015 to allow more time to complete the permitting process. The revised start date results in a longer construction period which increases inflation and interest costs during construction.

With the updated capital cost estimate, Site C remains the most cost-effective option to meet B.C.'s long-term electricity needs.

BC Hydro has known about the switch back to the PST for years. Why just add this cost now?

The $7.9 billion was a 2010 estimate and the HST was in place at the time so it reflected HST. Since 2010, BC switched back to the PST.

If the capital cost estimate had not been updated to reflect this cost, BC Hydro would have been required to use funds from the project contingency budget. Government felt that it was prudent to increase the capital cost estimate so that the full contingency could be maintained.

Why are you just now adding an additional reserve fund?

Keeping with practice on other large infrastructure projects we established a project reserve of $440 million to account for events that could occur over an 8-year construction period that would be outside the control of the project team such as higher than anticipated inflation or fluctuations in interest rates. The reserve is subject to Treasury Board approval. The project reserve is in addition to a $620 million contingency allocation built into the budget.

But you already have hundreds of millions in contingencies added to the budget – why more?

The contingency fund is to account for cost increases that may occur as part of the construction process – increases in the costs of materials, or labour, or changes to the project schedule, for example.

The project reserve is for extraordinary events that are outside the control of the project team like significantly higher than anticipated inflation or fluctuations in interest rates.

Is this just to address BC Hydro's constant failure to meet budget targets like for the Northwest Transmission Line?

While we're never pleased with cost overruns on capital projects it's important to note that BC Hydro's 3-year capital plan is on budget.

In fact, in 2013 BC Hydro completed a total of 92 transmission projects that came in $87.9 million under budget overall.

The Site C budget is much more advanced in terms of the investigations and costing work than the initial estimate for the Northwest Transmission Line that was part of a Green Infrastructure Fund application to the Federal government.

Who conducted reviews of the Site C budget?

A review of the estimate methodology and financial model was undertaken by KPMG in both 2011 and 2014.

In both cases KPMG concluded that the methodology used for the cost estimate and construction of the financial model was appropriate.

KPMG found that reasonable and appropriate processes were followed for developing assumptions used in the financial model and that the assumptions and methodology behind the cost estimate remain appropriate.

In its updated review of the cost estimate in October 2014 KPMG noted:

"We have reviewed the assumption development process and it shows a level of care and diligence consistent with an infrastructure project about to enter the construction phase. Based on our review, it is our view that the Project Team has followed reasonable and appropriate processes for developing the assumptions used in the Financial Model."

In addition, a review of direct costs was undertaken in 2014 by a panel of experts in construction of large infrastructure projects. The panel was made up of individuals that each have 35 to 50 years of experience in management and construction of major projects.

The panel was led by Frank Margitan, former vice-president at Kiewit, with more than 40 years of experience in heavy civil and mining projects.

The panel concluded that:

- The estimate is sufficient for the proposed scope and schedule of the project.
- The estimate is at an appropriate level of accuracy for making a final investment decision.
- There is sufficient contingency to cover any reasonable increase in cost.

The panel concluded that the cost estimate is sufficient for the proposed scope and schedule and at an appropriate level of accuracy for making an investment.

Why won't KPMG validate the budget?

KPMG is a strategic advisor to the Site C project and has overseen the process of developing both the 2010 and 2014 cost estimate.

BC Hydro has separately brought in a panel of experienced contractors to review all aspects of the direct construction costs to ensure they are reasonable.

Is the entire budget earmarked for construction costs?

No. Only $4.3 billion of that is related to direct construction costs. The remainder is indirect costs including inflation, interest during construction, regulatory costs, environmental mitigation, community and First Nations benefits, and contingencies.

Why are the indirect costs so expensive?

The eight-year construction is a long period of time, over which financial costs such as interest during construction and interest accumulate.

Were risk management elements taken into consideration for this project?

Yes. In August 2014, a consulting firm hired by BC Hydro - Marsh Risk Consulting – reported that the Site C risk management team has done a very good job developing its project risk plan and is well positioned to implement risk management planning as the project continues to mature.

Quebec is halfway through building the $6.5 billion Romaine hydro project and a gov't commission is now recommending that it be halted because it will never pay for itself. Yet this project is cheaper than Site C and produces more energy. The problem? An average N. American market price for electricity of $30 a MWh due to cheap natural gas. Somehow Site C will be different?

Hydro Quebec is building the Romaine project to export power to other markets and needs a contract to sell the power.

BC Hydro is building for domestic demand growth. Site C is most cost effective option in B.C.

IMPACT ON PROVINCIAL DEBT RATING:

- **Our discussions with debt rating agencies indicate that Site C will have a neutral impact on the province's credit rating, although that final determination of any rating is made by the agencies.**

What are the impacts on the provincial debt?

There is no impact on the Province's debt.

The net incremental increase to BC Hydro's debt from building Site C is expected to be approximately $6.4 billion.

What about the Province's credit rating?

BC Hydro's debt is self-supported debt and most credit rating agencies do not include self-supported debt in their analysis of the Province's credit rating. Standard and Poors has indicated that they will start including self-supported debt in their analysis of provincial credit ratings. That said, recent discussions with Standard and Poors indicate that commercial borrowing for Site C would have a neutral impact on the agency's assessment of the province's credit rating, although that final determination of any rating is made by the S&P Credit Committee.

BC Hydro already has more than $16 billion in debt and a number of major projects under construction. Is there a limit to how much the debt the corporation can carry?

The capital structure put in place under the 10 Year Plan will ensure that BC Hydro's debt-to-equity ratio will improve from 80:20 to 60:40. A ratio of 60:40 is comparable or better than most electrical utilities in Canada.

Government is taking less dividends from BC Hydro than it would have it Site C did not proceed ($820 million less in total over the project construction period), so that the debt to equity ratio can be maintained while Site C is under construction.

How would potential cost overruns and/or construction delays impact credit rating?

The Ministry of Finance has worked on this issue and there is no impact on the Province's debt. Recent discussions with Standard and Poors indicate that commercial borrowing for Site C would have a neutral impact on the agency's assessment of the province's credit rating, although that final determination of any rating is made by the S&P Credit Committee.

The 10-year plan includes measures to reduce BC Hydro's debt-to-equity ratio to 60:40 from the current level of about 80:20. Will borrowing to build Site C make it impossible to reach that goal?

Reaching the 60:40 debt-to-equity ratio is estimated to be delayed by two years - from 2028 to 2030.

DELAYING THE PROJECT:

- **We're starting construction in summer 2015 to allow for orderly permitting and planning of construction.**
- **Delaying the start of the project any further would create additional risks and costs that would significantly increase the project budget.**

Why are you delaying the project?

We're starting construction in summer 2015 to finalize permitting and complete procurements in an orderly fashion.

A summer 2015 construction start is an achievable and realistic timeline for additional First Nations engagement to be completed.

How much will it cost to adjust the start of this project from January 2015 to mid-summer 2015?

We expect that the adjusted start date could cost up to $175 million mostly due to inflation and interest over a longer period. However, BC Hydro is implementing a number of measures to manage this cost and it is possible that the actual impact could be lower.

Why does adding $175 million to the cost make any sense? Why not just go now?

More time is needed to complete the permitting process for the project and complete procurements. And under the environmental assessment approval, some early activities like site clearing cannot be undertaken in the April to July period due to potential wildlife impacts, so construction will need to start in the summer.

Why not delay approval of the project until you have greater support from First Nations and other groups?

Delaying the final investment decision would have created additional risks and costs that would significantly increase the project budget and the cost to ratepayers.

FIRST NATIONS CONCERNS:

- **We understand the concerns of First Nations and we are committed to working hard to accommodate project impacts and identify opportunities for them to benefit from the project.**

First Nations have been very vocal in opposing the project and you're now approving it to proceed to construction. How can you call that meaningful consultation?

BC Hydro has been consulting and engaging with Aboriginal groups about Site C since 2007, focusing its consultation on those groups most affected by the project but also engaging with other Aboriginal groups that may experience some effects.

The Site C project received federal and provincial environmental approvals on October 14, 2014, which included the release of a Federal/Provincial Consultation and Accommodation Report.

The conclusion of the report stated: "*The Agency and EAO are of the view that there has been meaningful consultation with the potentially affected Aboriginal groups, to understand the potential impacts of the proposed Project on Aboriginal Interests, and to develop substantive accommodation measures that are intended to reduce, mitigate or offset these impacts*."

The report also concluded "*that consultation has been carried out in good faith and that the process was appropriate and reasonable in the circumstances*."

BC Hydro has provided over $14 million in capacity funding to Aboriginal groups to support general engagement, traditional land use studies and baseline reports.

We remain committed to working hard with Aboriginal groups to address their concerns and identify opportunities for them to benefit from the project.

Are First Nations companies going to get contracts for the construction of Site C?

Yes. BC Hydro is engaged in discussions with Aboriginal groups and their companies respecting direct procurement opportunities. Aboriginal companies are also participating in competitive bid processes.

What can we say about the transfer of Crown land to First Nations, as compensation for land that could be flooded by the Site C reservoir?

Transferring land is one way of compensating First Nations for loss of land but negotiations are under way so we won't talk about specifics. If specific Crown land parcels are identified and agreed to by the parties, BC will consult with local government, tenure holders and other First Nations that may have interests related to those lands.

How many First Nations are prepared to sign benefit agreements?

BC Hydro has made offers of accommodation to all of the First Nations that the independent Joint Review Panel determined to be significantly affected by the project.

How much have you allocated to pay FNs?

There are amounts in the Site C budget to support First Nations and community benefit agreements. As those negotiations are ongoing, we cannot disclose those amounts as they are commercially sensitive.

How will Site C impact future projects under the First Nations Clean Energy Business Fund? Won't BC Hydro need fewer clean energy projects?

