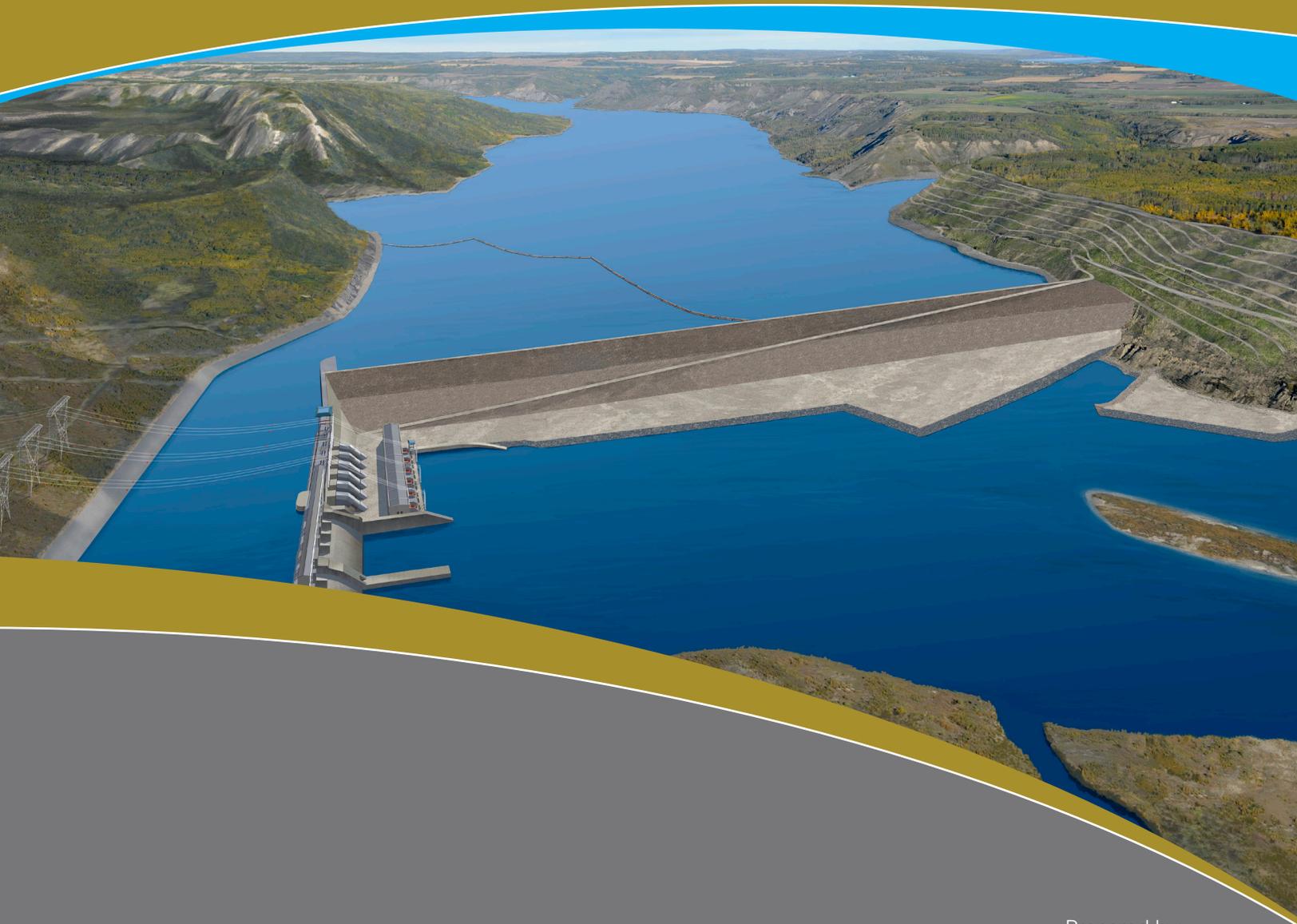


# Site C Clean Energy Project Project Definition Consultation, Spring 2012 Consultation Summary Report

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July 25, 2012

## Appendix 3: Open House Question and Answer Session Notes



Prepared by:  
Kirk & Co. Consulting Ltd.  
and  
Mustel Group Market Research

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
<b>OPEN HOUSE</b>	Fort St. John – Open House April 17, 2012, 6:00 p.m. – 9:00 p.m. Quality Inn Northern Grand – Grand 1 9830 100 <sup>th</sup> Avenue Fort St. John, B.C.

<b>PURPOSE</b>	Notes from a public open house for the BC Hydro Site C Clean Energy Project held with stakeholders and representatives of the Site C Project on April 17, 2012 at Quality Inn Northern Grand, Fort St. John, B.C.
<b>FACILITATOR</b>	Judy Kirk, Kirk & Co. Consulting Ltd.
<b>SITE C PROJECT TEAM ATTENDEES</b>	Dave Conway, BC Hydro Siobhan Jackson, BC Hydro Judith Reynier, BC Hydro Andrew Watson, BC Hydro Don Wharf, Site C Project Team Mike Porter, Site C Project Team Dave Hunter, BC Hydro Duane Anderson, BC Hydro John Bodnarchuk, Site C Project Team Karen Schroder, Kirk & Co. Consulting Ltd. Emilie O’Genski, Kirk & Co. Consulting Ltd., Meeting Recorder

**KEY THEMES**

**Energy Planning**

- Some participants questioned the need for Site C and felt that demand could be met by using alternative energy resources, including natural gas.
- Some participants felt that conservation and Power Smart programs should be expanded, including the ability for individuals to produce their own power.

**Impact Lines and Land Use**

- Participants expressed concern about the accuracy of the preliminary impact lines and whether landowners impacted by flooding and erosion would be compensated.

**Expression of Opposition**

- Some participants expressed that they were opposed to the Site C project.

*The record notes that the meeting was called to order at 8:00 p.m.*

**DISCUSSION**

*(Abbreviations will be used and mean – Q: Question, A: Answer, C: Comment)*

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**1. Welcome and Introductions – Judy Kirk**

*Judy Kirk welcomed participants to the open house, and explained the format of the Q & A. Judy informed participants that the question and answer session was being recorded for accuracy. The BC Hydro Site C Team members introduced themselves.*

**2. Questions and Answers - All**

- Q:** *Jim Jarvis:* Are you very happy with yourselves in terms of how you're mucking around with our environment and changing the topography to make more electric power? The electrical power in this province is not efficiently used. It might be there if we zeroed in on those for better use of the power.
- A:** *Andrew Watson:* I work for BC Hydro and doing my job to the best of my ability.
- Q:** *Dave Conway:* I joined this project in 2008 and I realized that there are demands throughout the province in different areas and everything we do to meet our energy demands. We are trying to meet our demands through many different resources. We've added IPPs like wind since 2002 through power calls. But the problem is that power isn't always there at the right time and that's why we need to build Site C – to obtain firm power. This is one small piece of the BC Hydro system. If this dam is built at this site it uses what's already been done with Williston. To me, as a rate payer and a British Columbian, I think that is a great benefit. I know it has trade-offs but to me this is important.
- C:** *Renee Ardill:* Christy Clark said Site C is for the oil patch and BC Hydro has sung the whole time that it's for British Columbians. The people of BC are getting stuck paying for this thing. Oil patches don't need any more breaks. The cost of this project is horrendous. You can use natural gas – it's getting burned one way or the other. My fight isn't with the people in this room it's with the government.
- Q:** *Dave Lambie:* The thing that concerns me is that I think there are seven lines in this Discussion Guide about GHG. That's junk. It doesn't address GHG emissions you get when you build the dam - it should show a 20-year plan. I want something with meat on it of the effects of GHG.
- A:** *Siobhan Jackson:* I can point you to our website where we have a study on GHG. Most emissions are associated with change of land use and loss of trees. The second is 20% emissions associated with construction and materials used for construction. We do have that information. The estimate was done in 2008 and it will be updated for our environmental assessment. You're right; it was brief in the discussion guide.
- Q:** *Ken Boon:* Christy Clark says 100% power would be needed for Kitimat and Shell Gas. We'd flood this valley just to convert to natural gas to Liquefied Natural Gas? You'll just burn it for electricity. At the same time, BC Hydro has a Power Smart program and we are still trying to save electricity. Site C would be the biggest waste of power just to convert to Liquefied Natural Gas. What is your position on this? You're wasting 600 megawatts.
- A:** *Mike Savidant:* We've been looking at this project since 2005. We've always looked at this project for domestic load. We look at the overall residential, commercial and industrial load forecasts. Even

