BC Hydro
2008 Long Term Acquisition Plan

Final Argument

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For: ESVI, OEIA, ITO and ROMS BC

Summary

The following document is the Final Argument for the BC Hydro 2008 Long Term Acquisition Plan as submitted by:

Energy Solutions for Vancouver Island Society
Okanagan Environmental Industry Alliance
IslandTransformations.Org
Rental Owners and Managers Society of BC

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Discussion

1.0 Underestimating DSM targets

1.1 Underestimating DSM targets due to past BC Hydro practices at setting targets:

We submit that in the past, BC Hydro has consistently set its targets for DSM energy savings too low.

Discussion:

Mr. Bertsch cross examined BC Hydro's Witness Panel 4 regarding its F2007 DSM results:

Mr. Bertsch asked: "*Could you confirm that the energy savings [for 12 months ending March 31, 2007] of the energy efficiency portion was 412 gigawatt hours per year versus the target of 310 gigawatt hours per year?*"[1]

Mr. Hobson replied: "*Yes.*"[2]

Mr. Bertsch asked: "*. . . and energy savings 33 percent above target.*"[3]

Mr. Hobson replied: "*For those portions, yes.*"[4]

Therefore, BC Hydro confirms that the actual DSM savings for F2007 was 33% higher than its targets. Similarly, the F2008 DSM actual savings was 71% higher than targeted[5].

To understand what caused the phenomenon in F2007, Mr. Bertsch asked: "*Would this give an indication in some way that the DSM targets perhaps are too low?*"[6]

Mr. Hobson explains: "*No, you know, I think we're taking snapshots here, and I think we've also got some of the issues that I spoke of earlier, in terms of nailing the ramp-up with respect to specific initiatives. We're going to get variation with respect to performance within slices in time, and I think within the planning exercise that we put forward over a long term, you're almost working towards an end point, and you're trying to shape that in terms of when you think the savings consistent with your offer are going to drive savings within a specific period of time.*"[7]

So, BC Hydro explains that the F2007 DSM actual was higher than the target because of issues such as "*ramp-up*" and "*variation . . . within slices in time*".

To analyze the "*variation . . . . within slices in time"* issue identified by BC Hydro it would appropriate to examine the performance of BC Hydro's actual DSM performance compared to the targeted DSM over the last several years, and look at the confidence level of BC Hydro to obtain those targets:

Mr. Weaver asked: "*But your experience is, you've set your targets and*

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[1] Transcript Volume 13, Mar 5, 2009, Page 2451, Lines 14-17; Exhibit B-4, ESVI IR 2.10.1 Attachment 2, Page 5 of 17

[2] Transcript Volume 13, Mar 5, 2009, Page 2451, Line 18

[3] Transcript Volume 13, Mar 5, 2009, Page 2451, Line 23-24

[4] Transcript Volume 13, Mar 5, 2009, Page 2451, Line 25

[5] Transcript Volume 13, Mar 5, 2009, Page 2456, Lines 24-25 & Exhibit B-4, ESVI IR 2.10.1 Attachment 4, Page 6 of 17

[6] Transcript Volume 13, Mar 5, 2009, Page 2451, Line 26 to Page 2452, Line 1

[7] Transcript Volume 13, Mar 5, 2009, Page 2452, Lines 2-12

you've essentially met them with PowerSmart."[8]

Ms. Van Ruyven replied: "*We have, and I have a lot of confidence in our PowerSmart group.*"[9]

Ms. Van Ruyven states: "*But since PowerSmart got back on board in about 2001, we have met our targets each year.*"[10]

In other words, instead of the actual DSM savings averaging the mid point - sometimes being high and sometimes being low - BC Hydro is consistently setting its DSM targets too low.

BC Hydro consistently surpassing its DSM targets is confirmed by comparing the actual cumulative DSM Energy Savings to the DSM targets[11] over the last several years. The actual DSM values are consistently higher than the targets, and over the entire six year period from F2003 to F2008, the actual DSM values were 7.6% higher than the DSM targets[12]. Plus, in the last two years (F2007, F2008), the actual DSM savings have been significantly even higher (as discussed above), perhaps revealing the latest trend.

<u>Resolution:</u>

We submit that BC Hydro has not provided any evidence suggesting that it has changed its approach for setting DSM targets in the 2008 LTAP compared to its methods in the past.

Since, in the past, BC Hydro's have consistently been too low, we submit that the DSM targets[13] used in 2008 LTAP are too low and should be increased by least 7.6% to accommodate for the tendency of BC Hydro to set their targets too low.

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[8] Transcript Volume 4, Feb 20, 2009, Page 532, Lines 11-13
[9] Transcript Volume 4, Feb 20, 2009, Page 533, Lines 4-5
[10] Transcript Volume 4, Feb 20, 2009, Page 537, Lines 20-22
[11] Exhibit B-60
[12] Exhibit B-60; 2181/2026 = 107.6% or 7.6% higher
[13] Exhibit B-10, Page 29, Table 2-10

1.2 Underestimating future DSM targets compared to past actual performance:

We question how "ambitious" the future DSM targets in the 2008 LTAP are in comparison to the last couple years of actual performance.

As noted in the BC Hydro's last two DSM reports, the actual incremental DSM savings of F2007 and F2008 were 412 GWh/yr[14] and 464 GWh/yr[15]. These values are significantly above the LTAP projected F2008 to F2010 incremental values of 286 GWh/yr[16], 287 GWh/yr[17] and 325 GWh/yr[18]. In addition, these actual values were reasonably close or above the incremental values in all future years (<=460 GWh/yr[19]) except for one year.

We submit that by analyzing the actual DSM energy savings in comparison to the planned LTAP future targets, and taking into the ambitious DSM goals and future DSM funding levels, that this provides further evidence that the DSM energy savings targets are too low and should be increased.