All projects with power purchase agreements with BC Hydro currently under development will proceed as planned. In addition, as part of the Clean Energy Strategy, there are numerous opportunities under BC Hydro's expanded Standing Offer Program for new projects up to 15 MW.

It's important to note it will be almost 10 years before Site C begins supplying electricity.

In addition, if B.C.'s power needs outstrip the ability to be met by Site C, independent power producers will be given the opportunities to fill the gap.

LEGAL CHALLENGES:

- **We recognize that some First Nations are opposed to the project so legal challenges were not unexpected.**
- **We're committed to working with these groups to achieve accommodation agreements that work for both government and impacted First Nations.**

What's your reaction to the judicial review filed by Treaty 8 First Nations?

It's not a surprise or unexpected. We recognize that some First Nations are opposed to this project.

We're committed to working with these groups to achieve accommodation agreements that work for BC Hydro, government and impacted First Nations.

How common is it for First Nations and other opponents to seek judicial reviews on major projects?

It is not unusual. In (almost) all cases the courts have ruled that proper consultation did occur, noting that consultation is meant to shape and improve projects to minimize their impact, not to provide an avenue for compensation or veto.

We're committed to working with these groups to achieve accommodation agreements that work for BC Hydro, government and impacted First Nations.

Can site preparation or construction begin while judicial reviews and other possible legal actions are before the courts?

A judicial review would not in itself legally prevent BC Hydro from proceeding with site preparation and construction activities.

Do First Nations or others have the legal authority to secure an injunction that forces a temporary halt to work on the project?

Once a judicial review is commenced petitioners can make an application for a stay of project activities. It would be up to the Courts to decide whether or not to grant a stay of activities.

How long could such a delay last and what effect would it have on the project?

It would be up to the Courts to decide how long a stay of activities would last.

In the event of civil disobedience (i.e. a blockade) would BC Hydro/the Province seek a court order to have the protesters removed?

I cannot speculate on that. What I can say is BC Hydro's focus is on negotiating agreements and developing positive relationships with First Nations.

How will the William decision affect the Province's legal rights regarding Site C lands?

The William decision does not address any rights or title of Treaty 8. The Site C project would be located on lands under Treaty 8.

This is an important distinction from the recent Supreme Court of Canada *Tsilhqot'in* decision, which was a case that involved Crown lands subject to Aboriginal rights and title claims with no treaty.

How can you say you have consulted enough if you still have no agreements reached?

BC Hydro has been consulting and engaging with Aboriginal groups about Site C since 2007, focusing its consultation on those groups most affected by the project but also engaging with other Aboriginal groups that may experience some effects. .

The Site C project received federal and provincial environmental approvals on October 14, 2014, which included the release of a Federal/Provincial Consultation and Accommodation Report.

The conclusion of the report stated: "*The Agency and EAO are of the view that there has been meaningful consultation with the potentially affected Aboriginal groups, to understand the potential impacts of the proposed Project on Aboriginal Interests, and to develop substantive accommodation measures that are intended to reduce, mitigate or offset these impacts*."

The report also concluded "*that consultation has been carried out in good faith and that the process was appropriate and reasonable in the circumstances*."

BC Hydro has provided over $14 million in capacity funding to Aboriginal groups to support general engagement, traditional land use studies and baseline reports.

We remain committed to working hard with Aboriginal groups to address their concerns and identify opportunities for them to benefit from the project.

Based on what First Nations have said to date – LNG or Site C – does this mean no LNG?

We believe in both. We remain committed to working hard with First Nations to address their concerns and identify opportunities for them to benefit from both Site C and the province's LNG sector.

Do you really think, based on the firm stance First Nations such as West Moberly have taken, that you can reach any agreements?

Yes. We remain hopeful and we will continue working hard with First Nations to address their concerns, identify opportunities for them to benefit from the project and develop positive relationships.

How much money have you allocated for court costs?

Funding for legal costs is included in the project budget. The specific amount cannot be disclosed as it is commercially sensitive.

ENVIRONMENTAL IMPACT:

- **Site C will provide a source of clean, renewable energy in B.C. for more than 100 years.**
- **Site C will have the lowest greenhouse gas emissions compared to other forms of electricity generation.**
- **The federal and provincial environmental approvals of the project include dozens of legally enforceable conditions that must be met.**

What do you say to people who claim the environmental impact of Site C will be far too sweeping?

All major infrastructure projects have environmental impacts and Site C is no different.

In providing environmental certification the provincial and federal governments have concluded that the impacts of the project are justified by the benefits the project provides. The EA decision comes with a set of conditions that BC Hydro must meet to build and operate the project.

By relying on the Williston reservoir for storage, Site C will produce 35% of the electricity generated by the WAC Bennett dam with a reservoir just 5% of the size.

Site C will provide a source of clean, renewable and cost-effective electricity in B.C. for more than 100 years.

The environmental assessment certificate includes 77 legally-enforceable conditions that the proponent must meet.

The Environmental Assessment Office will monitor progress on the project to ensure that it is satisfied that the certificate conditions are met.

In addition, BC Hydro is required to obtain a variety of provincial permits, through a process coordinated and led by the Ministry of Forests, Lands and Natural Resources Operations.

What about impacts to agriculture?

More than 99 per cent of Class 1 to 5 agricultural lands in the Peace Agricultural Region would not be affected by Site C.

Overall, agricultural production will benefit from proposed mitigation measures, including a $20 million agricultural compensation fund proposed by BC Hydro that would support agricultural programs and projects such as irrigation and drainage improvements.

Other proposed mitigation measures include the implementation of individual farm mitigation plans to support the continued operation of farms directly affected by the project.

The Joint Review Panel concluded the permanent loss of agricultural production of the Peace River valley bottomlands is not considered significant.

What do you say then to the growers it does impact? Will they be compensated?

Proposed mitigation measures include the implementation of individual farm mitigation plans to support the continued operation of farms directly affected by the project.

Overall, agricultural production will benefit from proposed mitigation measures, including a $20 million agricultural compensation fund proposed by BC Hydro that would support agricultural programs and projects such as irrigation and drainage improvements.

Does the government not see value in local food sources or see the importance of maintaining our ability as a Province to supply our own food?

More than 99 per cent of Class 1 to 5 agricultural lands in the Peace Agricultural Region would not be affected by Site C.

No changes are anticipated to the ability of the region to produce food to satisfy regional consumption.

The Joint Review Panel concluded the permanent loss of agricultural production of the Peace River valley bottomlands is not considered significant.

Why is the Province exempting Site C from a review by the ALC?

The environmental assessment process, including the Joint Review Panel hearings, included an assessment of the agricultural impacts from Site C.

A further review by the Agricultural Land Commission would duplicate this process and create additional costs for taxpayers.

Government will take appropriate action to address the ALR lands affected by the Project that includes a $20 million compensation fund proposed by BC Hydro.

How do you define ``appropriate action``?

There are a number of statutory and regulatory options available to government to ensure that there is not a redundant review of agricultural impacts by the ALC.

I am not going to speculate which of those government will choose.

JOBS:

- **Site C will create 10,000 direct construction jobs and contribute $3.7 billion to the province's GDP.**
- **Proceeding with Site C will not have a serious impact on the workers available to build the LNG industry because the labour requirements for Site C are different than for LNG.**

How much employment is Site C expected to create?

Site C will create 10,000 direct construction jobs and contribute $3.7 billion to the province's GDP.

How does that compare to the employment that would have created if you'd gone with the IPP option instead of Site C?

The IPP portfolio would create fewer jobs during construction, but more jobs during operations.

Our first and most important consideration in choosing Site C over IPPs was the impact on ratepayers. Site C is the most affordable, most reliable option to supply our power needs for the future.

Are you going to have enough workers to build Site C and build LNG facilities?

Yes. BC Hydro has worked closely with the Ministry of Jobs, Tourism, and Skills Training to identify Site C labour requirements in relation to the development of the LNG industry.

Labour requirements for Site C are different than for LNG. Site C is concentrated in heavy equipment operators, supervisors, labourers and trades – more like a mining project. LNG has less need for heavy equipment operators and supervisors and its specific trades requirements are different.

Has BC Hydro ever used temporary foreign workers on infrastructure projects?

I can't speak to every BC Hydro infrastructure project ever built, but as a recent example, I can tell you that there were no foreign workers used with the Northwest Transmission Line. The engineering firm for that project was US-based so there were a very small number of US-based management and professional staff who worked for that company. The construction workers were all Canadian. Half of the labour force was local (living somewhere between Terrace and Bob Quinn) and the rest were from other parts of Canada.

Will BC Hydro consider using temporary foreign workers on Site C?

The private sector companies that will be awarded contracts to build Site C will be responsible for hiring the workers they need to get their job done. As such, BC Hydro would not be doing the hiring for the vast majority of the labour required for the project.

Generally, it has been our observation that contractors tend to hire locally and regionally first, then nationally before considering foreign workers. For example, no foreign workers were used on the Northwest Transmission Line, and about half the labor force was local, with the rest from other parts of Canada.

BCUC:

- **The decision to proceed with Site C is a major public policy decision, most appropriately made by the elected government, not the utilities commission.**
- **The BCUC does not actually have the capacity to do the kind of work that has been done by BC Hydro in analysing and reviewing the project, particularly the costs.**
- **BC Hydro has been developing Site C for 35 years and has spent $225 million on engineering work and field investigations. As a result, we know more about Site C than any other BC Hydro project at the final investment phase.**
- **As with other large infrastructure projects, BC Hydro will be required to provide regular reports to the BCUC during the construction of Site C.**
- **The BCUC will decide how the costs of Site C are recovered in rates.**

The Mayor of Hudson's Hope, First Nations and others have insisted that Site C should be referred to the BC Utilities Commission (BCUC). Why did the government refuse to do this?

The decision to proceed with Site C is a major public policy decision, most appropriately made by the elected government, not the utilities commission.

The BCUC does not actually have the capacity to do the kind of work that has been done by BC Hydro in analysing and reviewing the project, particularly the costs.