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- without the potential LNG projects there will still be a resource gap that's a significant size. We do still need energy and a resource the size of Site C.
- Q: *Ken Boon:* You must really need a lot for the Shell plant. It's because of the third plant we need Site C because before you were able to building two LNG plants.
- A: *Mike Savidant:* We look at the current and proposed supply. We look at what we can build in the future and we could supply two projects plus more in the future. We are working on our Integrated Resource Planning process right now and you can participate in that this June.
- Q: *Judy Kirk:* Is your question why don't we just use natural gas?
- Q: *Ken Boon:* What's your response to the fact that you're wasting all that power?
- A: *Mike Savidant:* We look at LNG as part of the industrial load. We have a mandate and are not able to discriminate one load versus another. We serve industrial, commercial and residential demand.
- Q: *Andrea Morison:* Basically, as Ken said, apparently we already had enough surplus energy in the province to supply the first two LNG plants we knew about. But now I hear we are looking at up to seven natural gas plants, eight new coal mines and upgrading nine others, so what does that do to forecasting for BC Hydro?
- A: *Mike Savidant:* We do not have current surplus enough to supply the two LNG plants. We look at the proposed projects and we do not have enough resources right now to supply LNG.
- Q: *Andrea Morison:* Christy Clark talking about so many projects; I don't understand how we're going to supply the demand for electricity.
- A: *Mike Savidant:* One of our problems right now is that we don't have enough capacity. In our load forecast, we look at the projects we know are coming. I've never heard that they're planning for seven LNG plants. The IRP public consultation is being planned for June and that will look at overall system planning and load forecasting. It will look at resource alternatives and options.
- Q: *Andrea Morison:* The province is pushing for Canada to be supplying LNG right now but even if Site C does go ahead it's at least 11 years from being in-service. It doesn't make sense. Let alone the fact that China has recently discovered the second largest shale gas area in the world, so they'll soon be using their own supply. I did have another question to do with decommission, in the Project Description Report; there is a paragraph that, in my opinion, essentially says that we'll deal with that when the time comes. I can't believe that in this day and age, we aren't giving consideration to how we are going to deal with this dam in 100 years or when it needs to be dismantled? What will be done about decommissioning?
- A: *Andrew Watson:* BC Hydro is proposing Site C to be a permanent facility. When we talk about a design life of a hundred years, we are talking about civil structure; we are not planning on decommissioning in a hundred years.
- Q: *Andrea Morison:* We don't know how long it's going to last. I bet you aren't planning decommissioning because it will decommission itself.
- A: *Andrew Watson:* As long as you maintain and reinvest you can have a long lifespan with this dam.
- Q: *Andrea Morison:* I would expect that there would more be more explanation and rationale in the plan.

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- A: *Andrew Watson:* We are working with the regulator right now of the guidelines for the Environmental Impact Statement right now, so we will take that comment in and that comment can also be directed to our regulator.
- Q: *Andy Larstell:* I've owned a modest commercial electrical contracting company for over 20 years. You know, there are some things that BC Hydro is doing really right and others that could be improved. I am heavily involved in Power Smart. In the past five months, I've done some commercial upgrades for some local business in the area and it's added about \$160,000 to my revenue stream and it wouldn't have happened if BC Hydro provided the impetus to do the upgrades. Out of that, my customers have received over \$42,000 back in rebates. Also, the power savings are almost 150,000 kilowatt hours. I've doubled the light in warehouses and shops and they are saving 100 watts a fixture. It's a win-win situation. My customers are so happy and they really like BC Hydro all of a sudden. I'm really happy because they're happy. I look around and there is no valley being flooded, there are no impacts. I'm happy now, and my customers are happy now and it's conserving. I'm a proponent of Power Smart because I can see it in action. What I've noticed is there is not much of a mention in your Project Description Report about conservation. Even though BC Hydro has one of the best Power Smart programs in the world, the market is starting to slide. For something that provides so much benefit to me, what benefit does Site C give to British Columbians? I see my benefits coming from Power Smart. When Site C goes in, I know who's going to get the work and it's not me or anyone in this area. It will be a company down south that builds dams. When I go down to my pristine river to fly fish, it's gone and replaced by a reservoir machine. You can't catch a rainbow trout – they're gone, my recreation is gone, I have no work and I live here and there is a phenomenal program in place and BC Hydro doesn't want to push it anymore. In light of the benefit that I receive now, what benefit am I going to receive from this dam?
- A: *Mike Savidant:* I agree that we do have an exceptional program. Conservation is also the first option we look to meet demand. I don't agree we are cutting back on the Power Smart program. I know our incentives vary year-to-year. When you look at the IRP, we anticipate an extensive program coming up. After conservation, we look at other resource options and we still have a supply gap.
- A: *Siobhan Jackson:* One of the key benefits of the project is that it will serve as part of our overall system. Our dams have provided long lasting power for generations at a very good rate for ratepayers. The environmental assessment requires a long list of things that we are looking at and are currently studying. We'll be covering all those topics and identifying where they include project benefits. Out of the five major topic areas, four of them are on the social, economic, community and heritage side.
- Q: *Danielle Layman:* I wonder how you look yourself in the mirror. Why are we on Stage 4 when we've hardly started Stage 3? You assume it's a done deal.
- A: *Siobhan Jackson:* The environmental assessment process is run by BCEAO and CEA Agency and requires a lot of detailed project information. That is why the project design really runs through all stages. The main driver is the amount of info the environmental assessment requires. We need to know where the alignment is so we can do detailed assessments. We are in Stage 3 and that work

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is to support Project Definition in order to assess the project for submitting our application to be certified.

**Q:** *Danielle Layman:* One of the girls just said you don't have a plan to decommission because it will decommission itself. What do you know about slumping and slope stability? It's been asked before in Stage 2 and we've never had a good answer. Have you taken into account the past slides that have occurred in this area?

**A:** *Andrew Watson:* We've taken into that into account in the design of the dam and it could withstand waves generated by slides. We've looked at stabilization of the left bank in the design of the dam, and we've also accommodated for it in the design of the highway and the predictions for shoreline effects. Mike Porter's team has created impact lines around the reservoir and the maps on the internet show these.

**Q:** *James Burke:* I can understand that Power Smart is a great thing in terms of ability to revamp and retrofit. I recently built a new home with geothermal heating. The only source of energy I'm using is electricity and I can control against increasing cost of natural gas. I don't see any rebates because I'm not a retrofit - I'm a new build. I want to encourage benefits to new construction as well as allowing each of us to be power producers. I understand that Ontario's rates are significantly higher, but it is an option. But you should allow me as a tax payer to enter into the market. I have cash and I am willing to buy a solar panel but what you currently offer doesn't make it feasible. There are so many options out there. That would be a great opportunity. Also, the transmission line you talked about from the northwest, I believe that's so we can tie Alaska to the main power grid? It's going to cost \$400 million to build that power line to supply the mining projects there. Do we have an obligation to supply that power load?

**A:** *Melissa Holland:* The northwest line is just entering into construction. It's a \$500 million project to build a 287 kV line to supply a mine in region. There is an IPP that will connect into the system there. It does not connect to Alaska and yes, we are obligated to serve that is why we are building it. There is a federal infrastructure grant that will subsidize the cost. There is funding from industry as well.

**C:** *Mike Savidant:* I don't have details on every Power Smart program but I believe we do have programs for new home construction. Our programs look at ways to change behavior. I can't talk about specific programs for geothermal but that's the approach we take.

**A:** *Dave Conway:* I know that we have two other programs. There is a Net Metering program so if you are producing power, you can net out on what you produce and what you take. There is also a Standing Offer Call with a streamlined process. Then there is a set contract with a set price. If you have an opportunity to produce more may be programs like that and I can find some contact names for you.

**Q:** *James Burke:* We want cheap power. If you know that there are a million roof tops if you put money into solar panels that is a significant investment. We want to produce and be part of it but there is no incentive.

**Q:** *Ken Boon:* To follow up on the IPPs that are producing power – we aren't allowed to see what BC Hydro pays for that power. Landowners are net metering with solar panels; meanwhile IPPs are being paid a higher rate. It highlights that BC Hydro has done a good job at keeping the net

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metering unadvertised. People are shocked when I tell them that when the sun shines our metre spins backwards and it goes back into the grid. And didn't the IRP program get put on hold last year? I understand it's going again. Last year I looked at it and net metering got a tiny mention and then it's not even an option for generation of power. That needs to get changed.

A: *Mike Savidant:* We don't see volumes coming in that would cause it to be a significant option as the level of energy for long-term supply.

A: *Dave Conway:* You're right though; there isn't enough awareness about that program.

Q: *Chris Wagner:* How much silting do you expect to happen from the sloughing of the banks?

A: *Andrew Watson:* From the erosion predictions for the project, we expect that the first 3-5 years will be the most active period. About 85% of the shoreline around the proposed reservoir is shale and bedrock and gravel which is less susceptible to erosion. The 15% that is silts and clays will be more susceptible to erosion. There are studies going on right now as part of the EIS to predict this in more detail.