2.0 Increase DSM funding

2.1 During the cross-examination of BC Hydro Witness Panels regarding closing the load-resource gap with DSM:

In response to questions regarding Option A and Option B, Ms. Van Ruyven stated: "*Well, if you plug in Option B, based on our new load forecast, . . . it's probably in the high nineties of our total resources if it was Option B would be met through DSM, and that doesn't really pass the test of having some diversity of resources in your plan. It would pretty much close the entire gap.*"[20]

Mr. Bob Elton states: "*. . . I mean, the Act actually says that it's up to the utility to say why it hasn't chosen all DSM. So I think clearly the energy policy of the government allows for the possibility that at some point we will indeed say it's all DSM.*"[21]

[14] Exhibit B-4, ESVI IR 2.10.1 Attachment 2, Page 5 of 17
[15] Exhibit B-4, ESVI IR 2.10.1 Attachment 4, Page 6 of 17
[16] Exhibit C23-9
[17] Exhibit C23-9
[18] Exhibit C23-9
[19] Exhibit C23-9
[20] Transcript Volume 4, Feb 20, 2009, Page 526, Line 20 to Page 527, Line 2
[21] Transcript Volume 4, Feb 20, 2009, Page 527, Line 21 to Page 528, Line 4

These statements show that BC Hydro interprets the energy policy that it allows for the entire load-resource gap to be closed with DSM at some point, and that Option B would almost close the gap.

2.2 Mr. Bertsch explored with Witness Panel 3 whether or not there can be too much DSM:

Mr. Bertsch asked: "*So in other words B.C. Hydro would not consider it a detriment to create a situation where there's too much energy savings through DSM?*"[22]

Mr. Reimann of BC Hydro responded: "*Well, I think we'd look to avoid a situation where we acquired more supply than we needed.*"[23]

Mr. Bertsch clarified: "*I'm talking about energy savings due to DSM.*"[24]

Mr. Reimann answered: "*Agreed.*"[25]

Therefore, it can be concluded that BC Hydro does not consider it a detriment if there is too much savings through DSM.

2.3 In defense of not closing the entire gap with DSM, BC Hydro states:

Mr. Bob Elton states: "*I think a legitimate reason for saying it isn't all DSM is the issue of deliverability risk, which is what we've said, and I agree with Ms. Van Ruyven that over time it may well be that we'll become more and more confident of the deliverability of DSM programs.*"[26]

Therefore, it can be concluded that BC Hydro has not closed the gap with DSM because of its lack of confidence for the deliverability of the DSM programs.

2.4 In exploring the relationship between DSM expenditures and chance of success:

Mr. Hobson states: "*Well, I think what we've done is, by putting forward a reduced level of savings but maintaining the expenditures, we've improved our chances of achieving the level of savings we have adjusted to, versus what it otherwise would have been if we had also adjusted those*

[22] Transcript Volume 10, Page 1867, Lines 16-18
[23] Transcript Volume 10, Page 1867, Lines 19-21
[24] Transcript Volume 10, Page 1867, Lines 22-23
[25] Transcript Volume 10, Page 1867, Line 24
[26] Transcript Volume 4, Feb 20, 2009, Page 527, Line 21 to Page 528, Line 4

expenditures."[27]

Therefore, we submit there is a direct correlation between chances of success and the expenditures: the chances of success (and confidence of deliverability) increase when the expenditures are increased.

2.5 So, in conclusion:

- At some point, the energy policy allows for the entire load-resource gap to be closed with DSM, and
- it is not a detriment to have too much energy savings due to DSM, and
- the core of BC Hydro's hesitation to close the gap with DSM is the confidence level of deliverability and that BC Hydro feels that more time will allow for the confidence level to increase, and
- The confidence of deliverability increases when the expenditures are increased.
- Therefore, we submit:
  - BC Hydro should shorten the timeframe to obtain this increased confidence level (because among other reasons, that the cost of DSM is significantly lower than new supply), and
  - that an appropriate, and our suggested, approach (to shorten the timeframe) is by increasing the level of DSM funding to the funding level for Option B or enough to close the gap.

3.0 Rental DSM Program

3.1 Mr. Bertsch cross examined BC Hydro Witness Panel #4 regarding the rental DSM program:

Mr. Bertsch asked: "*If for some reason the DSM plan put forward in this LTAP is rejected and resubmitted after June 1st, 2009, do you believe that B.C. Hydro would then need to submit a rental DSM program?*"[28]

Mr. Godsoe replied: "*That's a legal issue, and I can confirm that that would be the*

[27] Transcript Volume 13, Page 2380, Lines 18-23
[28] Transcript Volume 13, Page 2511, Lines 9 to 11

case."[29]

Therefore, any DSM plan introduced after June 1, 2009 must include a rental DSM program.

3.2 What about standalone DSM programs?

Mr. Bertsch asked: "*Could DSM plans be filed on a standalone basis and be introduced to the market without any input from intervenors or stakeholders?*"[30]

Mr Godsoe replied: "*So, I can answer that. If there is expenditures attached to under Section 44.2, we need blessings from this Commission before we can put them into rates. So it's a pretty safe assumption that, if we bring a DSM plan through the LTAP or a stand-alone with expenditures, we will put that in front of the Commission, because there is a direct link to our cost recovery.*"[31]

Therefore, a DSM plan could be introduced on a standalone basis.

3.3 Does the Commission require a hearing?

The Chairperson asked: "*Is there a requirement for the Commission to hold a hearing and approve it? Or can the Commission just accept it?*"[32]

Mr. Godsoe replied: "*I think you can just accept it. You're masters of your own domain as far as process goes.*"[33]

Therefore, a hearing would not be required to approve a standalone DSM plan.