The costs of Site C have been independently reviewed by KPMG and a panel of independent contractors – work that the commission would have contracted out itself regardless.

BC Hydro has been developing Site C for 35 years and has spent $225 million on engineering work and field investigations. As a result, we have a far greater level of information about Site C than other BC Hydro projects typically have at the final investment phase.

To provide additional transparency on the project's capital costs, BC Hydro will be required to provide regular reports to the British Columbia Utilities Commission during construction.

Critics have also demanded that BC Hydro's demand side management and load growth projections be reviewed by the BCUC. Will government agree to this?

BC Hydro's load forecasting methodology has already been independently reviewed through a number of BCUC proceedings. The BCUC has accepted BC Hydro's load forecasting methodology.

In addition, as part of a due diligence process, a third-party review was commissioned by BC Hydro from an independent energy consultant with over 30 years of experience in load forecasting who concluded that "BC Hydro is using state-of-the-art methodologies for forecasting sales."

If that's the case why did the Joint Review Panel conclude that BC Hydro had not fully demonstrated the need for Site C on the timetable set forth in the application?

The Joint Review Panel's calculations of need did not include any electricity demand from LNG.

BC Hydro submitted information to the Panel after its report was released that showed that Site C would be required on the schedule that BC Hydro had proposed under a conservative LNG demand scenario.

LOCAL IMPACT:

- **Site C will bring opportunities for new and existing jobs and businesses during the construction phase.**
- **During construction Site C will result in $40 million in tax revenues to local governments.**
- **The project will provide lasting benefits for communities and residents of the Peace Region, including a regional legacy benefits agreement that will provide $2.4 million annually to the regional district and its communities once the project is up and running.**

Do local governments support this project?

BC Hydro has been consulting with communities, local governments, stakeholders and the public since 2007.

BC Hydro reached a regional legacy benefits agreement with the Peace River Regional District (PRRD) – announced in June 2013 – whereby BC Hydro will provide $2.4 million annually to the PRRD and its member communities for 70 years once Site C is operational. The payment will be indexed to inflation.

BC Hydro is also working with communities to reach agreements that will provide lasting benefits for residents in the Peace region. To date, agreements have been reached with the Districts of Taylor and Chetwynd, and discussions continue with Fort St. John and Hudson's Hope.

What impacts will Site C have on communities?

Like any major project there will be impacts. There will also be significant benefits. BC Hydro has been consulting with communities, local governments, stakeholders and the public to understand their concerns since 2007.

The Joint Review Panel concluded that:

- There will be no significant adverse effects on population, housing, community infrastructure and services, or the labour market.
- There will be opportunities for new and existing jobs and businesses during the construction phase.
- Local government revenues to be received from existing sources, together with payments contemplated in negotiations between the Proponent and local governments, would generally be sufficient to maintain service quality levels; therefore, no significant adverse effects or cumulative effects are foreseen.

What kind of compensation is being offered to communities affected by the project?

BC Hydro reached a regional legacy benefits agreement with the Peace River Regional District (PRRD) – announced in June 2013 – whereby BC Hydro will provide $2.4 million annually to the PRRD and its member communities for 70 years once Site C is operational. The payment will be indexed to inflation.

BC Hydro is also working with communities to reach agreements that will provide lasting benefits for residents in the Peace region. To date, agreements have been reached with the Districts of Taylor and Chetwynd, and discussions continue with Fort St. John and Hudson's Hope.

How many homes will be impacted by Site C?

With respect to land requirements for Site C, BC Hydro and the Crown already own 93 per cent of the land required for the project.

With respect to residences, there are 30 property owners with residences that may be impacted. Not all of these residents will be required to move.

- About a third of the affected residences could potentially stay where they are today.
- Up to another third of these residences could potentially be moved to another area on their property.
- We anticipate that approximately ten privately-owned residences would not be able to remain on the existing property.

In all cases, compensation is provided based on fair market value, plus additional compensation such as legal and moving costs and any business or financial costs related to the property.

BC Hydro continues to meet directly with property owners who may be impacted.

What kind of compensation will property owners be offered?

Compensation is negotiated directly with land owners.

Compensation is based on fair market value of the lands, plus additional compensation such as property transfer tax and reasonable moving, legal and survey costs that are incurred in acquiring a similar interest or estate in other land, and any business or financial costs related to the property.

And what if they refuse to leave?

We want to negotiate with homeowners impacted by Site C and fairly compensate them, and our goal is mutually agreeable settlements. As a last resort, BC Hydro will expropriate the properties and compensate the homeowners at fair market value.

SITE C CAPITAL COST ESTIMATE

The Site C capital cost estimate of $7.9 billion was developed in 2010 and included all construction, development, inflation and interest costs, as well as contingencies. The bottom-up estimate was completed by a team of internal and external engineering and construction experts, and underwent an external peer review by KPMG LLP to validate the methodologies and assumptions.

In 2014, BC Hydro conducted a cost refresh to reflect the advanced stage of project design and engineering and to prepare for a final investment decision by government. The refresh showed that while some costs had increased due to factors such as a longer environmental assessment process, enhancements to worker accommodation and larger diversion tunnels, the original cost estimate remained appropriate as these increases were largely offset by savings from lower than anticipated interest rates, efficiencies in project design and reduced excavation requirements.

As part of government's due diligence, the capital-cost estimate was reviewed and updated to $8.335 billion. Government also decided to establish a project reserve of an additional $440 million, to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates, for a total of up to $8.775 billion. The reserve will be subject to provincial Treasury Board approval.

The increase to the capital cost estimate from $7.9 billion to $8.335 billion reflects:

- Costs associated with the change from the harmonized sales tax (HST) to the provincial sales tax (PST). If the capital cost estimate had not been updated to reflect this cost, BC Hydro would have been required to use funds from the project contingency budget. Government felt that it was prudent to increase the capital cost estimate so that the full contingency could be maintained.
- A revised construction start date of summer 2015 to allow more time to complete the permitting process. The revised start date results in a longer construction period which increases inflation and interest costs during construction.

As with other large capital projects, BC Hydro will be required to provide regular reports to both the British Columbia Utilities Commission and government, during construction.

Debt Impact

Site C will result in a net incremental increase to BC Hydro's forecast debt of approximately $6.4 billion. This is less than the capital cost estimate for the project due to lower dividend payments to government and costs that have already been incurred.

For context, BC Hydro is currently investing an average of $1.7 billion per year to maintain and upgrade its existing system. With Site C, BC Hydro's total capital spending will average about $2.4 billion per year.

Due Diligence Reports

In 2014, external peer reviews were completed to validate the methodologies and assumptions of the project's capital cost estimate. The full reports are available online at www.sitecproject.com

KPMG LLP

KPMG conducted a review of the updated capital cost estimate and concluded that the level of care and diligence was consistent with an infrastructure project about to enter construction phase, that reasonable and appropriate processes were followed for developing the assumptions used in the Financial Model, and that the methodology behind the cost estimate was appropriate.

> "Since the 2010 estimate, KPMG performed another thorough review of the 2014 cost estimate process and again we found the extensive process exemplary."
>
> (December 2014)

> "We have reviewed the Assumption development process and it shows a level of care and diligence consistent with an infrastructure project about to enter the construction phase."
>
> (October 2014)

Panel of Independent Contractors

An additional review of the project's estimate of direct construction costs was undertaken by a panel of experienced independent contractors. The panel was made up of individuals that each have 35 to 50 years of experience in management and construction of major projects.

The panel concluded that the capital cost estimate was sufficient for the proposed scope and schedule of the project, contained an appropriate level of accuracy for making a final investment decision and was at a level of detail comparable to a private sector contractor estimate. The panel also concluded that the updated contingency was sufficient to cover any reasonable cost increases.

> "Overall, it is the panel's conclusion that the estimate is sufficient for the proposed scope and schedule of Site C. The estimate has an appropriate level of accuracy for making a final investment decision. Further, there are some opportunities for cost reduction available."

> "The direct cost estimate has been prepared to higher level of detail than typical owner's estimates and at a similar level of detail as a Contractor in the Private Sector."

"The direct cost estimate appears to be sufficiently complete and adequate to cover all anticipated costs associated with constructing the works in the planned time schedule."

"The estimate has sufficient allowances/contingency to cover any reasonable increase in cost resulting from design development or cost estimate uncertainty."

(October 2014)

Contact: Jake Jacobs
Media Relations
Ministry of Energy and Mines and Responsible for Core Review
250 952-0628

Connect with the Province of B.C. at: www.gov.bc.ca/connect

Site C Final Investment Decision – Technical Briefing

Notes for Minster Bill Bennett

Slide 1 – no notes

Slide 2:

- Thank-you for coming.
- Today Premier Christy Clark will announce that government has decided to proceed with the Site C Clean Energy Project.
- Here to review the results of government's due diligence process which:
    - Resulted in an updated capital cost estimate for Site C as well as the establishment of a project reserve
    - Involved extensive consultation with the independent power industry; and
    - Concluded that Site C was the best way to meet our growing need for electricity while keeping rates low

Slide 3:

- Today, BC's residential electricity rates are the 3rd lowest in North America and the 4th lowest for commercial and industrial customers

- Today's decision put ratepayers first – and will make sure British Columbia maintains its low cost power advantage

Slide 4:

- We don't often think about how well our electricity system works – it just tick's along.
- BC Hydro maintains 77,000 kilometres of transmission lines over vast and challenging terrain
- We've had 0 brownouts in British Columbia
- And over 93% of the electricity we produce is clean
- Our goal is to keep our system reliable and clean & that means planning ahead and making investments now to meet our growing needs

Slide 5:

- Demand for electricity in BC will grow by 40% over next 20 years:

    - 1.1 million more residential customers using more electricity than ever to power all those new devices coming in their homes – cell phones, PVRs, big screen TVs and more

    - economy is growing – and in particular, demand is growing across all customer groups – residential, commercial and large industrial

- Emerging technologies such as electric vehicles that will also require new power

- If you look at the slide you'll see a red line and a green line

- The green line shows demand being met by conservation – I will talk about this more on the next slide

Slide 6:

- We wouldn't be building Site C if we didn't need to.
- Our first choice, BC Hydro's first choice, is to avoid the need to build by reducing the growth in demand
- This keeps rates down and costs low
- That's why BC Hydro is continuing its ambitious Power Smart programs with a target to meet 78% of new demand through conservation
- This means BC Hydro is planning to meet only 22% of load growth with new supply.