Q: *Chris Wagner:* How much silt do you expect in volumes, in comparison to reservoir capacity?

A: *Andrew Watson:* Those numbers will be included in the EIS. In terms of volume, order of magnitude compared to the reservoir, conservative estimates predict that it would take hundreds of years for a comparable volume of silt to fill the reservoir. Detailed calculations will be in the EIS and the guidelines for those studies are in front of the regulator.

Q: *Chris Wagner:* I have some questions for Siobhan on the worker housing and socio-economic part of the assessment. You said the environmental assessment requires detailed information so I'm assuming that they've already got some level of guidelines established on the type of information they will want to see?

A: *Siobhan Jackson:* Yes, the agencies have draft environmental impact statement guidelines posted on their websites right now for public comment. That document is what is informing our approach, any changes to that, we will update our approach to studies.

Q: *Chris Wagner:* I wanted clarification because yesterday, you gave me an answer on worker housing that you weren't sure what studies needed to be done at this point.

A: *Siobhan Jackson:* No, the approach we taking to assessing the effects of workers on the community and worker housing is in the draft guidelines. We are looking at a number of variables and looking at the potential population change and direct and indirect labor changes, making estimate about how many will be residing in town or in camps as the effects will be different. We are making reasonable estimates on that, as well as changes to the social factors. There are many pages on our approach and you're welcome to comment on that. The public comment period is open now until the end of May. They will determine what the final requirements will be from the environmental assessment and we'll update our approach.

Q: *Chris Wagner:* They are holding meetings here in Fort St. John?

A: *Judy Kirk:* Yes and those dates are available on the website. This discussion guide includes the links to the CEA Agency and BEACO website.

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- Q: *Jim McKnight:* My family has been living on the river since 1920. How many Fort St. John people will be employed in construction? There were very few in previous dams. How many FTEs (Full Time Equivalents) will BC Hydro employ?
- A: *Siobhan Jackson:* The estimated labor is 7,000 person years or so during the construction period. The project will be built by contractors and the use of the local market will make them competitive. Those details haven't been determined yet. The long term employment will forecast to be about 25 – 30 people to operate the facility.
- Q: *Jim McKnight:* For 60 years I've been recreating on this river. Last spring, friends and I could not get into the lake at Dunlevy. The dam was closed and the boat launch was inaccessible. Dinosaur Lake has one campground. What will be built for recreation for locals on this dam and will it be permanent and long-term?
- A: *Siobhan Jackson:* Our proposed recreation sites are outlined in the Discussion Guide. We are thinking of three sites that we would maintain and build. The two larger sites would have double wide concrete boat launches, day-use facilities and would be maintained by BC Hydro. We have plans to improve the launches at Peace Island Park as well as Blackfoot. At Dinosaur Lake, BC Hydro is improving and maintaining the facilities, and we are waiting for the land tenure at Dinosaur to make the improvements there. It will be the same basic design as what you see in the Discussion Guide.
- C: *Renee Ardill:* I want to go back to what Dave Conway said about the re-use of stored water. One politician in the early stages of the project said it would be bad not to re-use this water. However, it also puts all your eggs in one basket. Most firm power is in the Peace or in the Kootenays and it's a long distance from the main load. You're dependent on the two river systems, which are far from the main load. Bennett Dam, if it was to wash out, would take the other two out and there goes your power. You've got nothing close the Lower Mainland. It would make more sense to build closer to the load.
- C: *Judy Kirk:* Thank you for your comment.
- Q: *Melanie Blaney:* I have a request that I don't want my comments edited to BC Hydro's satisfaction. I have a comment and then a question. The reason I've been protesting outside today is because you people are not asking the most important question of all. You have refused to ask it from the start. You have not asked, do we want this project at all. Your own survey, during the last round, as biased as that survey was, showed that more people in this area did not want the dam, than wanted it. If that survey had actually been unbiased it would have shown a much higher proportion. I have talked to a lot of people both locally and from across the province and it's hard to find people in favour of the dam. So if your first concern was democracy and what people really want, that fact, that you know a majority of people do not want it, would have been killed the project. Now, my question, you mentioned that you have a lot of detailed information, a lot more detailed than we would expect, well if you have a lot of detailed information, then I would like to know how's this dam is going to affect the Y2Y corridor?
- A: *Siobhan Jackson:* The Y2Y corridor's main focus is on wildlife and wildlife in a defined area from the south to the Yukon. The studies we are doing look various species within this area and whether

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there are wildlife movement patterns that could be effected. At this point, we are not here to present that information but within the environmental assessment process we'll be able to present all of our results, including our fish and wildlife studies.

Q: *Melanie Blaney*: So are grizzly bears part of that study?

A: *Siobhan Jackson*: Yes, we have included grizzly bears in terms of habitat and bears and large carnivores in general are part of the study.

Q: *Melanie Blaney*: Okay, because grizzly bears have been known to use the valley as a corridor and grizzly bears are important and we need to know what is going on with that. I really think that BC Hydro and the government need to listen to people's concerns. Just because we live up north does not mean we don't live in the 21<sup>st</sup> century. It does not mean that we can't look at the numbers and do the math. Everyone knows you're selling power to the States – you're selling more power than you are importing. We know that. And that's your goal with Site C. We live in the 21<sup>st</sup> century and it's time to look at 21<sup>st</sup> century options to meet our power needs. Stop supplying to the US, it's a waste of power, they can look after their own needs. We live in the north and live with the valley and we know what it means to us, we know how valuable it is to us and we are not willing to sell it for government profit.

C: *Unidentified*: Hear, hear. (Applause)

C: *Judy Kirk*: Any other comments? It's about ten to nine, we'll wrap up at nine but the team will be here as we clean up, if you have any other questions.

Q: *Bob Fedderly*: I really think we are missing opportunity with Burrard Thermal sitting idle. I know it's a government policy issue but it needs to be looked at right now. Natural gas gets burned somewhere. In the Lower Mainland it might not be popular. My question to you people if I was in the Lower Mainland is what is plan B. What if something takes out two towers, then where are we going to get power from. We saw what happen last year when one was almost washed out. Maybe you have to put up with Burrard running for peak load. Natural gas is firm power. It's flexible and we have lots of it. We don't need to build. All we have to do is modify it. There are lots of carbon capture programs and we haven't even touched conservation, micro-generation and transmission loss. We haven't looked at the alternatives. I think we have to look at how much loss in transmission are we going to lose. Everyone else generates power at site because it's cheaper. No one helped pay for my power lines. Is there going to be more money spent looking at alternatives?

A: *Mike Savidant*: The IRP process is BC Hydro's strategic long-term planning. We evaluate how much load there will be and how much conservation we can do. Our first step is always conservation and then after that our options to fill the gap. On the IRP website, we've done an inventory of the viable resource options and then we create portfolios for which have the best rate impact and best environmental impacts. That's how we come up with our decisions. We are allowed to use Burrard for emergency purposes currently. That is something that we are looking at whether there is potential to expand with Burrard but it's not decided on yet.

Q: *Bob Fedderly*: What would be your suggestion to get Burrard back on the table?

A: *Mike Savidant*: If you're looking at gas and Burrard, then the IRP process is the right place to come and provide your feedback. That is where we're looking at all the alternatives, and where Burrard is one of the options. Actually having it running 24-7 would take significant capital investments.