3.4 What type of stakeholder consultation is committed for the rental DSM plan?

Mr. Bertsch asked: "*No matter which way it goes, can B.C. Hydro commit to meaningful stakeholder consultation before introducing its rental DSM program?*"[34]

Mr. Hobson replied: "*Well, I think we would move forward with stakeholder consultation, and we could commit to that. To the degree that we take it forward within a regulatory process, I don't think that's close to being determined. And I guess it would depend on that process, to determine what level of intervenor*

[29] Transcript Volume 13, Page 2511, Lines 9 to 11
[30] Transcript Volume 13, Page 2510, Lines 12 to 14
[31] Transcript Volume 13, Page 2510, Lines 15 to 22
[32] Transcript Volume 13, Page 2510, Lines 23 to 25
[33] Transcript Volume 13, Page 2510, Line 26 to Page 2511, Line 1
[34] Transcript Volume 13, Page 2512, Lines 7 to 9

involvement through our regulatory setting would be required."[35]

Mr. Bertsch inquired: "*So using the words 'meaningful stakeholder consultation', if you just restrict it to those three words, would it be a qualifier or –*"[36]

Mr. Hobson replied: "*I think that's a relative term. So, I think we would move forward with what we would consider to be the type of engagement we would need to best understand the type of program we would move forward with, and you know, low income might be a good example of that, where, you know, we did a fair bit of consultation with different groups in the development of that particular initiative.*"[37]

BC Hydro committed to stakeholder consultation on the rental DSM program, but not necessarily meaningful stakeholder consultation.

3.5 This brings up the question of what is meant by meaningful stakeholder consultation versus stakeholder consultation. As described in Appendix A, the 2007 RDA decision emphasized the importance of meaningful stakeholder engagement (or consultation)[38].

Therefore, we submit that it is important that meaningful stakeholder consultation be committed to by BC Hydro.

3.6 So, in conclusion:

- Any DSM plan introduced after June 1, 2009 must include a rental DSM program, and
- a DSM plan could be introduced on a standalone basis, and
- a hearing would not be required to approve a standalone DSM plan, and
- BC Hydro committed to stakeholder consultation on the rental DSM program, but not necessarily meaningful stakeholder consultation, and
- meaningful stakeholder consultation is important for the rental DSM program.
- Therefore, we submit that:
    - BC Hydro should commit to have meaningful stakeholder consultation

[35] Transcript Volume 13, Page 2512, Lines 11 to 18
[36] Transcript Volume 13, Page 2512, Lines 19 to 21
[37] Transcript Volume 13, Page 2512, Line 22 to Page 2513, Line 3
[38] Appendix A of this document

(or engagement) before submitting its Rental DSM Program to the BCUC.

4.0 Capacity-focused DSM Project

4.1 The regional aspect of the Capacity-focused DSM project:

In response to questions in regards to the Capacity-focused DSM project, Mr. Hobson states: "*There are going to be certain areas that are going to be more capacity constrained, but I think that's what leading us to this is more the general opportunities that may exist around capacity, and whether that's at a system level or a regional or a distribution level. I think those will all be areas that we'll try to explore as we go through the process.*"[39]

The Capacity-focused DSM project involves regional or distribution level opportunities.

4.2 What type of stakeholder engagement?

Mr. Bertsch asks: "*I assume the stakeholder -- maybe one of the other terms lately that we've been looking is will you be doing meaningful stakeholder engagement in this project?*"[40]

Mr. Hobson's response: "*I think the stakeholder engagement we're talking about here would be more similar to what we went through in putting the demand-side management plan together. So, we would have an advisory group presumably still in place through our efficiency and conservation advisory group. That would be a form of stakeholder engagement.*"[41]

BC Hydro discussed stakeholder engagement for the Capacity-focused DSM project would include an advisory group through the efficiency and conservation advisory group, but BC Hydro did not commit to meaningful stakeholder engagement.

4.3 We submit that stakeholder engagement should go beyond this advisory group, and that meaningful stakeholder engagement (as discussed in Appendix A, and earlier in the Rental DSM project section) is important for the Capacity-focused DSM project.

[39] Transcript Volume 13, Page 2496, Lines 2 to 9
[40] Transcript Volume 13, Page 2500, Lines 16 to 19
[41] Transcript Volume 13, Page 2500, Lines 20 to 26

4.4 So, in conclusion:

- The Capacity-focused DSM project involves regional or distribution level opportunities, and

- BC Hydro discussed stakeholder engagement, but did not commit to meaningful stakeholder engagement, and

- meaningful stakeholder engagement is important.

- Therefore, we submit:

  - that BC Hydro should commit to meaningful stakeholder consultation within the Capacity-focused DSM project, plus include appropriate regional stakeholder representation.

5.0 Comparison to other jurisdictions

5.1 BC Hydro provided a table of "*Average Annual DSM Energy Savings as a Percentage of Sales*"[42] for a range of jurisdictions in its 2008 LTAP application.

BC Hydro indicated that "*only New York and New Jersey, both high cost jurisdictions, are more aggressive than BC Hydro's Option B.*"[43] New York and New Jersey are shown at 2.0%, while BC Hydro Option B is shown at 1.7% and BC Hydro Option A is shown at 1.3%[44].

BC Hydro explained in Exhibit B-4, BCSEA IR 2.23.3 Information Request, that this "*jurisdictional review*"[45] table is one of the "*non-quantified aspects used by BC Hydro*"[46] in identifying how DSM Option A outperforms DSM Option B.

BC Hydro stated that "*As this comparison shows, DSM Option B is more of an outlier in terms of overall effort than DSM Option A.*"[47]

In further explaining "outlier":

- Mr. Hobson of BC Hydro stated: ". . . *but it's an outlier with respect to what*

[42] Exhibit B-1, Section 5.5.4 "DSM Deliverability Risk", Page 5-58, Table 5-19
[43] Exhibit B-1, Section 5.5.4, Page 5-57, Lines 13-15
[44] Exhibit B-1, Section 5.5.4, Page 5-57, Lines 13-15
[45] Exhibit B-4, BCSEA IR 2.32.3
[46] Exhibit B-4, BCSEA IR 2.32.3
[47] Exhibit B-4, BCSEA IR 2.32.3

others are doing in general"[48].

"*No, I purely mean that it's within a group of utilities that are sort of lying away from the rest. But again, I don't think we were looking at it as being the single utility that was out there, apart from everyone else.*"[49]

Two characteristics appear from this testimony. First, the definition of "outlier" seems to be vague – through the use of words such as "general" and "sort of". Second, we suggest that BC Hydro has not chosen Option B because it would be it in the "outlier group", and that this is in some way a detriment.