Slide 7:

- Our electricity comes from many diverse sources

- As you can see, heritage hydro is the foundation of our system but you can also see that about 25% of BC Hydro's energy needs are provided by IPP renewable projects. The role IPPs play in our system will continue to grow and become more important as new projects come online and existing projects are renewed.

- Today, under the 10 Year Plan, BC Hydro is investing $1.7 billion per year to maintain and upgrade its existing facilities

- Even with ambitious Power Smart programs…

- Even with investments in BC Hydro's existing system…

- Even with continued growth of the independent power sector…

- BC will still need energy and capacity – and Site C is the lowest cost way to get it.

Slide 8:

- As part of our due diligence process we commissioned a review of BC Hydro's load forecast methodology by an independent energy consultant – Mr.Mark Gilbert.

- Mr. Gilbert has held leading positions in forecasting at three electric utilities over a career of 33 years – most recently at American Energy Power or AEP which serves 5 million customers through seven electric operating companies doing business in 11 states.

- Mr. Gilbert confirmed that BC Hydro's forecasting methodologies are state-of-the-art.

Slide 9:

- As part of our due diligence process, we considered a number of options
  - Site C
  - IPPs
  - Natural gas
  - Geothermal
  - Market purchases

Slide 10:

- Natural gas:
    - Would need to abandon our commitment that of 93% of the electricity generated in B.C. must come from clean and renewable resources.
    - Would produce significantly higher GHG emissions.
    - Would exposes ratepayers to gas and carbon price volatility.
    - And based on our analysis it would be more expensive for ratepayers than Site C.
- Market purchases?
    - Relying on market imports to meet BC's energy needs over the long term would expose ratepayers to cost uncertainty and potentially undermine the reliability of our system
- Geothermal?
    - While geothermal has a future role to play in British Columbia's energy system and will hopefully have a bright future, it has not developed to the point where it can deliver the reliable electricity that we need today.

- 12 permits have been issued over the past few years but no projects have bid into BC Hydro procurement processes, even though they have been eligible.

- The identification of geothermal resources requires extensive drilling – this can be very expensive and has a high chance of failure.

- This left us with two options – Site C or a suite of independent power projects backed up with a source of firm energy, like natural gas.

Slide 11:

- As the third project on the Peace River, Site C can take advantage of water already stored behind the existing WAC Bennett Dam in the Williston Reservoir.

- This will allow Site C to generate 35% of the energy produced at the WAC Bennett Dam with only 5% of the reservoir footprint – no other such opportunity

- This gives Site C a very unique, cost-effective advantage that is very difficult for alternatives, such as Independent Power Projects, to compete against

Slide 12:

- Site C will be a source of affordable, reliable and clean electricity for more than 100 years.

- It is a proven, firm, dependable source of energy that is there to meet peak demand on even the coldest, darkest days and nights, whether the wind is blowing, the sun is shining or the spring freshet is on or not.

- Hydroelectric dams with water storage like Site C are dependable because water can be released when needed to generate power, or stored to be used later to create electricity when demand is high.

- Intermittent sources need to be backed up by dependable energy that is always available.

- The firm energy from Site C will increase the amount of intermittent energy that BC Hydro's system can support going forward.

- Site C will also produce the lowest GHG emissions per gigawatt hour when compared to other forms of generation (same as solar, wind or geothermal).

- During construction, Site C will provide approximately 10,000 direct construction jobs.

Slide 13:

- We will need a lot of workers to build Site C.
- That's a nice position to be in – lots of well paid jobs and lots of opportunities for workers.
- But do we have enough skilled workers to build both Site C and infrastructure for the LNG industry?
- BC Hydro has worked closely with the Ministry of Jobs, Tourism, and Skills Training, training institutions and industry associations to identify Site C labour requirements in relation to the development of the LNG industry.
- The conclusion of this work is that the labour requirements for Site C and LNG are largely different.
- While the workforce for Site C will be weighted towards heavy equipment operators to move large volumes of materials, like a mining operation, the LNG industry has a greater reliance on skilled trades.
- As a result, the labour requirements for Site C are not expected to interfere with the LNG industry.
- BC Hydro recognizes the importance of hiring locally for Site C.

- The labour strategy for Site C will promote local and Aboriginal hiring.

- To increase the availability of local labour BC Hydro has invested in a number of skills and trades training programs including:

    - The Northern Lights College Foundation to support trades and skills training through the creation of student bursaries.

    - Northern Opportunities for its pre-apprenticeship program, and for the creation of a school district career counsellor position to help students transition into trades and career training.

    - The Northeast Native Advancing Society to support trades training under its North East Aboriginal Trades Training Program.

    - School District No. 60 – to support a career counsellor position to encourage students to go into the trades

    - College of New Caledonia – to support students in the Heavy Equipment Operator training program

Slide 14:

- The Site C capital cost estimate of $7.9 billion was developed in 2010 and included all construction, development, inflation and interest costs, as well as contingencies.

- The bottom-up estimate was completed by a team of internal and external engineering and construction experts, and underwent an external peer review by KPMG to validate the methodologies and assumptions.

- In 2014, BC Hydro conducted a cost refresh.

- The refresh showed that while some costs had increased due to factors such as a longer environmental assessment process, enhancements to worker accommodation and larger diversion tunnels…

- The original cost estimate remained appropriate as these increases were largely offset by savings from lower than anticipated interest rates, efficiencies in project design and reduced excavation requirements.

- KPMG reviewed the 2014 cost refresh and concluded:

    - The level of care and diligence was consistent with an infrastructure project about to enter construction phase that reasonable and

appropriate processes were followed for developing the assumptions used in the Financial Model, and

- that the methodology behind the cost estimate was appropriate.

- The direct construction cost estimate was also reviewed by an independent panel of contractors

- The individuals on the panel each had 35 to 50 years of experience in management and construction of major projects.

- They concluded that:

  - The capital cost estimate was sufficient for the proposed scope and schedule of the project

  - That it contained an appropriate level of accuracy for making a final investment decision and a level of detail comparable to a private sector contractor estimate

  - And that the contingency was sufficient to cover any reasonable cost increases.

- I tell you all of this to show that BC Hydro's updated cost estimate was subjected to rigorous independent scrutiny and the original 2010 cost estimate stood up

- So what has changed?

- Government worked with BC Hydro these past few months and although we could poke no holes in the $7.9 Billion budget, we did make three decisions that impact the final budget.

- First, the original budget was done in the HST world. There is a cost to going back to PST and BCH agreed with government that it would be prudent for this cost to be added to the capital budget, as opposed to paying the cost from contingencies.

- Second – The 2014 cost refresh was based on a January construction start date. Government and BCH agree that it would be prudent to instead, start construction in summer 2015 to allow more time to complete the permitting process.

- The later start date results in a longer construction period which increases inflation and interest costs during construction.

- Taken together, these two changes result in an updated capital cost estimate of $8.335 billion.

Slide 15:

- I said on the last slide that government made three decisions.

- The third thing government and BCH agree upon is that it is possible more unforeseen events could occur during the 8 year construction period than are allowed for in the budget contingency

- And that therefore, government is creating a Project Reserve of $440 Million for those unforeseen events that are outside BCH's control, such as higher than expected inflation and higher than forecast interest rates.

- This $440 million, although BCH does not expect to use it brings the total to $8.775 Billion.

- The Project Reserve will be held and managed by the provincial Treasury Board.

- As with other large capital projects, BC Hydro will be required to provide regular reports to the British Columbia Utilities Commission and government during construction.

Slide 16:

- So that's the budget, what about BC Hydro's debt?

- Site C will result in a net incremental increase to BC Hydro's forecast debt of approximately $6.4 billion.

- This is less than the total I just talked about because:

    - Government will take less dividends while the project is being constructed so that BC Hydro's debt to equity ratio can be maintained; and

    - The project has sunk costs that are already on BC Hydro's books

- For context, BC Hydro is currently investing an average of $1.7 billion per year to maintain and upgrade its existing system (announced last Nov).

- With Site C, BC Hydro's total capital spending will average about $2.4 billion per year.

Slide 17:

- So I've covered demand, budget and BCH debt. Now I want to talk about what I believe is the most important topic - cost to ratepayers

- BCH developed its business case and argument for environmental approval for commencement of the Joint Review Panel process in January, 2013.

- I announced the 10 year rates plan in November of 2013.

- The cost of energy from Site C was pegged at $83 / MWh for the Joint Review Panel

- Subsequent to the environmental assessment process ending, BCH applied the new policies from the 10 year rates plan to energy cost at Site C.

- And more recently, BCH worked the new capital cost into their estimate of energy cost from Site.

- Under the pre-10 year rates plan, when Site C – a multi billion asset – came into service – the amount of net income government required BC Hydro to earn would have jumped significantly

- In fact, it would have gone up by $280 million in the first year

- Under the 10 Year Plan, net income is now tied to inflation starting in 2018, rather than a deemed percentage of the value of the assets in service

- So the cost that was factored into that $83 / MWH from the pre-10 year rates plan, goes away when net income starts being tied to inflation rather than the value of assets in service. This is a decrease of $26 per mgwt/hr on the cost of power from Site C.