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- Q: *Arlene Boon:* Andrew, did you just say the valley would have stream going through it? We are going to lose the valley for just a stream?
- A: *Andrew Watson:* I was describing the very long-term process need to maintain power generation at the dam. I'm talking hundreds and hundreds of years out.
- Q: *Arlene Boon:* The 2009 report said the sloughing is going on indefinitely, that is obviously what you are referring to and our valley will just have a stream.
- A: *Andrew Watson:* The sedimentation will be driven by the tributaries; the silt from the Moberly and Halfway will make its way out over a long period of time to the main river and start in-filling in hundreds and hundreds of years, based on historic estimates. There is sediment modeling underway for the EIS, which will indicate a much longer time-frame. Even in that long time-frame, we need to make sure there is an un-trapped flow of water to the dam site.
- Q: *Arlene Boon:* How far past the predicted slough lines has Williston gone?
- A: *Andrew Watson:* In some places on Williston Reservoir, like Dunlevy, there has been significant erosion. But that is a different type of geological material compared to the Site C area.
- Q: *Arlene Boon:* Your predictions were way off on that. What is the Peace Canyon Dam erosion prediction? How far back has that preceded?
- C: *Judy Kirk:* Just to clarify, you're asking how accurate the erosion predictions were for the Dinosaur Reservoir.
- A: *Andrew Watson:* Williston was flagged as an area for erosion. I don't have the information on Dinosaur Reservoir here with me right now but we can get back to you.
- Q: *Arlene Boon:* I want that all of the information made public for Dinosaur and Williston. In the minutes, please note that. I'm pretty sure your predictions are not accurate. Someone's kid must have drawn these purple lines on the map. I'm pretty sure your crayon lines are going to be a little off.
- C: *Judy Kirk:* Any further questions before we wrap up?
- Q: *Dave Letourneau:* Thanks for the naysayers not making so much noise tonight. I'm a homeowner just south of the 85<sup>th</sup> Ave Industrial Lands. Have you checked? You say peak load is a problem? Have you looked into gas facilities? Peak load is 6-9pm and I'm wondering if other utilities have been contacted and consulted to add co-generation to their systems? It's used by Enbridge in their office downtown. They generate enough power to run their entire building. That's an option that should be looked at. That's a very viable option as gas increases so do turbines increase in speed which makes power. It's a co-gen set up that they have. Perhaps that should be looked into because that's every town in Canada that has gas. In Fort St. John's system we have 39 stations and that's just one town. That's an option to look into.
- C: *Judy Kirk:* Thank you for your comment.
- Q: *Andrea Morrison:* What years will the conveyor belt run at 85<sup>th</sup> Avenue Industrial Lands?
- A: *Andrew Watson:* Site C is a seven year construction process and this would be running three to seven years.
- Q: *Andrea Morrison:* Will people living near 85<sup>th</sup> Avenue Industrial Lands be compensated for the noise and disruption to enjoyment of their property?

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- A: *Andrew Watson:* Right now we are looking at mitigation options.
- A: *Judith Reynier:* I understand our first line is to look at mitigation options for noise, dust and vibrations. We've had meetings with homeowners in the area and we are looking for feedback on how we can mitigate all the affects of the activities at the 85<sup>th</sup> Avenue Industrial Lands.
- Q: *Kent Laboucane:* My question is regarding the environmental assessment. How much of your information is getting to the environmental assessment process because I just the find information just off. You say 30% silts and clay in one place and then you said 15% in another. How much of your information is getting to the governments environmental assessment process?
- A: *Judy Kirk:* To clarify, you're asking how much of the study information will get into the environmental assessment process?
- A: *Andrew Watson:* All of the information will be part of the environmental assessment process. We have some early information and studies that we are sharing as part of this consultation. The methodology behind all of our studies will be filed in early 2013. Right now as part of the regulatory process, the environmental impact statement guidelines are out for public comment right now.
- Q: *Kent Laboucane:* So the whole report government going to check out your studies for themselves?
- A: *Andrew Watson:* They'll be looking at the work we've done and reviewing.

*The record notes that the question and answer session ended at 9:00 p.m*

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
<b>OPEN HOUSE</b>	Hudson's Hope – Open House April 18, 2012, 6:00 p.m. – 9:00 p.m. Hudson's Hope Community Hall - Hall 9904 Dudley Drive Hudson's Hope, B.C.

<b>PURPOSE</b>	Notes from a public open house for the BC Hydro Site C Clean Energy Project held with stakeholders and representatives of the Site C Project on April 18, 2012 at Hudson's Hope Community Hall, Hudson's Hope B.C.
<b>FACILITATOR</b>	Judy Kirk, Kirk & Co. Consulting Ltd.
<b>SITE C PROJECT TEAM ATTENDEES</b>	Dave Conway, BC Hydro Siobhan Jackson, BC Hydro Judith Reynier, BC Hydro Andrew Watson, BC Hydro Don Wharf, BC Hydro Mike Porter, Site C Project Team Dave Hunter, BC Hydro Duane Anderson, BC Hydro Karen Schroder, Kirk & Co. Consulting Ltd. Emilie O'Genski, Kirk & Co. Consulting Ltd., Meeting Recorder

<b>KEY THEMES</b>
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**Housing**

- Participants expressed concern that Site C activities to date and the potential of the project proceeding have reduced the value of local properties.
- Participants expressed concern that Hudson's Hope doesn't have enough housing or community services and that it is becoming increasingly difficult to attract and retain residents to Hudson's Hope.

**Energy Planning**

- Participants asked about BC Hydro's energy planning process, the use of renewable resources and the need for Site C.

**Hudson's Hope Berm**

- Participants asked about the construction of the berm, including construction materials, and BC Hydro's confidence that the berm would protect against erosion.

**Expression of Opposition**

- Some participants expressed that they were opposed to the Site C project.

*The record notes that the meeting was called to order at 7:45 p.m.*

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
<b>OPEN HOUSE</b>	Hudson's Hope – Open House April 18, 2012, 6:00 p.m. – 9:00 p.m. Hudson's Hope Community Hall - Hall 9904 Dudley Drive Hudson's Hope, B.C.

<b>DISCUSSION</b>
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*(Abbreviations will be used and mean – Q: Question, A: Answer, C: Comment)*

**1. Welcome and Introductions – Judy Kirk**

*Judy Kirk welcomed participants to the open house, and explained the format of the Q & A. The BC Hydro Site C team members introduced themselves.*

**2. Questions and Answers – All**

Q: *Kathi Birosh:* This might be a silly question, but is the ferry landing going up 30 feet? How does that work? That's pretty high.

A: *Andrew Watson:* I think it's about a third of the height of the escarpment. If you go to the edge of Hudson's Hope and look down, it's about one third of that height. The depth of the water at Peace Canyon dam is zero and at Site C it would be 51 metres, in front of Hudson's it would be 9 or 10 metres (or 30 feet).

Q: *Kathi Birosh:* My place goes up 20 feet where I live. So, I know they've been doing drilling. The bank drop is 90 feet to the river. It comes up 20 feet. I lose my house with this. I'm still 70 feet in the air. I don't understand how that's going to affect me where I am. I need you to explain this to me.

A: *Mike Porter:* The banks upstream of Hudson's Hope, along the reservoir shoreline would be in the bedrock – the silts, stones and shale. On top of that there is a thick cap of the sand and gravel and we see that there are small slides that happen in the bedrock under natural conditions. Overtime, those slopes flatten, that's a process that takes hundreds or thousands of years to occur. What's happening more quickly, the cap of sands and gravels is also prone to erosion and small slides. If water levels are raised with the reservoir, there would be small change in the stability of the bedrock slopes. This process of small rock slides and sloughing of sands and gravels would continue at perhaps a slightly faster rate. The stability impact line captures what is in part a natural process but also a process that is difficult to separate. If a slide were to occur it would be difficult for us to know if it was for natural reasons or due to the reservoir. For that reason, it's a conservative approach. It's much in-line with more modern practices. Hudson's Hope now has a recommended set-back from the top of the slope that is in line with the approach we have.

Q: *Kathi Birosh:* Why couldn't the berm go to Alwin Holland Park where the homes end? Why can't it protect all of us?

A: *Mike Porter:* The berm is an effective form of mitigation when we get further downstream to where the silts and clays are. That is an area where, unlike further upstream, the expected change would be small and the most active part is at the top of the slope where the sands and gravels are. Further downstream, the most active process is the process of wave erosion at reservoir level and a more dramatic change in ground water conditions that would reduce the stability of the slopes, much more than upstream. By putting a berm in with enough mass to offset the changes in stability and by adding rip rap protection we can effectively protect the shoreline. The berm process wouldn't have the same benefits upstream in the bedrock slopes. To eliminate the hazards there

<p><b>MEETING DETAILS</b></p> <p><b>OPEN HOUSE</b></p>	<p><b>BC Hydro Site C Clean Energy Project</b>  <b>Project Definition Consultation, Spring 2012</b></p> <p>Hudson's Hope – Open House  April 18, 2012, 6:00 p.m. – 9:00 p.m.  Hudson's Hope Community Hall - Hall  9904 Dudley Drive  Hudson's Hope, B.C.</p>
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we would need to construct something that goes right to the very top of the slopes and that's not something deemed to be practical or feasible.