However, on the other hand, BC Hydro is recognized as the among the best worldwide.

The Executive Vice-President of Customer Care and Conservation, Ms. Van Ruyven, stated: "*We have, and I have a lot of confidence in our PowerSmart group. If you look worldwide, we are considered, you know, best in class in demand-side management programs. People come from all over the world to talk to our PowerSmart folks about how they do demand-side management, and I have confidence that, you know, we can get there. We've got a good foundation.*"[50]

By reducing the DSM programs as a result of comparisons to other jurisdictions, this could very well result in the reduction of the world-wide regard that BC Hydro has obtained (which we submit is not an appropriate circumstance), and this could reduce the high confidence level to achieve its DSM goals (which we also submit is not appropriate).

Therefore, we disagree that BC Hydro's jurisdictional review in the 2008 LTAP supports DSM Option A over Option B.

5.2 BC Hydro also provided a DSM spending table for 2006/2007 in response to an Information Request that shows the following expenditures[51]:

Manitoba Hydro	8.1%
San Diego Gas & Electric	3.8%
Southern California Edison	2.2%
Pacific Gas & Electric	2.2%
Portland General Electric	1.7%
PacifiCorp	1.7%
Hydro Quebec	1.4%
Puget Sound Energy	1.3%

[48] Transcript Volume 10, Page 1745, Line 12-13
[49] Transcript Volume 10, Page 1746, Lines 17-21
[50] Transcript Volume 4, Feb 20, 2009, Page 533, Lines 4-5
[51] Exhibit B-3, BCUC IR 1.48.1, Attachment 1

BC Hydro	1.3%
FortisBC	1.2%
Avista	0.4%

We note what seems to be some discrepancies:

- BC Hydro's DSM level in 2006/2007 is at the same level, 1.3%, as the supposed more aggressive targets of BC Hydro's DSM Option A in the 2008 LTAP.

- Even the most aggressive targets of BC Hydro's DSM Option B, at 1.7%, is at the same level or less than PacifiCorp, Portland General Electric, Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric and Manitoba Hydro even a couple years ago in 2006/2007.

We submit, that contingent on BC Hydro's explanation for the discrepancies:

- that these factors could provide further evidence that Option B of DSM would not be as aggressive compared to other jurisdictions as BC Hydro originally anticipated, and

- consequently further supports implementation of Option B DSM.

6.0 Clean Power Call, DSM, Burrard & Load/Resource Gap

6.1 As provided throughout the past several call for power call processes[52], and by using a Request for Proposals process for the Clean Power Call[53], we submit that BC Hydro has clearly established a buyer/supplier relationship with the IPP sector. The 2007 BC Energy Plan recognizes "*both buyer and sellers of electricity*"[54]. BC Hydro wishes to buy electricity, and the IPP sector has electricity to sell.

Further evidence of the buyer/supplier relationship between BC Hydro and the IPP sector is noted in the BC Hydro's Final Argument: "*BC Hydro is expecting the final offers it receives through the Clean Power Call RFP negotiation process will be competitive.*"[55]

[52] Exhibit B-1, Section 2.3.7
[53] Exhibit B-1, Page 6-36, Lines 4-16
[54] Exhibit B-1, Appendix B-1, Energy Plan, Page 18 of 84
[55] BC Final Argument, Page 162, Lines 1-2

We submit that normally one would not expect BC Hydro to have an obligation to develop the IPP sector. While as a buyer it may be advantageous to work responsibly with one's suppliers, we submit it would normally not be prudent to extend to developing the suppliers sector.

However, we note BC Hydro highlighting the Energy Policy Action Item No. 26 from the 2007 Energy Plan:

> "*BC Hydro's energy procurement plays a critical role in the reaching Government's self-sufficiency objective, as well as meeting the Government's objects for competitive rates, clean or renewable electricity, the development of a vibrant and competitive IPP sector and other fiscal and provincial policy objectives.*"[56]

This puts BC Hydro into a challenging situation, and under certain conditions may require BC Hydro to perform conflicting roles. The 2007 Energy Plan, released in February 2007, was developed well before the current economic situation.

We submit that the 2007 Energy Plan was developed within the general understanding and expectations of the electricity needs and overall economic situation as of that time. Clearly "*load growth*"[57] and "*economic growth*"[58] were relevant as of February 2007, and there is no mention throughout the 2007 Energy Plan of dealing with the present situation "*that economic conditions were deteriorating and that this was having a material impact on the B.C. economy*"[59]. The situation in late 2008 was deemed to have changed so significantly that an Evidentiary Update was required on December 22, 2008[60].

The challenges of BC Hydro faced in late 2008 in playing both the role of the buyer for "*competitive rates*" and in support of the supplier in the "*development of a vibrant and competitive IPP sector*", we submit, are beyond those anticipated by the 2007 Energy Plan.

We note in BC Hydro's final argument, BC Hydro stated:

> "*Independent of any other reasons for proceeding with the Clean Power Call and recognizing the reduced load/resource gap in the Evidentiary Update (Exhibit B-10), BC Hydro believes it is important to proceed with this acquisition process as another important step in developing a vibrant and competitive IPP sector in the Province. Cancelling the acquisition*

[56] BC Final Argument, Page 163, Lines 27-31
[57] Exhibit B-1, Appendix B1, 2007 Energy Plan, Page 17 of 84
[58] Exhibit B-1, Appendix B1, 2007 Energy Plan, Page 17 of 84
[59] BC Final Argument, Page 85, Lines 18-19
[60] Exhibit B-10

process would have a chilling effect on the IPP industry."[61]

In support of this position, BC Hydro quotes a paragraph[62] from 2007 Energy Plan Policy Action Item No. 26 noted above. This paragraph underscores the challenges for BC Hydro, and we submit has prejudiced the case of whether or not the load resource gap could be filled with DSM or of using Option B for DSM.