- Also under the 10 Year Plan, we eliminated the tier 3 water rental rate as of 2018

- The $83 price assumed BC Hydro would have to pay tier 3 water rentals for the water used by Site C

- Now, they will pay the tier 2 rate

- This decreases the cost by a further $1

- So the 10 year rate plan reduces the cost of power from Site C considerably, but the capital cost is higher than before – that higher capital cost equates to $2.25 more on the cost of power from Site C

- And if the project reserve of an additional $440 million were to be utilized, that would add $2.50

- Taken together, the cost to ratepayers of the energy from Site C goes from $83 to $58 / MWH up to $61 / MWH if the full reserve is used

- Still by far the least expensive electricity available to BC rate payers from any new project

Slide 18:

- What if we acquire the new power we need from IPPs? How much will that cost ratepayers?

- BC Hydro's Integrated Resource Plan analysis calculated a cost of **$96** / MWH.

- As part of our due diligence, we conducted extensive consultations with the independent power industry

- We wanted to make sure our analysis reflected recent advances in technology and efficiency.

- We worked very closely with Clean Energy BC

- And with a number of proponents in the industry

- Following these consultations, we adopted a cost of **$85** / MWH for our analysis

- As I said earlier, Site C, because it will last 100 years and because it benefits so much from the Williston Reservoir, is very difficult to compete against.

- But it is also the last project of its kind.

Slide 19:

- When we think about the impact on ratepayers of Site C or IPPs, there are additional factors beyond the cost of the energy where it is generated – including:
    - cost to deliver that energy to customers (both Site C & IPP's)
    - With IPPs, because they are intermittent and not always available, there are also two additional costs:
        - First – you need to back up IPPs with firm energy sources so that power is available even when the wind isn't blowing or rivers aren't flowing
        - And second – IPPs limit the amount of trade revenue that BC Hydro can generate because BC Hydro has to hold back a portion of its system to back-up fluctuating and intermittent IPP generation
- After accounting for these factors, you end up with a final cost to ratepayers of $64-$67 / MWH for Site C and between $110 - $130 / MWH for IPPs

Slide 20:

- Large hydro projects are cost-effective because after an upfront capital cost, they have low operating costs for more than 100 years and their costs to ratepayers decrease over time.

- Today, the cost of electricity produced by B.C. Hydro's large hydroelectric facilities is far lower than the rate that residential customers pay for their electricity.

- These large hydroelectric facilities offset the costs of other more expensive new generation in the system.

- Site C will provide more than a century of the same affordable, reliable and clean electricity that the W.A.C. Bennett, Peace Canyon, Mica and Revelstoke dams provide today

- It will help keep overall electricity costs down and rates low.

Slide 21:

- Over the first 50 years of Site C operations ratepayers will pay an average of $650 to $900 million **less** each year compared to a portfolio of IPPs.

- This means annual savings of approximately 6% to 8% for the typical household

- BC's electricity rates are the 3rd lowest in North America for residential customers and the 4th lowest for commercial and industrial customers

- It is absolutely clear that to put ratepayers first and keep rates low, we need to choose the option of building Site C

- But I say this in the context of the Clean Energy Act which states that Site C will be the last large hydro electric dam built in BC – after Site C, it will be wind, run of the river, geo thermal, solar, tidal, bio energy and perhaps gas.

Slide 23 – Aboriginal engagement

- We recognize that some First Nations have significant concerns about the Site C project
- BC Hydro has been consulting and engaging with Aboriginal groups since 2007
- A federal/provincial Consultation and Accommodation Report concluded that:
- "There has been meaningful consultation with the potentially affected Aboriginal groups…" and "… consultation has been carried out in good faith and that the process was appropriate and reasonable in the circumstances."
- BC Hydro has made offers of accommodation been made to all First Nations that the Joint Review Panel deemed most affected by Site C.
- BC Hydro is also negotiating with First Nations on significant procurement opportunities for project construction.
- But there is much more to be done and we will continue working with First Nations to address concerns, identify opportunities for benefits and enhance relationships.

Slide 23 – questions

Site C
Final Investment Decision

Technical Briefing - December 16, 2014

BRITISH COLUMBIA

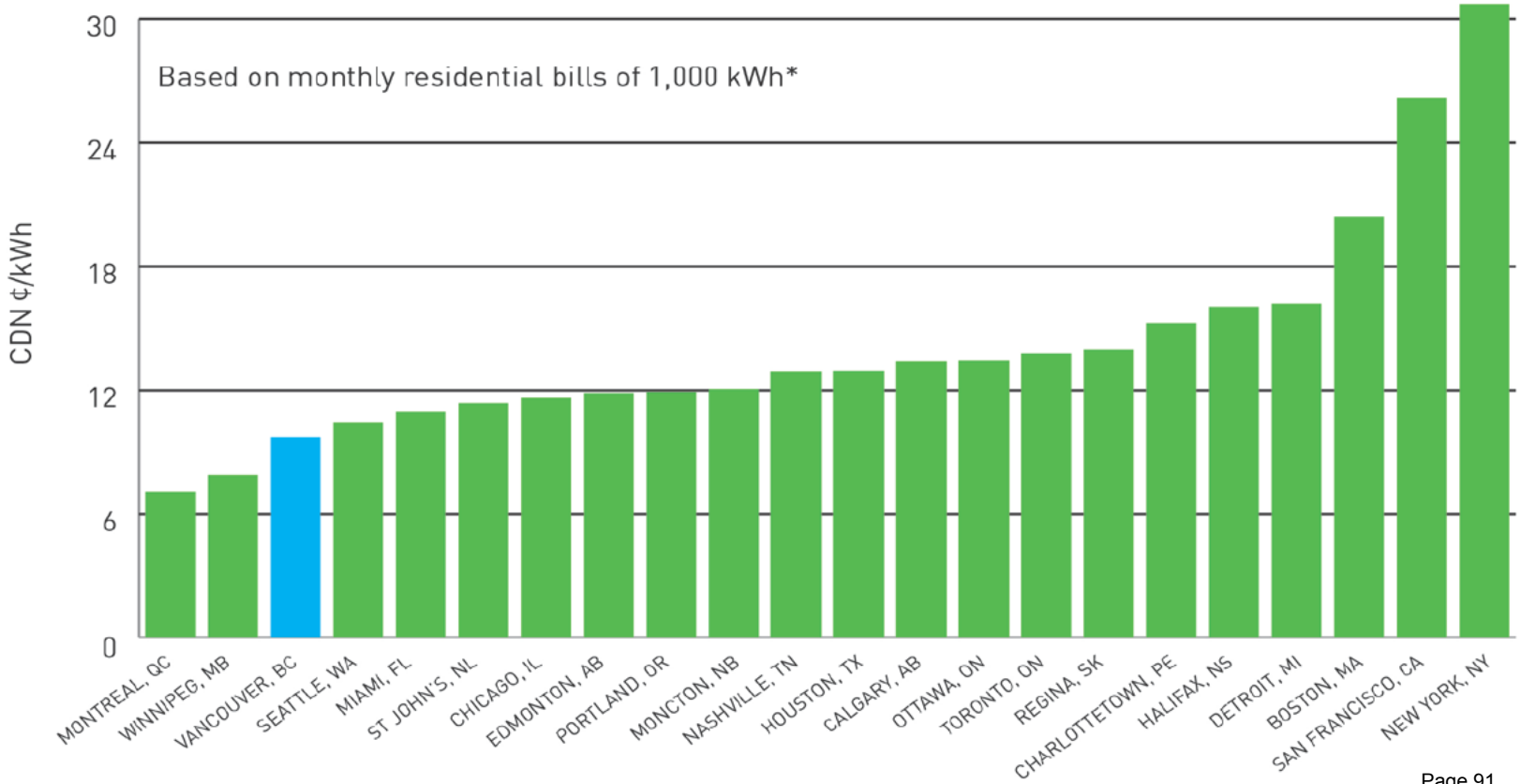
SITE C | CLEAN ENERGY PROJECT

BC hydro
FOR GENERATIONS

Agenda

1. BC Hydro's System Today
2. Growing Demand for Electricity
3. Comparing the Options
   a. *Limitations of some options*
   b. *About Site C*
   c. *Site C Capital Cost Estimate*
   d. *Due Diligence: Site C and IPPs*
4. Aboriginal Engagement
5. Questions