- Q: *Brandon Rud:* Is BC Hydro confident the berm will protect those homes? Is it a guarantee or will we have to sell in 20 years to BC Hydro because it's not safe?
- A: *Mike Porter:* The studies carried out are comprehensive. We have a good understanding of the geological conditions and how the reservoir will change those. There is a high level of confidence in the berm. It is still important to remember that the berm would be a couple of metres above reservoir level and protect against big slides. There will still be slopes at the very top that won't be mitigated. There is a natural condition there that would continue.
- Q: *Robert Bach:* The berm construction – is the design far enough along that you have ideas about the water flowing underneath the town? There are a lot of springs around Hudson's Hope and some are high volume. How will the berm be constructed so it can handle that?
- A: *Mike Porter:* The idea is that the berm will be constructed with free-draining material but there is also water that will be coming out of the slopes out at the top and it will have to be conveyed in channels and that level of design isn't finished yet. It's a combination of design and materials, plus the channels and other features to manage surface water. The details of that will be moved further along once the project is approved.
- Q: *June Sykes:* In general, how did you come out with a map in the last week? In our case you have made our property a tiny piece because of the highway realignment. It puts us in a position where, if we don't want to stay there, who will buy our property? No one will buy our property because it's too uncertain. I'm speaking for everyone in the valley. The only person who will buy it is BC Hydro and I would really hate my house to become yours. You guys fiddle around and suddenly I have to make a decision. I don't expect an answer; that's my statement.
- A: *Robert Bach:* I'd like to follow-up on that. I've been selling real estate in this area for 20 years, when that map was released on April 10<sup>th</sup> I felt that BC Hydro has now stigmatized all of our properties. We've been here long enough that this project has been on the horizon for the last 40-years so we know the effects of that. Regardless of whether the project goes forward or is shelved, the impact to us is the same because as June pointed out, I can't think of a better word than stigmatized. There are properties on the river that haven't sold for fair value mainly because Site C is looming. No one wants to buy property like that because of the unknown. This is basically the case with all our properties. I think that the project probably won't be announced whether it goes ahead or not for a few years but in the meantime our lives are affected and put on-hold. Site C changes our futures and everything we've worked towards that makes this our home. That's not something that an appraiser can put a value on. The comparables aren't even reasonable because of Site C. I don't know how BC Hydro can effectively take care of that or address that reasonably and fairly to these people who've lived here all their lives. It doesn't make a difference if Site C goes forward or not, I was on the PWAC for six years. We tried to make BC Hydro name a date that they would release the properties or proceed with the project. We were shooting for 2050. The

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
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provincial government says that it's BC Hydro's decision but it affects our lives greatly and it doesn't make a difference at this point because of the maps that are here and the public knowledge is out there. People should be compensated. That's my statement, not a question.

- Q: *Unidentified*: You might have already addressed this but with the new federal regulations around environmental assessment timing, will Site C be affected?
- A: *Siobhan Jackson*: I don't anticipate any significant changes because we already have a joint agreement in place for a joint panel review. The timeline is laid out and we are well into it. The information from this consultation and the work we are doing in the fall all contributes to our environmental assessment application and we are working towards a date of early 2013 for submission of the application. That's what starts the review and hearings. That's roughly the timeline.
- A: *Judy Kirk*: Earlier we talked about this BC Hydro consultation continuing until the end of May. Then, BC Hydro will be coming out again in the fall with additional consultation topics. Siobhan also mentioned that the draft Environmental Impact Statement Guidelines is out for public comment period right now. They want online feedback about the guidelines that BC Hydro must follow. There will be open houses held by the regulators in the first two weeks of May. I've seen some ads in the local papers. Then, once BC Hydro files all of its studies and the results and an application for environmental certification in early 2013, there will be an additional public comment period. It's a lot of process over the next two years. Some held by BC Hydro and some by regulators.
- Q: *Unidentified*: Does BC Hydro actually think they really need this power?
- A: *Mike Savidant*: When we evaluate whether we need a project we go through an Integrated Resource Planning process. We develop a load forecast which shows how much demand for electricity we'll need in the province. We see how much we use now, for residential, industry and commercial, to create a forecast over 20-years. Next, we look at the conservation potential. It's always the first option we go to. We say how much do we think conservation can bring down that load. Then, we look at the remaining gap that must be served by additional resources. We do see a gap between supply and demand that would require a project like Site C.
- Q: *Unidentified*: Have you ever looked at anything besides large hydro? We don't know where all this electricity is going. I suspect we are spending a whole lot of money but do we really need it? Why don't you build a plant out there to deal with LNG? You don't need to run the hydro lines. There are lots of options and I don't understand. I'm not an engineer but find this hard to swallow.
- A: *Mike Savidant*: Since 2005, we've always looked at this project to serve domestic load. When we talk domestic load we are saying residential, commercial, and industrial. Without LNG we still see a gap and we still need Site C sized resource. We continue to see the need for Site C.
- Q: *Unidentified*: Why not use wind power? You could switch back and forth. It's not rocket science.
- A: *Mike Savidant*: In the IRP we do look at all the alternatives. We already bring on a lot of wind to the grid but it's not reliable. You can't count on it to be there on the coldest day of the year like you can count on large hydro.
- Q: *Unidentified*: We have so much wind up here.

<p><b>MEETING DETAILS</b></p> <p><b>OPEN HOUSE</b></p>	<p><b>BC Hydro Site C Clean Energy Project</b>  <b>Project Definition Consultation, Spring 2012</b></p> <p>Hudson's Hope – Open House  April 18, 2012, 6:00 p.m. – 9:00 p.m.  Hudson's Hope Community Hall - Hall  9904 Dudley Drive  Hudson's Hope, B.C.</p>
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- A: *Mike Savidant*: The wind quality is excellent up here I agree but it doesn't blow every day and it's not firm power. We look at building projects like Site C for capacity. You need the capacity when the wind isn't blowing.
- A: *Dave Conway*: There seems to be a perception that we actually still have surplus energy. We don't have it. We go to market often to buy energy and as a result, if the wind is there, there is nothing to back it up. If Site C was available now, we could use the power now.
- Q: *Unknown*: Build some natural gas.
- A: *Mike Savidant*: We do look at natural gas in the IRP but there is a provincial government policy objective that we need to be 90% renewable resource. Gas isn't green and natural gas cannot supply the load that Site C can supply. We need to reduce our GHG emissions and natural gas wouldn't be able to replace a clean project like Site C.
- Q: *Unidentified*: I don't think Site C is green.
- A: *Mike Savidant*: It is clean and renewable.
- Q: *Mick*: I never thought about this before but if Site C has been an option for so many years, is there not another river anywhere else? Why does it have to be on the Peace River?
- A: *Dave Conway*: The W.A.C. Bennett government set up a two-river policy using the Columbia River and the Peace River. Since that time all provincial governments have continued to use the two-river system. That's why you see the Peace and Columbia and not any other rivers.
- A: *Andrew Watson*: It's also creating very large storage reservoirs on the two years that have multi-year storage capability, on the Peace there is Williston. What that does is enables Site C to take advantage of the water again. From a hydrology point of view, before the Bennett Dam, the Peace River flowed we had a freshet and high flows in the Peace River and then for rest of the year we had low flows. When the time came that we need electricity varies through the day and through the year, we have peak demand in the winter months. A natural river doesn't have the capability to deliver energy on that basis, as there are low flows in the winter, so you need a large storage reservoir.
- Q: *Mick*: If Site C is built and we meet the peak demand, and our population continues to increase and industry continues to increase, will we look at building another dam? We will have the same problem in the future and there could potentially be a Site E, D and so on. You will probably answer and say those are off the table. But when peak demand raises its furious head again, will there be more sites?
- Q: *Andrew Watson*: You're right, we can answer it from a policy perspective. When the provincial government passed the *Clean Energy Act* it stated that Site C would be the last large hydro project in B.C. and that was legislation.
- A: *Judy Kirk*: But that said we hear your comment.
- C: *Mick*: If we can do something next time differently then why can't we do it differently this time? I invite all of you to attend the Paddle for the Peace this July. Come see the river valley for what it is, why there is passion about it. We have a beautiful river and the ones upstream are already gone.