In cross examination, Mr. Bob Elton, stated in relation to the load/resource gap and DSM:

> "*. . . I mean, the Act actually says that it's up to the utility to say why it hasn't chosen all DSM. So I think clearly the energy policy of the government allows for the possibility that at some point we will indeed say it's all DSM.*"[63]

It seems that contradictory roles are being asked of BC Hydro - if BC Hydro already has decided to play a critical role in developing the IPP sector by supporting the Clean Power Call, that may jeopardize BC Hydro's evaluation of filling the load/resource gap with only DSM, such as Option B DSM.

As mentioned previously, we submit

- that the present situation is one which was not anticipated by the 2007 Energy Plan and we note that the Policy Action Item No. 26 also says:

  > "*In addition, MEMPR [Ministry of Energy, Mines and Petroleum Resources] will consider if regulatory or other changes are advisable.*"[64]

If MEMPR plans to introduce changes to the policies to deal with the present situation, that may improve the clarity for the future, but will no doubt not be able to be implemented in time for this 2008 LTAP.

6.2 In the meantime for this 2008 LTAP, best efforts will be needed to deal with the challenges, interpreting the regulations, guidelines and policies.

First, we submit that the legislated DSM Regulation must be met to ensure "*DSM is the preferred resource*"[65]. As referenced by BC Hydro in its Final Argument:

> "*Pursuant to subsection 44.1(2)(b) BC Hydro must pursue all cost-effective DSM prior to pursuing any supply-side options, and*

[61] BC Final Argument, Page 164, Lines 5-9
[62] BC Final Argument, Page 164, Lines 5-9
[63] Transcript Volume 4, Feb 20, 2009, Page 527, Line 21 to Page 528, Line 4
[64] Exhibit B-1, Appendix B1, 2007 Energy Plan, Page 17 of 84
[65] BC Final Argument, Page 16, Lines 11-12

Pursuant to subsection 44.1(2)(f) BC Hydro must prove why it cannot fill its entire load/resource gap with DSM only."[66]

We disagree with BC Hydro's selection of the "*Original Option A*"[67] for DSM and we disagree with BC Hydro that the "*Adjusted Option A represents all cost-effective DSM at the present time*"[68].

It is noted that:

"*BC Hydro did not select Option B because, even though the additional savings would come at a considerably lower unit cost (if the savings were realized) than new supply, it would not be cost-effective because it would involve an over-reliance on DSM given its deliverability (both volume and schedule) risk, and the consequences of ending up short of supply.*"[69]

First, it is clear that BC Hydro agrees that "*the additional savings would come at a considerably lower unit cost*"[70]. This statement supports Option B.

Next, BC Hydro indicates that in regards to Option B "*it would not be cost-effective*"[71]. BC Hydro states that it: "*uses the Commission's definition of cost effectiveness, which in addition to low cost includes schedule/deliverability risk, reliability, timing, location and environmental impacts[30].*"[72]

The footnote #30 referenced in this statement indicates that "*the Commission's definition of cost-effectiveness is found In the Matter of British Columbia Transmission Corporation: An Application for a Certificate of Public Convenience and Necessity for the Vancouver Island Transmission Reinforcement Project, Decision, 7 July 2006, pg. 15;*"[73] (BCTC VITR).

The referenced page 15 of the BCTC VITR project states:

"*The description of "cost-effective" as described in the VIGP Decision provides further clarification of the appropriate considerations. The task is not to select the least cost project, but to select the most cost-effective project. Therefore, as suggested by BC Hydro, reliability, safety, schedule, financing arrangements and other factors itemized in the VIGP Decision and revised by BC Hydro are also relevant to the task before the*

[66] BC Final Argument, Page 16, Line 12
[67] BC Final Argument, Page 122, Line 14
[68] BC Final Argument, Page 118, Lines 2-3
[69] BC Final Argument, Page 122, Lines 19-23
[70] BC Final Argument, Page 122, Lines 20
[71] BC Final Argument, Page 122, Lines 21-22
[72] BC Final Argument, Page 16, Lines 15-17
[73] BC Final Argument, Page 16, Footnote 30

Commission Panel."[74]

The VIGP Decision cost-effective definition states:

"*In that decision, the Commission defined 'cost-effective' to include ' . . . considerations of project characteristics such as reliability, dispatchability, timing, and location as well as cost or price, in the case of an EPA*"[75].

We note BC Hydro clearly states that it "*uses the Commission's definition of cost-effectiveness*" and that it is to be found BCTC VITR referenced page 15, which in turn referenced the VIGP Decision.

We note that the definition provided by BC Hydro in the Final Argument[76] includes extra factors of "*deliverability risk*" and "*environmental impacts*" which were not included in the Commission's definition in the BCTC VITR or VIGP projects as referenced by BC Hydro in the Final Argument. We will rely on the Final Argument definition since as BC Hydro points out " *. . there is an enormous amount of evidence for the Commission to sift through in attempting to determine whether the Order BC Hydro is seeking ought to be granted. This Argument focuses on the oral evidence where some controversy is apparent. For all other matters, BC Hydro relies on the 2008 LTAP Application itself, its IR responses and undertakings.*"[77]

Therefore, we submit:

- that the use of the extra factors of "*deliverability risk*" are not substantiated for the definition of cost-effectiveness, are not supported by evidence in this proceeding, and therefore should not be used in discussions relating to cost-effectiveness.

6.3 BC Hydro indicates that in regards to Option B: "*it would not be cost-effective because it would involve an over-reliance on DSM given its deliverability (both volume and schedule) risk and the consequences of ending up short of supply.*"[78]

Let's consider the case where deliverability risk is considered for evaluation of DSM. In a long exchange between Mr. Andrews, Mr. Hobson and Mr. Reimann, the deliverability risk for "*Option B prime*"[79] was explored.