3rd Lowest Rates in North America

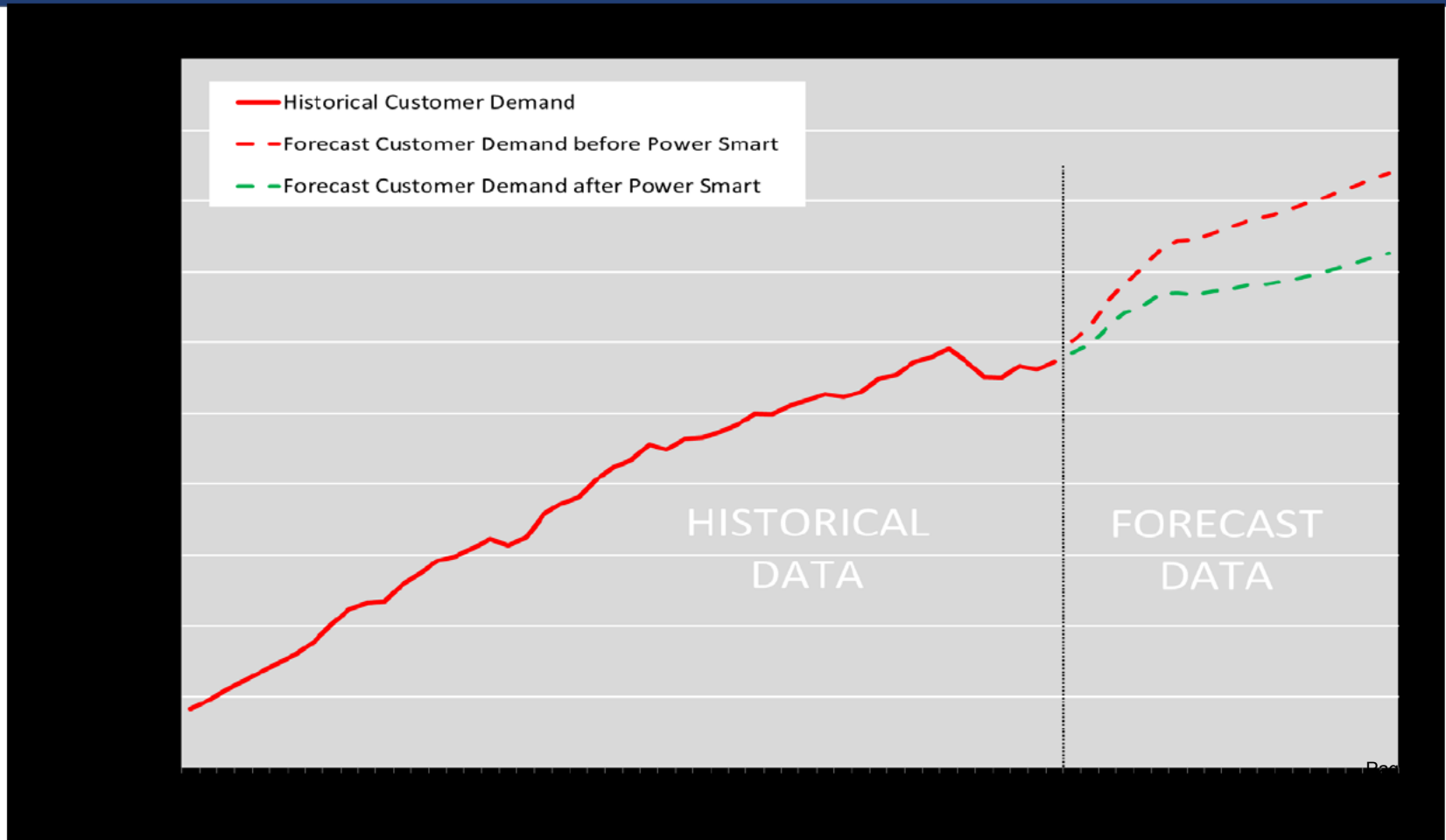


*Monthly bills as of April 1, 2014 (except BC Hydro May 1, 2014 bills), excluding taxes and levies.

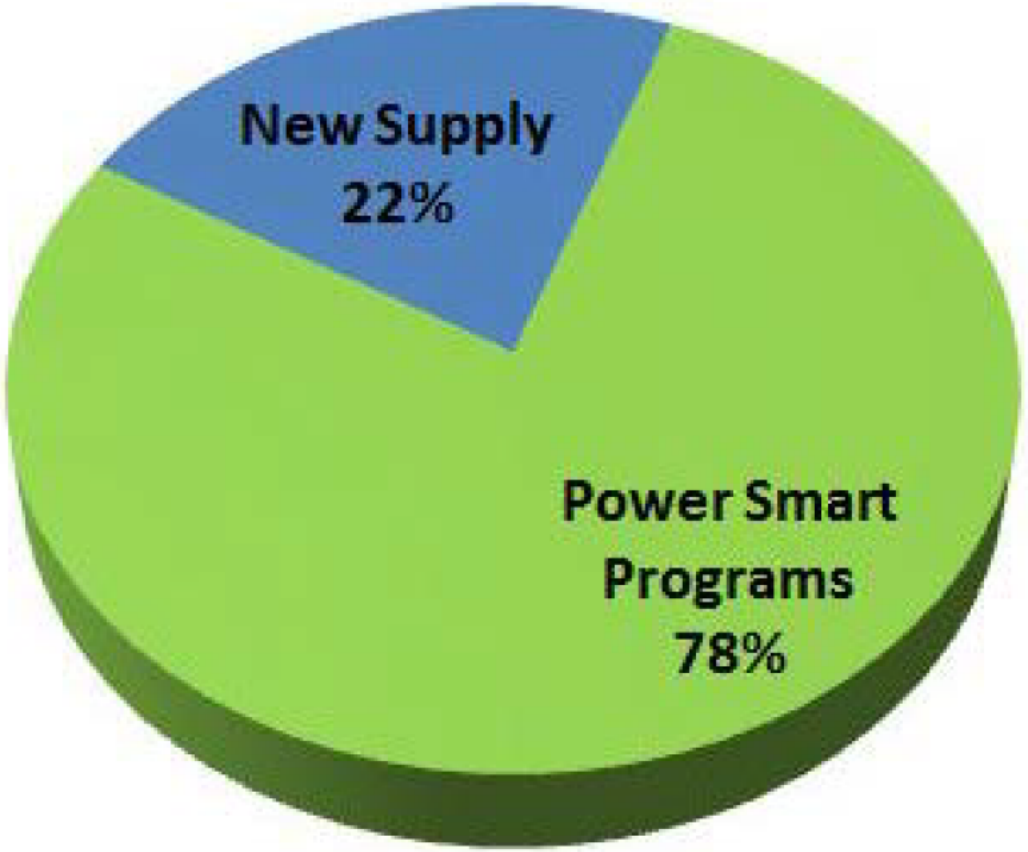
A Reliable and Clean System

- **95%** of B.C.'s population served by BC Hydro
- **1.9 million** customers including residential, commercial, industrial
- **31** hydroelectric facilities; **3** thermal generating plants
- **0 brownouts**
- **77,000 km** of transmission and distribution lines
- **93%** clean electricity
- **~25%** of power from independent power producers. The amount of power supplied by IPPs will continue to grow.

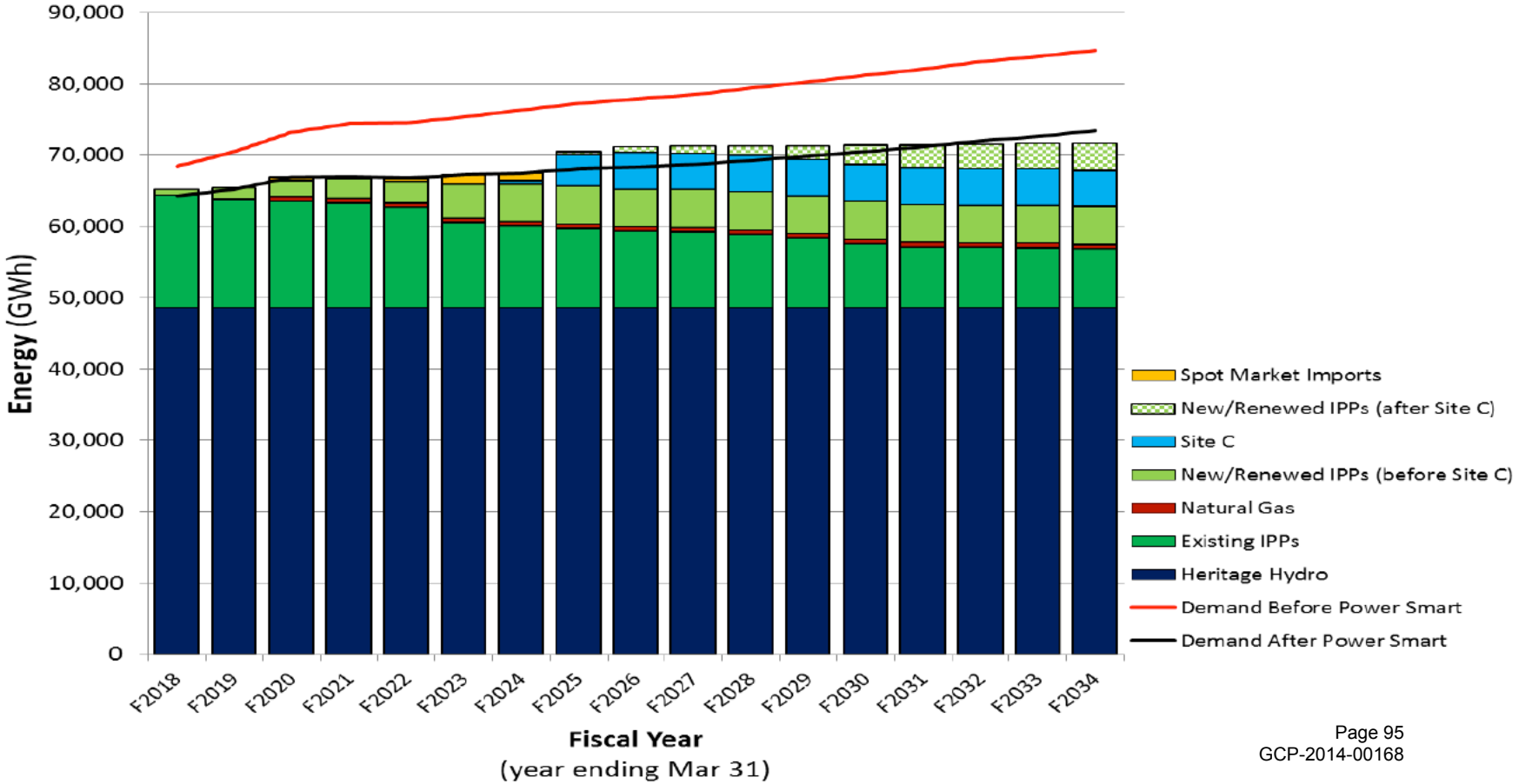
Demand Increasing by 40% Over 20 Years



Conserving First: Avoiding the Need to Build



Meeting Demand Through a Mix of Resources



Due Diligence: Review of Load Forecast

- A third-party review of BC Hydro's load forecast methodology was commissioned from an independent energy consultant with over 30 years of experience.