<p><b>MEETING DETAILS</b></p> <p><b>OPEN HOUSE</b></p>	<p><b>BC Hydro Site C Clean Energy Project</b>  <b>Project Definition Consultation, Spring 2012</b></p> <p>Hudson's Hope – Open House  April 18, 2012, 6:00 p.m. – 9:00 p.m.  Hudson's Hope Community Hall - Hall  9904 Dudley Drive  Hudson's Hope, B.C.</p>
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- Q: *John Bandenberg*: You talk about the new recreation aspects, and there are boat launches on the Williston Reservoir and the Dinosaur Reservoir and there's one at Lynx Creek. Who pays for the upkeep and maintenance of those places right now?
- A: *Siobhan Jackson*: BC Hydro maintains the boat launches and has been doing the upgrades that you've been seeing. At Dinosaur we have plans to make an improvement we are just securing the land tenure. The boat launches are maintained by BC Hydro and we are taking a more active role downstream and upstream as well. I do know that we've been slower than we should but the water use plan has increased our commitments.
- Q: *John Bandenberg*: Who maintains those areas now? Who picks up the garbage? Who looks after the outhouses?
- A: *Siobhan Jackson*: Well each site is different.
- Q: *John Bandenberg*: What about the site at the south side of Williston, Elizabeth Creek?
- A: *Dave Conway*: I don't know who the contractor is.
- Q: *John Bandenberg*: I can tell you it's taxpayers of Hudson's Hope.
- A: *Dave Conway*: Typically we hire contractors to do that, depends on the arrangement.
- Q: *John Bandenberg*: So how much money does Hydro put into the Dinosaur Lake boat launch and camp ground?
- A: *Siobhan Jackson*: I don't have the number, but I can follow up on the status for each of the sites.
- Q: *John Bandenberg*: I'm asking because you talk about all these new great recreation areas on the reservoir and I don't see it around here.
- A: *Judy Kirk*: BC Hydro will get back to you on what their role is, who pays and who cleans up at those recreation sites.
- Q: *Brandon Rud*: How is the berm going to be constructed and what routes will be used? Where does the material come from? Will properties above the berm be subjected to large noise and dust? What are the mitigating factors? It's quite a large project, will it change daily living?
- A: *Andrew Watson*: We are in the early stages of planning right now. The material sources we are looking at are on the island immediately downstream that will be flooded. The berm would be constructed at the same time as the Lynx Creek highway realignment. There might be some sharing of material. We don't know what the route through town will be, as we need to finalize the material location before we can confirm that.
- Q: *Don Wharf*: Andrew identified some sources for material. One option that is displayed on the board up here is from Zone B on the plan. We are looking at that area for material as well and if that option is selected - to cut that slope back - that will greatly reduce the truck traffic that would go through these city streets. The source of rip rap to protect the berm would come from Portage Mountain that would be trucked down Canyon Drive. We are looking at DA Thomas Road. You've probably seen the concept for a recreation site at ferry landing road, you see where the base and picnic area, that will be a turnaround area for trucks so they can back in, offload material and then get back out. We anticipate a two-year construction period during the construction season May through October.
- A: *Brandon Rud*: That will be construction between 8 a.m. – 4 p.m. or will it be 24-hours a day?

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
<b>OPEN HOUSE</b>	Hudson's Hope – Open House April 18, 2012, 6:00 p.m. – 9:00 p.m. Hudson's Hope Community Hall - Hall 9904 Dudley Drive Hudson's Hope, B.C.

Q: *Don Wharf:* We would try to work within the municipality's hours of operation. I don't know what it is in Hudson's Hope, in others it's 7 a.m. – 7 p.m.

A: *Judy Kirk:* In the environmental assessment you will have draft mitigation plans. You can see the specifics and comment on that to the regulators on whether you think that is sufficient.

Q: *Unidentified:* You said the fill for the berm would be from Lynx Creek and Portage Mountain? That's nice you're going to flatten Portage Mountain and truck it through town? I happen to live in Lynx Creek and I'm not impressed.

A: *Don Wharf:* Lynx Creek was identified as an option for a source but it's our last option. We don't anticipate we are going to use Lynx Creek. It's a possibility if the District of Hudson's Hope and the community say they don't want us cutting back at Zone B and we have to source material from somewhere else. We are looking at the islands as a source of material as our second option. Lynx Creek would be our last option and we don't anticipate at this time we'll use that area. We need to identify it for the EA process. Portage Mountain we are looking at. We need approximately 150,000 cubic metres for rip rap materials for the berm and we would be looking to bring that in from a section of Portage Mountain, but we are still investigating.

Q: *Unidentified:* What is the route?

A: *Don Wharf:* It would come down Canyon Drive and down Ferry Landing Road to the river.

Q: *Unidentified:* I have been in places where money talks. Is that basically what you are doing?

A: *Don Wharf:* It would be a very small portion of Portage Mountain.

A: *Andrew Watson:* We are also looking at constructed rip rap that you make out of concrete. There is no suitable rip rap material right now so Portage Mountain would be the closest. We need rip rap on Highway 29, so it would make good sense to use it for the berm as well.

Q: *Brandon Rud:* Is there any communication with the existing BC Hydro plants and people that work there and management on things like employee retention? They are on the brink of closing schools and arenas here and this doesn't help the issue. There are 8 homes for sale right now and they are poor quality. There are talks of people moving and there is nowhere for them to go. How are you going to fill the plants that you currently have. How is the town going to survive?

A: *Andrew Watson:* The houses we purchase through passive acquisition BC Hydro is leasing those so they can be used still. I work for the generating company, I work for Site C and report through the generating company, so we definitely are tapped in. It's a challenge.

A: *Dave Conway:* The Human Resources piece for the whole company. Despite the pros and cons, there is an attraction/retention policy depending on which location is in within the province. That's the level that the company established and there are challenges to attract people. What you've identified is what's in the community. It's a bit of a self-fulfilling prophecy, the less people, the less services will be available and the less services, the less people. The other piece is the fact that we have an aging workforce. Most of our people have had families that have moved. The young children aren't there anymore. We are also in competition for the same people and same skills. People have choices about where they want to be. We've gone north to recruit out of Northwest

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project</b>
<b>OPEN HOUSE</b>	<b>Project Definition Consultation, Spring 2012</b> Hudson's Hope – Open House April 18, 2012, 6:00 p.m. – 9:00 p.m. Hudson's Hope Community Hall - Hall 9904 Dudley Drive Hudson's Hope, B.C.

- Territories and Yukon and recruiting south as well. We've had limited success. We've got positions that we've been trying to fill for a year or two years and it's a challenge.
- Q: *Brandon Rud:* Hudson's Hope is very unique. I've worked around B.C. for the last 5 years. This place is beautiful and the outdoor lifestyle is great. But when you don't have a place to live, how are you going to move there? For the people who do live here, where will they go? Damien Dunne is talking to people but it doesn't seem like there is anything to bring people to Hudson's Hope. You're going to have great stuff but the current state of the town is embarrassing. It's hard to convince people it's a good thing. I haven't talked to you personally yet but you need to talk to lots of people here and it's so unique you need to talk to the people who don't come to these meetings as well. For the record, I came here as my one of my first locations but I almost quit because I got put between a rock and a hard place when it came to buying a house. I was one hour away from packing up and going south because I couldn't find place to live and now it's even harder for people.
- A: *Andrew Watson:* Some of the things we are trying to do on the Site C project, we wanted to confirm the berm early in the project and we extended the berm across the entire frontage. We've hired the best people to do the stability assessment upstream to look at options. We want to make sure where it's safe to remain. We are trying to reduce the impact on the residential side of things.
- C: *Brandon Rud:* I just thought more consideration could be building new homes or other options, rather than just pay people money. The appraised value is like \$200,000 and you can't build a home in this town for less than \$300,000. We need other housing options.
- Q: *Kathi Birosh:* What's on for tomorrow?
- A: *Judy Kirk:* It's a smaller meeting, 2-hours in length, we will be sitting around tables but it is the same information as presented tonight. If anyone wants to come to that you are welcome.
- C: *Kathi Birosh:* I believe there was a contract given to BC Hydro to build boat launches throughout the province and then there were government overview of spending and there were cut-backs, but I do believe the one at Dinosaur will be fixed up.
- C: *Dave Conway:* Yes, and the Dunlevy one.
- A: *Siobhan Jackson:* That's right. We are making a lot of improvements at Peace Island Park and we are stepping up to make improvements. You're going to see us pick our feet up in the next couple of years.

*The record notes that the question and answer session ended at 9:00 p.m.*

<b>MEETING DETAILS</b>	<b>BC Hydro Site C Clean Energy Project Project Definition Consultation, Spring 2012</b>
<b>OPEN HOUSE</b>	Dawson Creek – Open House April 23, 2012, 6:00 p.m. – 9:00 p.m. Best Western Dawson Creek – Room 1 500 Highway #2 Dawson Creek, B.C.

<b>PURPOSE</b>	Notes from a public open house for the BC Hydro Site C Clean Energy Project held with stakeholders and representatives of the Site C Project on April 23, 2012 at Best Western Dawson Creek, Dawson Creek, B.C.
<b>FACILITATOR</b>	Judy Kirk, Kirk & Co. Consulting Ltd.
<b>SITE C PROJECT TEAM ATTENDEES</b>	Dave Conway, BC Hydro Siobhan Jackson, BC Hydro James Thomas, BC Hydro Don Wharf, BC Hydro Simon Douglas, Site C Project Team Duane Anderson, BC Hydro Alex Izett, Site C Project Team Greg Woollacott, Ministry of Transportation and Infrastructure Chris Chok, Kirk & Co. Consulting Ltd., Meeting Recorder Tim Lai, Kirk & Co. Consulting Ltd.

<b>KEY THEMES</b>
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**Expression of Opposition**

- Some participants were opposed to the Site C project, citing impacts to agricultural production and impacts to First Nations communities.

**Energy Planning**

- Some participants asked BC Hydro to look at alternatives to building Site C, including use of natural gas, geothermal and wind power.
- Participants asked whether the energy generated by Site C would be pinpointed for use in Liquefied Natural Gas plants, and also whether Liquefied Natural Gas plants, as industrial customers, would be subsidized by residential rate payers by receiving a lower electricity rate.