DSM B prime is described as:

"*DSM B prime, where the three-year expenditures remain at $533 million, but the expected electricity savings are equal to 9,600 gigawatt hours per year in*

[74] BC Final Argument, Tab 14, Page 12 of 13
[75] BC Final Argument, Tab 14, Page 9 of 13
[76] BC Final Argument, Page 16, Lines 15-17
[77] BC Final Argument, Page 3, Line 29 to Page 4, Line 3
[78] BC Final Argument, Page 122, Lines 21-23
[79] Transcript Volume 10, Page 1727, Line 13 to Page 1735, Line 26

fiscal 2020, that number being the same as the expected electricity savings in revised DSM A, according to the December 2008 evidentiary update."[80]

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Mr. Andrews asks:

"*And so the deliverability risk of DSM B prime has to be either exactly the same as the deliverability risk of DSM A, or, if anything, superior, correct?*"[81]

_____

Mr. Andrews asks again:

"*I'm saying to you that the deliverability risk at worst is equal between the two, and if you're able to spend that additional money with any degree of expectation of additional savings, the deliverability risk for DSM B prime will be superior, correct?*"[82]

_____

Mr. Andrews re-irritated:

"*You seem to be resisting answering the question, which is to do with the deliverability risk comparison of DSM A revised and DSM B prime. And I'm asking you to confirm, if this is correct, that the deliverability risk of DSM B prime is either equal to or superior to the deliverability risk of DSM A revised?*"[83]

Mr. Hobson finally answered regarding being equal risk:

"*I would agree that it would be equal to, I suppose, in that you've gone forward with the same initiatives plus you've spent a bunch of additional dollars, and you're assuming the same amount of energy.*"[84]

Mr. Andrews continued:

"*So it could be equal, but it also could be superior in that the chance of actually falling short of 9600 gigawatt hours could well be less if you've spent that additional money to any useful effect, correct?*"[85]

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Mr. Andrews asks again:

"*So you've chosen not to answer the question, and I'm going to come back to it again because I want your answer. I want you to confirm or deny that in comparing DSM A Option A -- excuse me, DSM B revised and DSM B prime,*

[80] Transcript Volume 10, Page 1722, Lines 12-17
[81] Transcript Volume 10, Page 1727, Line 25 to Page 1728, Line 2
[82] Transcript Volume 10, Page 1728, Lines 14-18
[83] Transcript Volume 10, Page 1729, Lines 15-19
[84] Transcript Volume 10, Page 1729, Lines 20-24
[85] Transcript Volume 10, Page 1729, Line 25 to Page 1730, Line 3

regarding deliverability risk, where they each have exactly the same expected value of savings, DSM B prime will be either equal to or superior to DSM A revised, correct?"[86]

Mr. Reimann answered:

"*So the deliverability risk, when we considered that concept, it had probability distributions, it had costs in there, it had the ability that we thought that we could actually get to that level. And it may well be that if you start to target a DSM option B, that you put more dollars on the table and you don't get any further down the path. And we're not sure that that actually makes sense, and those are dollars wisely spent.*

We're feeling that this is the level of DSM and the rate of advancing programs, codes and standards and rates, in an orderly fashion, that we have a belief that we can achieve. To go beyond that -- the deliverability risk isn't just the one probability measure, or just the cost-effectiveness, it's the whole thing. And the way we've defined it, we don't think that we could get -- or that it would be prudent to put any further weight on that, or any further savings or efforts on this, or that the dollars necessarily would add to the success of the programs."[87]

Mr. Andrews asks yet again:

"*I'm trying to be patient with the fact that you are not answering the question and instead defending your decision to reject DSM B. But the question itself has not yet been answered. And so I'll have to ask it again.*"[88]

Mr. Andrews asks yet again:

"*. . . the deliverability risk of DSM B prime is either equal to or superior to that of DSM B -- excuse me, DSM A revised. Correct?*" [89]

Mr. Reimann answered:

"*And I would say no. For the reasons I just gave you.*"[90]

This exchange demonstrates the difficulties in BC Hydro confirming a "simple" statement: "the deliverability risk of DSM B prime has to be either exactly the same as the deliverability risk of DSM A or, if anything, superior."

One reason for splitting up the definition of cost-effectiveness was so that such factors, as deliverability risk, can be explored. We submit that Mr. Reimann's final rejection "*I would say no. For the reasons I just gave you.*"[91]

[86] Transcript Volume 10, Page 1730, Lines 18-25
[87] Transcript Volume 10, Page 1731, Lines 1-21
[88] Transcript Volume 10, Page 1731, Lines 22-26
[89] Transcript Volume 10, Page 1732, Lines 8-10
[90] Transcript Volume 10, Page 1732, Lines 8-10
[91] Transcript Volume 10, Page 1732, Lines 8-10

has no basis. We submit that the "reasons" that Mr. Reimann provided were not in relation to the specific question being asked[92].

We submit the oral testimony from BC Hydro on this subject is contradictory, confusing and in-adequate. We disagree with BC Hydro's position.

To us, it is clear that the above "simple" statement is clearly true, and we submit, that the deliverability risk of DSM B prime has to be either exactly the same as the deliverability risk of DSM A or, if anything, superior. If you put more money into DSM Option A, which is the definition of Option B prime, the deliverability risk should be the same or superior.

We submit that this is a critical error and justifies on its own that the reasons that BC Hydro chose Option A are not valid, and therefore Option B should be chosen.

6.4 We note that the general process of BC Hydro used to fill the load/resource gap includes the following steps:

a) develop the load forecast
b) calculate the resources, including Burrard
c) fill the gap with DSM Option A and IPPs

Given the situation as described in section 6.1, we suggest the following process:

a) develop the load forecast
b) calculate the resources without Burrard
c) implement DSM Option B prime with BC Hydro's Option A energy savings plus extra to take into account of section 1 in this document
d) Clean Power Call at 2100 GWh/yr
e) allocate the remaining to Burrard (which will be less than BC Hydro's recommended 3000 GWh/yr)

This process will accomplish the following:

- puts more money into DSM, by implementing Option B prime DSM
- properly accounts for the extra DSM energy savings that DSM provides
- allows for the Clean Power Call to attract larger projects
- reduces the reliance on Burrard, thereby increasing the ability to obtain a suitable social license, at the same time reducing harmful emissions