Key Findings*:*

- *"BC Hydro is using state-of-the-art methodologies for forecasting sales."*
- *"The company utilizes several methodologies to produce peak forecast methods, all of which are among state-of-the-art methods."*

Mark P. Gilbert, LLC, September 2014

Comparing the Options

Site C

IPPs

Natural Gas

Market Purchases

Geothermal

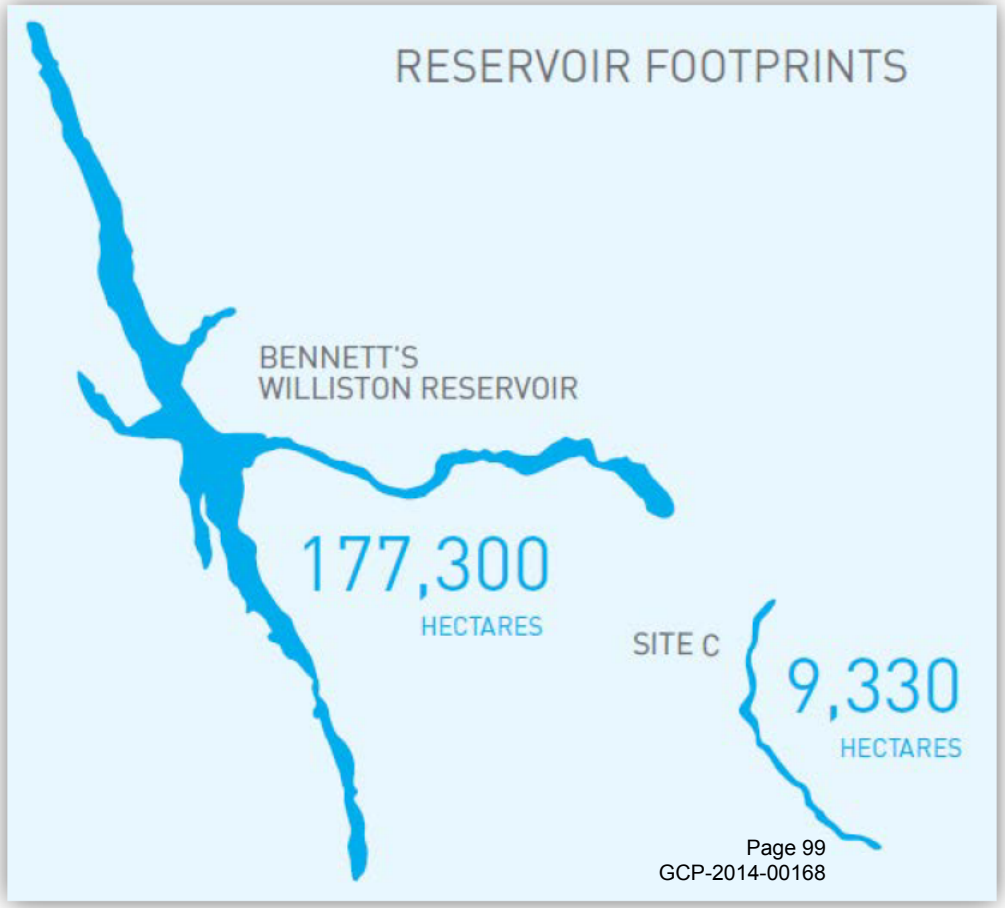
Some Options Have Limitations

- **Natural Gas?**
  - Would need to abandon commitment to 93% clean/renewable power
  - Significantly higher GHG emissions; historical challenges to permitting
  - Exposes ratepayers to gas and carbon price volatility
  - Due diligence analysis showed this option would be more expensive
- **Market Purchases?**
  - Transmission interconnection limits
  - Cost uncertainty; exposed to market volatility
- **Geothermal?**
  - Slow to develop; no proven track record in BC
  - 12 permits have been issued but none have bid into recent power calls
  - Identification of resource can be very expensive and risky

About Site C

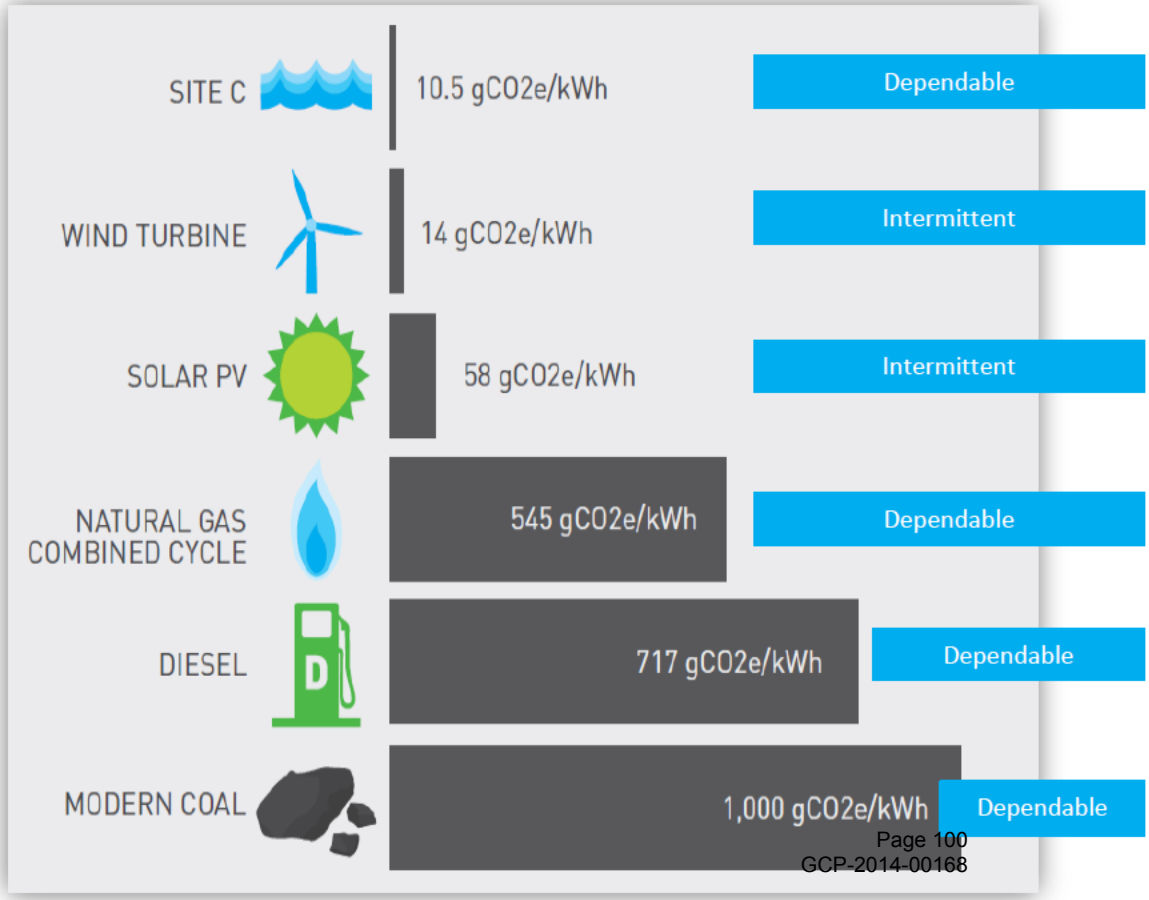
- As the third project on the Peace River, Site C will rely on the Williston Reservoir for most of its water storage.

- This enables Site C to produce 35% of energy of WAC Bennett Dam with 5% of the reservoir area.



About Site C

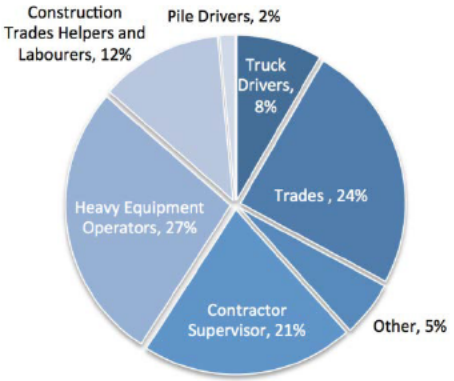
- **100+ years** of clean and renewable electricity
- **Dependable capacity** to meet peak demand
- **Integrates intermittent power** from IPPs (e.g. wind and run-of-river)
- **Low GHG emissions**
- **~10,000** direct construction jobs



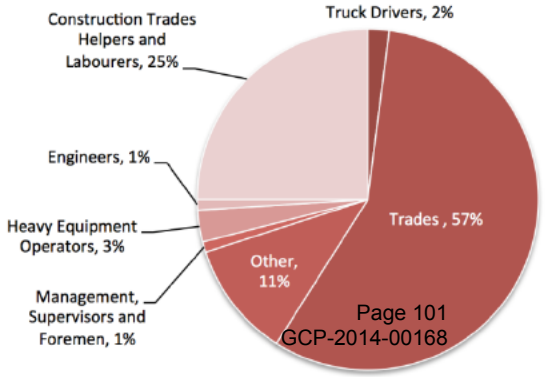
Labour

- BC Hydro worked with the Ministry of Jobs, Tourism, and Skills Training to ensure Site C and LNG labour requirements didn't conflict.
- The mix of labour needs for Site C and the LNG industry are different.
- BC Hydro's labour strategy for Site C will promote local and Aboriginal hiring.
- BC Hydro has supported opportunities for skills training through funding to:
  - *Northern Lights College Foundation*
  - *Northeast Native Advancing Society*
  - *Northern Opportunities*
  - *School District No.60*
  - *College of New Caledonia*

Site C Labour Needs



LNG Labour Needs



Updated Site C Capital Cost Estimate

- The Site C capital cost estimate of **$7.9 billion** was developed in 2010. In 2014, BC Hydro conducted a cost refresh that concluded the original cost estimate remained appropriate.
- As part of government's due diligence, the capital cost estimate was reviewed and updated to **$8.335 billion** to reflect:
- Costs associated with the change from the HST to the PST.
  - This means that BC Hydro will not need to cover these costs out of the project contingency budget.
  - Government felt it was prudent to increase the capital cost estimate so that the full contingency could be maintained.
- A revised construction start date of summer 2015.
  - Allows more time to complete the permitting process.
  - Results in a longer construction period which increases inflation and interest costs during construction.