**Community Benefits**

- Participants asked about the cost of power generated from Site C and were interested in potential benefits for residents in the Peace region, including a percentage of revenue generated.

**Outdoor Recreation**

- Participants wanted more information regarding recreation on the Site C reservoir, and stated that recreation opportunities that were promised as part of the W.A.C. Bennett Dam have not been provided. Some participants felt that BC Hydro was using promises of recreation as a way of “selling” the project to communities.





<p><b>MEETING DETAILS</b></p> <p><b>OPEN HOUSE</b></p>	<p><b>BC Hydro Site C Clean Energy Project</b>  <b>Project Definition Consultation, Spring 2012</b></p> <p>Dawson Creek – Open House  April 23, 2012, 6:00 p.m. – 9:00 p.m.  Best Western Dawson Creek – Room 1  500 Highway #2  Dawson Creek, B.C.</p>
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will have to be available to deal with that load now, because this project isn't certified. It's the same thing with the development of the Horn River Basin. So it could, if it ultimately gets built, it could, but unless there is a direct transmission line, it flows onto the grid, and it would serve our residential, commercial and industrial base. So would some of the energy at the time end up going to LNG? Quite possibly. But highly unlikely that all the energy produced from one facility, like the W.A.C. Bennett Dam or the Peace Canyon Dam, or Site C, would go to one particular project.

Q: *Diane Culling:* So just to clarify, following up on that comment – it was the Premier who made that comment. But she was making that comment about Shell's LNG plant, which was the third. Right now, BC Hydro has apparently got the ability to provide power for the first two. And compressing natural gas is a very energy intensive process. Over the years since Site C has reared its ugly head, we have heard that BC is running out of power, and we want to become a clean energy exporter. And now we are looking at subsidizing, without a doubt, subsidizing the international oil and gas industry, because they will get industrial rates. Industrial rates, what are they, a third less than residential customers?

A: *Dave Conway:* Roughly, yes.

Q: *Diane Culling:* Coming back to the LNG, that says to me that B.C. is not at a point of suffering brown outs, if we can have two LNG plants come online, especially at those rates. And so industrial rates are a third of what we are paying, what is the estimate for Site C?

A: *Dave Conway:* \$87 to 95/MW.

Q: *Diane Culling:* So what would industrial rates be? \$30?

A: *Dave Conway:* No, it's higher than that. I don't know the exact number, I'd have to check.

Q: *Diane Culling:* So on any of these LNG plants, we are really talking about significant subsidies to the oil and gas industry right now.

A: *Dave Conway:* The Government has not said that the industrial rate would be applied. My understanding is that they are looking at negotiating what that might be for specific load, like LNG. My understanding is that there is no decision made of what that would be.

Q: *Nick Parsons:* To all here present. Nothing in this world is more important to our well-being and civilization than the best productive food producing land, which is getting scarcer every year by millions of acres being swallowed up through urbanization world-wide. The Peace Valley has much potential, especially with irrigation, to feed locally for future generations.

BC Hydro should be investigating the potential of electricity derived from natural gas turbines in this immediate area, especially as it comes with a small price tag compared to damming a river, if this electricity is so badly needed. Natural gas is only one alternative – there are many more.

These letters I have written against the dam over the past two years fell on blind eyes, especially BC Hydro and government officials who are in favour of the dam. Anyone with an ounce of common sense would not contemplate this dam with all the destruction involved – let alone the outrageous cost. If this dam should get built, the current estimated cost of \$8 billion would represent a cost of \$2,000 to every man, woman and child in British Columbia which could end up as more, as most projects always are.

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As the saying goes, “you do not appreciate what you have until it is gone.” The valley, the river and its tributaries – all 118 kilometres of it – would be gone forever. Yes, forever. No turning back.

- Q: *Gene Hicks:* Do you have an accounting of the project costs to date, including your engineering – all costs on the Site C development so far?
- A: *Dave Conway:* Costs from Stage 1, from 2005 to Stage 3, March 31, 2012 are \$180 million. That includes all the consultation, First Nations consultation, all the project design, all the engineering and technical work, and all the study work that has been done to date. That’s our last fiscal year – we run an April 1 to March 31 fiscal year.
- Q: *Mick:* I have a question for Mike. If you could put the zeroes on it, Dave was talking about kilowatts and megawatts, and all that. I don’t know what that is. Did you say a penny and a half?
- A: *Dave Conway:* It is \$87/MW, and it ranged to \$95/MW. It is a cost range.
- Q: *Mick:* I think you said something about the cost per kilowatt hour. I think I pay somewhere around 7 cents/kwh.
- A: *Dave Conway:* The average rate for a residential customer is about 9 cents/kwh.
- Q: *Mick:* The production cost at the dam you said would only be a penny and a half.
- A: *Dave Conway:* 1.5 cents/kwh production for generation, and then additional cost for transmission, and then distribution, and then the overhead cost of 2.5 cents/gwh. But it’s a blended rate, Mick, not all your supply is coming from the W.A.C. Bennett Dam. It’s coming from projects all over, and also from independent power producers, like Bear Mountain. It’s coming in much higher.
- Q: *Mick:* The numbers are astronomical. Mike, do you not think that there are no alternatives to Site C at all? A couple of cents per kilowatt hour, to go into a fund to encourage geothermal, to encourage wind, and help lighten that peak load at some times. Because we know in 20 years like we said the other day, there will be another peak power problem, and we will have to solve it at some point then. Whether its 20 or 30 years. As we were children, there will be other children coming. That valley is in need of food production. The community of Taylor used to have 20 market gardens. BC Hydro has since bought that land and it’s a park. It’s a wonderful park. But it could have been very productive land. If we had encouragement from government to not use this valley for this purpose it could have been very productive. How much little mini cents per kilowatt hours, and all the energy that could come from wind, and solar and geothermal. I guess it’s a personal question – do you think those are all null and void adaptations that could be used instead of Site C? Do you think they’re just not worth it?
- A: *Dave Conway:* Absolutely not. Our Integrated Resource Plan, our forecast plan, and how we end up meeting the load demand, is based on many things. And to take some of your selections – our first and foremost is to reduce the amount of electricity that is being used. We spend a lot of money on energy reduction programs, primarily under the banner of Power Smart, with our industrial, residential and commercial customers. We’re trying to reduce first, because that’s the cheapest way, to not use it in the first place. And then we’re looking at generating options. So, we are taking wind. We have had calls since 2002. The energy from Bear Mountain comes onto the grid, BC Hydro purchases it. Micro-hydro, specifically down in the Squamish area, or out west towards Terrace – we’re taking energy from that. Biomass – in our case it is wood waste, and there are a

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number of wood waste plants like PG Pulp in Prince George and Weyerhaeuser in Kamloops, it all comes on. Some of these options, however, from our price perspective, I mentioned the fourth lowest rates in North America, makes it extremely expensive to add them. Our last call for power in 2009, which was micro-hydro and wind, on average was \$125/MW, which is 12.5 cents/KWh. So that's above what you're paying. We're blending that with the rates from W.A.C. As prices rise, more of these options will become possible. But it's a blend of all these things. Site C, as you pointed out very well, is not the solution; it's a mixture of things. First it's getting people to use less.

- Q: *Mick:* Thank you for that. You obviously have knowledge of lots of alternatives. The alternative of Site C is non-reversible. The wind farms are reversible. The land is gone when they're working on it, but after they are grazing fields for cattle and wildlife.
- Q: *Diane Culling:* Simon, I have a couple of questions for you. My apologies, I came in late, so I didn't get a chance to see all the displays. In November when you were in Fort St. John, you talked about 38 million cubic metres of material that would need to be spoiled to reduce the slope on the north side. At the time, I asked where all that material would need to be stored. Can you paint the picture of what that would look like?  
Take it back a step – first of all, what would it look like, on the ground. First of all, you have 38 million cubic metres of materials to remove to get down to solid shale. For the till material, you have 14 million cubic metres of till materials that would need to be brought in.
- A: *Simon Douglas:* It's not 14 million, it's 3.3 million cubic metres of till.
- Q: *Diane Culling:* Can you paint us a picture? Is the rip rap coming from Pine Pass? Paint an accurate picture of what the impact will really look like on the ground. Now we're hearing about a 3 kilometre long conveyor. People have had the illusion that Site C is about a river getting a little wider, the local people. And they don't understand what the real impact to the region is.
- A: *Simon Douglas:* The material that is going to be excavated at the site is going to be used for a lot of things. Some of the material that will be excavated out of the river valley itself, some of that can be used in the production of concrete aggregates or in the construction of the dam itself. You spoke of the 3.3 million cubic metres of till material that will come from 85<sup>th</sup> Avenue would go into the dam itself. I think what you're getting at is what happens to the material that can't be used for construction of the dam or other components. So the vast majority of that material, spoil material, if you like, is envisaged to go upstream of the dam site, and would be relocated into areas that would eventually be inundated by the reservoir. So during the construction period, which would on average be seven years, those areas would be visible. Once the reservoir is watered up and the facility is in operation, all of that material would not be visible by the naked eye.
- Q: *Diane Culling:* Can you define vast majority? If you're saying vast majority of the 38 million, are we talking about 30 million of it?
- A: *Simon Douglas:* I can't give you an exact number. We can get back to you.
- Q: *Nick Parson:* I don't know if the folks here realize or know that just over 200 acres has been purchased by BC Hydro at the outskirts of Fort St. John for \$12 million. Is this not premature? The dam is not going ahead yet. Why spend this money? Our taxpayer money. Why is the fellow not

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offered the \$12 million if the dam was to go ahead? Why purchase it? This is pre-emptive. This is not democracy.