[92] Transcript Volume 10, Page 1731, Lines 1-21

7.0 Electric Vehicles

Mr. Bertsch questioned BC Hydro about electric vehicles during cross examination:

Mr. Bertsch asked:

"*I wonder if you could explain to me what you mean, and how you might encourage customers to use their vehicles in off-peak hours.*"[93]

Mr. Ince replied:

"*Well, we struggled with this wording considerably, and particularly the use of the word 'encouraged', in that this implies both a carrot and a stick. Electric vehicles are a real perhaps risk and a real perhaps potential in terms of perhaps flowing back into the grid during peak hours to mitigate peak loads, but they're also a threat in terms of if people get off the day at work and they want to them go out for the evening, and they plug in at 5:00 and then they start going in at 6:00, our biggest in-rush current from the new electric vehicle load could occur right at the worst time, which is 5:00 to 6:00 p.m.*

So it could exacerbate our capacity problem. So there's two ways that this could go, and the encouragement could be through -- this is the stick side, this is differential rates, so it could be time of use rates, which penalized people plugging in during the super-peak period. Or it could be, I guess, inverse billing, in that people were encouraged by not doing that. And then there could be technology in terms of perhaps systems that limit the vehicle's ability to charge up during those peak periods.

So that if you've got a vehicle and somebody admits that they're not going to plug it in or if they're not going to be going out for the evening, the technology would indicate to that vehicle to coast for the next few hours. And then come 10:00 p.m., then it starts to charge up again.

So there's a number of approaches to this.'[94]

Mr. Bertsch inquired further about electric vehicles:

"'*How that technology unfolds could actually be a potential benefit to provide electricity back to us during peak times.' Again, could you explain how you would encourage the electricity to come back in the peak times versus another time?*"[95]

"*Well, to go the other way, to provide power back into the grid, and what the relationship of that would be to net metering.*"[96]

Mr. Matheson replied:

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[93] Transcript Volume 7, Page 1161, Lines 13-15
[94] Transcript Volume 7, Page 1161, Line 17 to Page 1162, Line 19
[95] Transcript Volume 7, Page 1163, Line 25 to Page 1164, Line 3
[96] Transcript Volume 7, Page 1163, Lines 12-14

"*I think Ms. Van Ruyven was speaking to the potential for that to exist. As to what kind of either infrastructure or enabling technologies we'd need to have in order to bring that about, we haven't -- we don't have answers for you for that right now.*"[97]

In an earlier cross examination; Mr. Bertsch asked:

"*Could you clarify in B.C. Hydro's plan, is DSM -- is SMI required in order to have time of use and critical peak rate structures?*" [98]

Ms. Van Ruyven replied:

"*Yes, it is. Well, I believe other jurisdictions have tried to do time of use and critical peak pricing without Smart Metering, and I don't believe that they've had particularly good results in getting people to shift off high-load hours.*"[99]

BCUC in its April 2, 2009 letter to Intervenors discussed electric vehicles[100] and mentioned an announcement with the BC Government including a report to be filed by the end of April 2009. BCUC asked if the evidentiary record should be re-opened to admit this evidence.

We support investigations into electric vehicles, not only as a potential energy load, but also as potential as a distributed power source. We believe electric vehicles can provide provincial carbon reduction benefits, has important relationships to Smart Meters and the Smart Grid, but must be analyzed in a holistic approach.

Without seeing the electric vehicle report, it is hard to judge its relevancy to the 2008 LTAP. We suggest that the report not automatically be included as evidence, but if an Intervenor after seeing the report is convinced of its relevancy to the 2008 LTAP, that they be given an opportunity to apply for its inclusion, with supporting reasons. We suggest this should be done by a certain date, say May 15.

In addition, we believe that BC Hydro should move beyond the "monitoring developments" stage[101], and should initiate an investigative project (together with the Province) to analyze the challenges and opportunities with electric vehicles.

[97] Transcript Volume 7, Page 1163, Lines 15-24
[98] Transcript Volume 5, Page 615, Lines 11-13
[99] Transcript Volume 5, Page 615, Lines 14-19
[100] BCUC April 2, 2009 letter, Item 5
[101] BCUC April 2, 2009 letter, Item 5

8.0 PowerSmart Loans

Mr. Bertsch questioned BC Hydro about the PowerSmart program in the 1990's[102]. An exhibit was produced of the PowerSmart's brochure at that time[103] including the loan program.

Mr. Bertsch asked in cross examination:

"*B.C. Hydro notes that many consumers don't believe that energy efficiency upgrades are worth the incremental effort or costs, and therefore ESVI asked about loans. B.C. Hydro indicated 'it does not plan to provide loans under the renovation rebate program.' Is that correct?"*[104]

Mr. Hobson answered:

"I think our response probably states that, but if I can expand on it –"[105]

"I think what we're trying to address here is I don't think the issue or the constraint that's being felt by homeowners is one of lack of access of financing. I think it's more of a cost issue with respect to how much they invest within the measures themselves."[106]

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Mr. Bertsch asked:

"Could you confirm that your response was written in August 2008?"[107]

Mr. Hobson replied:

"Thereabouts I would expect, given that we filed on August 21st."[108]

Mr. Bertsch asked:

"*Does the renovation rebate program rely on customers first going out to spend money on upgrades?"*[109]

Mr. Hobson answered:

"*Customers would have to spend money, yes, to do the upgrades.*"[110]

Mr. Bertsch asked:

"Does the latest financial situation since August create some concerns for B.C. Hydro in being able to meet its targets if it requires its customers to put money

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[102] Transcript Volume 13, Page 2477, Line 8 to Page 2493, Line 24
[103] Exhibit C23-10
[104] Transcript Volume 13, Page 2489, Lines 16-21
[105] Transcript Volume 13, Page 2489, Lines 22-23
[106] Transcript Volume 13, Page 2489, Line 25 to Page 2490, Line 4
[107] Transcript Volume 13, Page 2490, Lines 16-17
[108] Transcript Volume 13, Page 2490, Lines 18-19
[109] Transcript Volume 13, Page 2490, Lines 24-26
[110] Transcript Volume 13, Page 2491, Lines 1-2

into the programs?"[111]

Mr. Hobson answered:
"*Not at this point.*"[112]

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Mr. Bertsch asked:
"*Has B.C. Hydro revisited this topic in this answer since writing it? Or –*"[113]

Mr. Hobson replied:
"*Not that I'm aware of.*"[114]

Given the size of DSM expenditures in the 2008 LTAP, the current economic situation, consumers current reluctance to borrow funds, and the reliance on customers to spend their own money up front, we submit that BC Hydro should re-evaluate whether or not financial programs, including BC Hydro loans, should be implemented, or that BC Hydro alter the program so as to advance funds as renovations are completed (with appropriate accountability put into place). By being proactive with such a funding program we are confident that BC Hydro will have a better chance at meeting the DSM targets.