Updated Site C Capital Cost Estimate

- Government also decided to establish a project reserve of an additional **$440 million**, to account for events outside of BC Hydro's control, that could occur during an eight-year construction period, such as higher than forecast inflation or interest rates, for a total of up to **$8.775 billion**.

- The reserve is subject to provincial Treasury Board approval.

- As with other large capital projects, BC Hydro will be required to provide regular reports to the British Columbia Utilities Commission and government during construction.

Debt Impact

- Site C will result in a net incremental increase to BC Hydro's forecast debt of approximately **$6.4 billion**.
- This is less than the capital cost estimate for the project due to:
  - lower dividend payments to government; and
  - costs that have already been incurred.

- For context, BC Hydro is currently investing an average of **$1.7 billion** per year to maintain and upgrade its existing system.
- With Site C, BC Hydro's total capital spending will average about **$2.4 billion** per year.

Impact on Ratepayers – Site C

Site C Cost to Ratepayers (before changes)	$83 / MWh
Under the 10 Year Plan, the amount of net income that BC Hydro is required to earn each year will now be tied to inflation and will no longer increase when new assets like Site C are added to the system.	- $26 / MWh
The 10 Year Plan also reduced water rental charges for BC Hydro.	- $1 / MWh
The capital cost estimate for Site C has been updated from $7.9 billion to $8.335 billion.	+ $2.25 / MWh
Government has established a project reserve of an additional $440 million to account for events outside of BC Hydro's control that could occur over an eight-year construction period, such as higher than forecast inflation or interest rates. The reserve will be managed by the provincial Treasury Board.	+ $2.50 / MWh (if fully utilized)
Updated Site C Cost to Ratepayers	**$58 - $61 / MWh**

Impact on Ratepayers – IPPs

- BC Hydro's Integrated Resource Plan, approved in November 2013, calculated a cost to ratepayers for IPPs of **$96 / MWh**.

- Government also conducted extensive consultations with the independent power industry to ensure its analysis reflected recent advances in technology and efficiency.

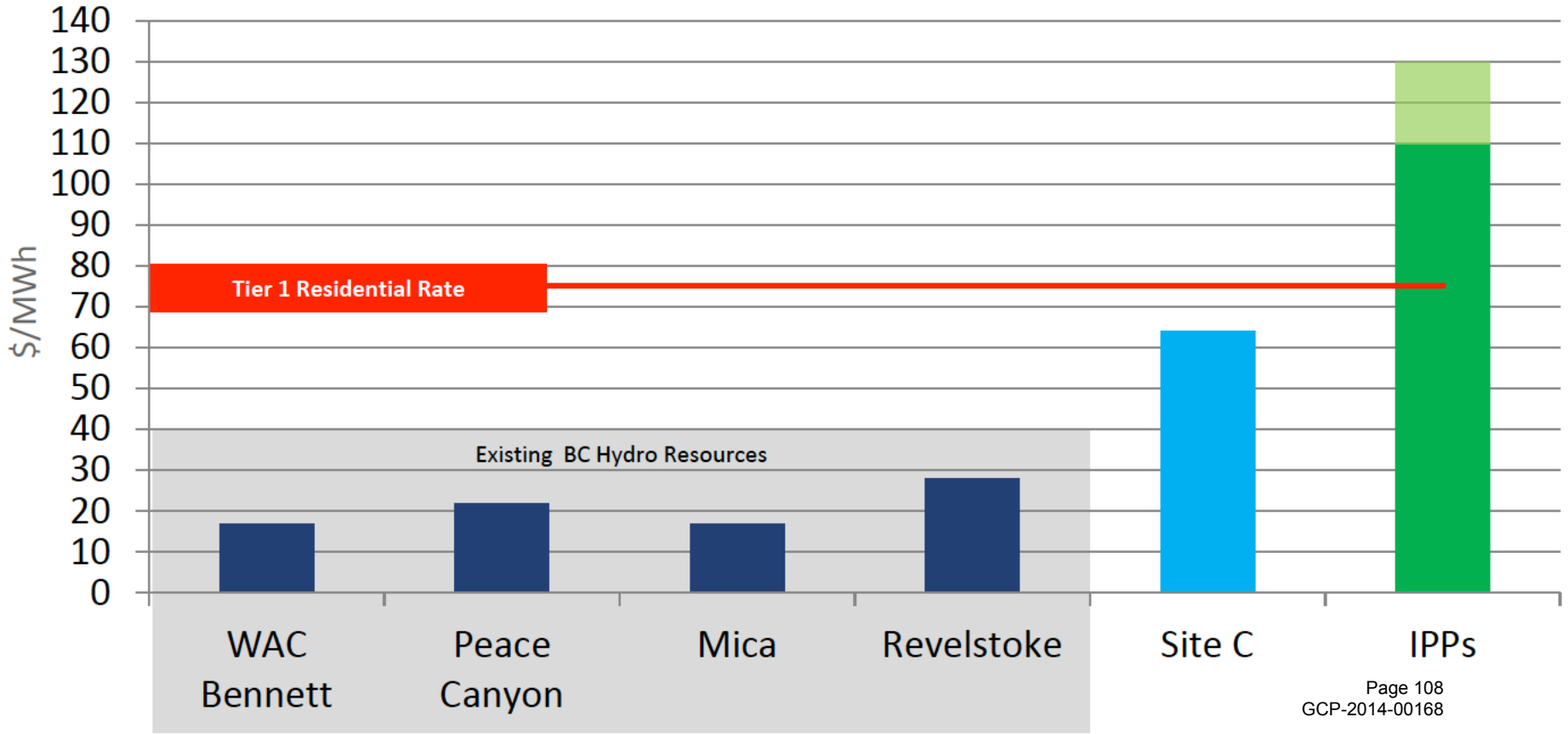
- Following these consultations, government adopted a cost of **$85 / MWh** for IPPs in its analysis.

Impact on Ratepayers

- Must account for additional factors such as:
  - Costs of delivering the electricity to customers.
  - Costs of backing up intermittent power with firm energy.
  - Lost trade revenues due to inability of IPPs to store power to take advantage of high prices on the export market.

	Site C (2014)	IPPs (Industry Consultations)	IPPs (IRP)
Starting Cost	$58 - $61 / MWh	$85 / MWh	$96 / MWh
Additional Factors	Adds $6	Adds $25	Adds $34
Final Cost	**$64 - $67 / MWh**	**$110 / MWh - $130 / MWh**	

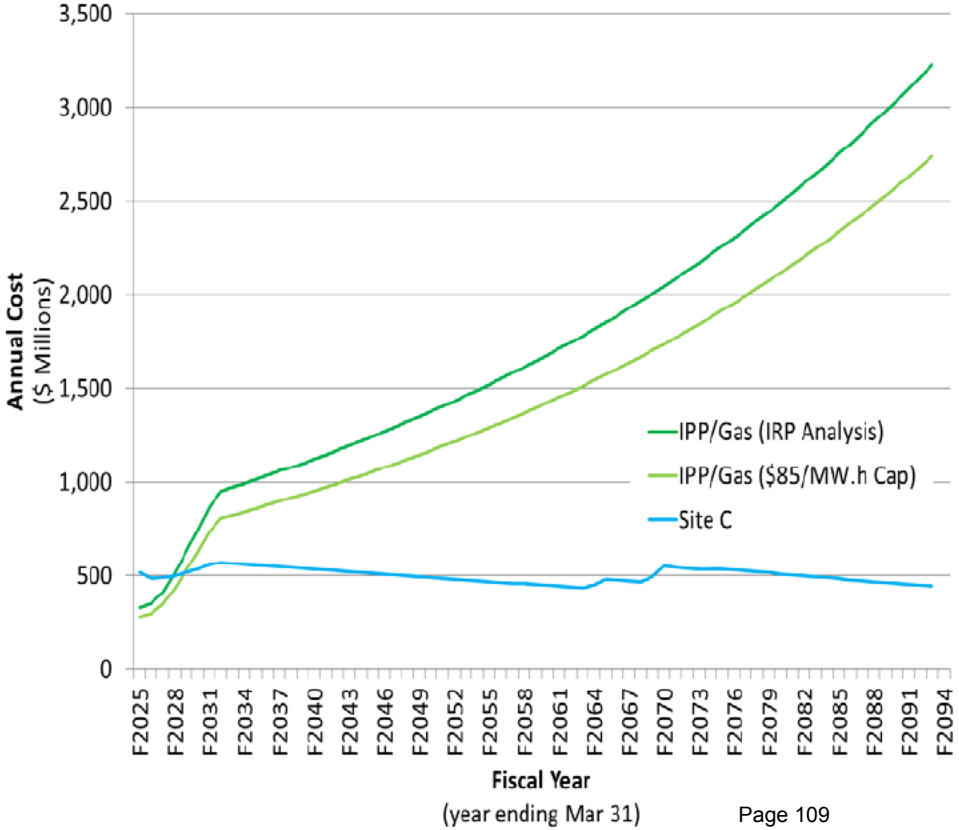
Cost Advantages of Hydroelectric Dams



Site C – Significant Ratepayer Benefits

- Over the first 50 years, ratepayers will pay an average of **$650 – $900 million** less each year, compared to an IPP/Gas portfolio.

- This amounts to annual average savings of ~**6% to 8%** for the typical household, compared to alternatives.



Aboriginal Engagement

- Consulting and engaging with Aboriginal groups since 2007; focusing on those most affected by project.
- Conclusion of federal/provincial Consultation and Accommodation Report:

  "*There has been meaningful consultation with the potentially affected Aboriginal groups…*" and "*… consultation has been carried out in good faith and that the process was appropriate and reasonable in the circumstances*."

- Offers of accommodation have been made to all First Nations the Joint Review Panel deemed most affected by Site C.
- Significant procurement opportunities being negotiated.
- Will continue working with First Nations to address concerns, identify opportunities for benefits and enhance relationships.

Questions