A: *Siobhan Jackson:* For the environmental assessment process, we are required to bring forward a lot of very specific information about what the effects of the project would be. For a site like that, for us to acquire it, allows us to be certain of what our activities would be. The timeline of the environmental assessment is three years. We didn't consider doing a conditional offer over that timeline. If the project does not proceed, it is still a zoned light industrial site, and we would look at what we would do with that land if the project were not to proceed.

Q: *Nick Parsons:* Would it be a fill site for Fort St. John? A land fill? What else would it be filled with?

A: *Siobhan Jackson:* It was zoned light industrial land. It doesn't need to be filled. It's a 200+ acre parcel, zoned light industrial, and we would look at future land use if the project doesn't proceed.

C: *Nick Parsons:* It would take a lot of product to fill that hole up.

Q: *Diane Culling:* Before I ask my question, I don't think you guys understood each other. If that volume of material was excavated out and to the dam site, then what do we have? It's a huge quarry.

A: *Siobhan Jackson:* So fair enough. We have a number of boards to communicate that. The shape of the site – if we were to use the material from the site, we would take material from the top. There would be no hole. We could level the site from its current rise of 35 metres from one side to the other. So there would be no hole.

Q: *Diane Culling:* Back to Simon. The majority of the material would be in the potential impoundment area. In November of 1981, when Site C was visited one of the first times, BC Hydro commissioned a study of landslide generated wave for Tea Creek and Moberly slides, from an engineering firm out of Vancouver. They built a physical test model that represented about 6 kilometres downstream, to see if a landslide that would create a wave that would top the dam. If I understand it right, they did manage to slop over in some of the trials. My question is, and my understanding is that the model was as built, with existing profile of the river bed, right? First of all, did you rerun those models? And with sediment in the reservoir, how would that affect the potential to have a wave over top that dam?

A: *Simon Douglas:* No, we have not rerun those models, but we do have studies ongoing looking at the new arrangement and looking at landslide generated waves around the reservoir. I think if I recall correctly, the sloughing that went over the go over the top of the dam, they tested slide velocities that were far in excess of what they knew was physically possible. They ran sensitivity tests to figure out what it physically takes to get over the top of the dam. Siobhan, would you like to jump in on sedimentation?

A: *Siobhan Jackson:* As part of our physical environment studies, we are studying sediment that would be predicted to occur. That would allow us to predict the total volume of sediment that would be contributed from the erosion activities, from the impact lines work here. In the fairly short term, most of the sediment would come from those activities. In the long term, most of the sediment load would come from the tributaries, as they would deposit their load from the upper arms. The analysis is underway to understand where those would filter. Which ones would become water borne and where they would deposit otherwise? There are many different tributaries with

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different sediment loads in the world. The sediment loads in this system are fairly modest for a dam and operating scenario.

Q: *Arlene Boon:* The industrial lands that you bought. Who owns the mining rights? BC Hydro or the owner that you bought it from?

A: *Duane Anderson:* The short answer is BC Hydro.

C: *Arlene Boon:* BC Hydro owns the material on that property. So when this project is cancelled, who is their right mind is going to buy this land back from BC Hydro for \$12 million? It's going to be a loss to the rate payer? That's a comment.

Q: *Leanne Esau:* I grew up in this area, went to school at Attachie. I have concerns about the banks sloughing in, I've read all the studies. This is the first time I have looked at your highway realignment, and I have concerns about the increased traffic that has already been on the highway. I don't see any improvement to Watson Hill. I don't see any of that added cost. What I see here is really underestimated.

A: *Don Wharf:* To address your questions, I'm going to get some help from our Ministry of Transportation and Infrastructure fellow here. What you see there is on the boards is the segments of Highway 29 that would be inundated by the Site C reservoir. That's what BC Hydro is responsible for. Those areas that you mentioned, including Watson Hill, Cache Creek Hill, where you're going up behind fracking trucks and being delayed, those areas are being monitored by the Ministry of Transportation and Infrastructure right now. So maybe Greg, if you want to address what the Ministry is doing.

A: *Greg Woollacott:* What Don has alluded to is, what we do on a regular basis is take a look at our corridors, including this particular stretch. We monitor the condition, and when warranted, we look at upgrading. This is one road that is particularly important to us, because we also have Taylor hill. I can give you my business card and we can talk later.

Q: *Allan Hickey:* If this dam goes through, I was very disappointed in the end of the Wacky Bennett Dam, that we never did get the fishing that we were promised. He doles the logging out to some halfwit cousin of his, so none of the logs in the reservoir, the dam – methyl mercury comes out of every log or any bush on anyone's farm. They have to make sure that every log comes out, so we don't have issues with methyl mercury or dead heads. We really need, if they're going to have a fishing resources, or a recreation resource, it would be a way better possibility to build good recreation sites and fishing, because its level compared to Wacky Bennett. Are you really looking into what they would provide into at least a recreation resource to the people?

C: *Judy Kirk:* Some comments in there for sure, but I think also questions around reservoir clearing and recreation.

A: *Siobhan Jackson:* Yes, in the Discussion Guide, there are a few pages that describe our proposed approach to providing recreation amenities that you just talked about. BC Hydro is proposing to build and manage three sites along the reservoir. Two would be full size boat launches at Lynx and one of two sites at Cache Creek. The third would be in association with the berm we are building at Hudson's Hope. BC Hydro would build and maintain those. Clearing, yes, we plan to clear the





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We used to go by horses. We lived right in the bush, and we used to have a lot of meat all the time. There is no more. There is no more moose. We've been hunting just about whole two weeks last week. We never even see one moose. Not elk. When we went hunting before, you think we would see anything? No, they all disappeared. My brother in law, before he died, he was working for an outfitter. At the end of the year, he came back, and he said "do you know where the animals are going? In that big Bennett Dam." He was guiding over there. He's seen these caribou trying to swim across. By the middle of the dam, they couldn't go anymore, they just drowned. They still want to do more damage? That's not enough you guys doing the damage? You guys should think about it. Maybe you people don't eat meat. I'm really disappointed when I come to these meetings. I don't even want to look at that sign. The way we used to live. That's the way my grandkids should be raised. All 14 of them. I'm proud of them when they go hunting. Thank you. That's all I share.

- C: *Unidentified:* Just a quick comment on morals and economics. The electricity is worth many times more than spuds and veggies that can be grown in the valley, but you can't eat electricity, and eating is a hard habit to break.
- Q: *Unidentified:* When we used to go on tours of the W.A.C. Bennett Dam, they used to always say it's been engineered for 100 years. I'm not sure how long it's been, but I want to know what the plans are for W.A.C. when the 100 years are over.
- A: *Dave Conway:* The timelines you hear related to 100 years, and the dam came into service in 1967, the 100 years is the economic plan period. We look at maintaining the facilities in perpetuity. So with a facility like the W.A.C. Bennett Dam, and the Williston Reservoir behind it, it's so vital to the system in terms of what it produces of electricity. You couldn't find the 2,730 MW of capacity it provides in today's world. And the water storage is two to three years. It's not there for 100 years. It's there for hundreds of years.
- C: *Judy Kirk:* It's about 12 minutes to 9 now, Dave, if you could wrap up. We will be here until 9:00pm, if you have further questions for the BC Hydro people, please feel free.
- A: *Diane Culling:* You guys are all on the payroll, on the clock tonight, and we are all here. Some of us have travelled a distance, and I think it would be respectful, I see there are questions behind.
- C: *Judy Kirk:* Diane, we started early, and we are going to end. We will be here. But we are going to end now, and people can come and ask questions individually. We started at quarter to 8, so we are going to wrap up now at 10 minutes to 9. Dave, please wrap up.
- C: *Dave Conway:* I would like to thank you for coming out. We do hear what you are saying. Thank you for coming and spending some time with us.

*The record notes that the question and answer session ended at 8:50 p.m.*