9.0 BC Hydro's DSM on its own buildings

Mr. Bertsch questioned BC Hydro about the energy efficiency for its own buildings:

Mr. Bertsch asked:
"What is progress of B.C. Hydro upgrading its own buildings for energy efficiency and leading by example?"[115]

Mr. Hobson replied:
"I don't know specifics around that, but there is an increased effort in that area. We've taken that fairly seriously, and that's come from our CEO down. That I think his expectations of B.C. Hydro is for B.C. Hydro to kind of walk the talk, and follow through with energy efficiency practices within its own facility. So more is happening there."[116]

Mr. Bertsch asked:

[111] Transcript Volume 13, Page 2491, Lines 3-6
[112] Transcript Volume 13, Page 2491, Lines 8
[113] Transcript Volume 13, Page 2492, Lines 1-2
[114] Transcript Volume 13, Page 2492, Lines 1-2
[115] Transcript Volume 13, Page 2493, Line 25 to Page 2494, Line 1
[116] Transcript Volume 13, Page 2494, Lines 2-8

"But you don't have anything concrete."[117]

Mr. Hobson replied:

"But the specifics, I don't have off the top of my head, no."[118]

We suggest that it will be very beneficial to BC Hydro and its customers to show by example and *"walk the talk"*. We suggest that BC Hydro implement a more visible and comprehensive approach to increasing energy efficiency in its own buildings, set energy saving targets of the same level of its 2008 LTAP DSM program, and to report on its progress.

[117] Transcript Volume 13, Page 2494, Line 9
[118] Transcript Volume 13, Page 2494, Lines 10-11

APPENDIX A

The importance to the Commission Panel of meaningful stakeholder engagement versus stakeholder engagement was revealed in detail in the 2007 Rate Design Application.

The Commission Panel made overall comments in the 2007 RDA decision in a section called "Views of the Commission Panel on the Application and Determination"[119]:

> "*The Commission Panel is struck by the limited scope of the matters on which BC Hydro chose to engage with its stakeholders, and the minimal engagement with them in the process of developing the RDA, particularly since its last RDA was filed in 1991 – sixteen years ago. Given the amount of strategic and policy direction BC Hydro has received in the intervening years by way of direction from the Commission, and from its Shareholder, the Province, by way of the 2002 and 2007 Energy Plans, and in point of fact from the public pronouncements of its own executive, as highlighted in Sections 1 and 2 of this Decision, the Commission Panel finds BC Hydro's response disappointing.*"[120]
>
> "*. . . clearly illustrates that it did not engage with its stakeholders to any meaningful degree on the fundamental role that rates, and their structure, can, and should, play in the achievement of the strategic agenda that has been set for it.*"[121]
>
> "*It is clear that Intervenors were not provided the opportunity to participate in meaningful dialogue as to the 'issues and proposals to be addressed in the F2008 RDA' but rather were informed as to what BC Hydro had decided was going to be brought forward, and given limited opportunity to comment on a narrow range of issues and options of a non-strategic nature. Given that, the Intervenors have been left with no choice but to put their agendas for constructive change before this Commission Panel.*"[122]
>
> "*The Commission Panel contrasts the Stakeholder consultations BC Hydro conducted in order to inform the 2007 RDA, with those it conducted in support of its 2006 IEP/LTAP proceedings before this Commission. In finding that BC Hydro had appropriately engaged its stakeholders in those matters (IEP/LTAP Decision, May 11, 2007, p. 31) the Commission had before it a 286 page document entitled 'First Nations and Stakeholder Report (ibid p. 27). In this proceeding, BC Hydro filed a 20 page 'Stakeholder Engagement Summary' fully 40 percent of which is concerned with the relatively small and unique E-Plus customer subset.*"[123]

Further indications of the need for stakeholder engagement are demonstrated in BC

[119] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, section 2.7
[120] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 56
[121] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 56
[122] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 57
[123] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 58

Hydro's proposed changes to its Large General Service Rates in the same RDA[124]:

> "*The evidence before the Commission Panel is that BC Hydro's stakeholder engagement process consisted of two workshop meetings at which only two options (one of which retained a declining block structure) were presented to customers, and that part of BC Hydro's proposed mitigation was an offer of participation in its Power Smart programs, which were programs already in existence.*
>
> ***The Commission Panel finds that BC Hydro's proposed restructuring of its Large General Service class was ill-conceived and poorly executed. The proposal is denied."***[125]
>
> "*The Commission Panel is also concerned that while it heard statements from BC Hydro that further structural changes to the Large General Service cannot be undertaken until after its proposed phasein period, it did not receive any indication of what those changes may look like, and as a result the Commission Panel cannot be sure that where BC Hydro's proposal takes the class would be a logical place to start further structural changes. In the Commission Panel's view the stakeholder engagement should start with the long view rather than vice versa.*"[126]
>
> ***"Accordingly, BC Hydro is directed to commence meaningful stakeholder engagement with its Large General Service customers to develop, and file with the Commission an application for a rate structure or structures that encourage conservation without unduly benefiting or harming any of its customers in that class."***[127]

[124] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, section 4.4
[125] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 162
[126] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 162
[127] BC Hydro 2007 Rate Design Application, BCUC Decision Phase 1, October 26, 2007, pg 163