

Haida Gwaii/Queen Charlotte Islands Community Electricity Plan



Summary Report on the Second Round of Public
Meetings
July 3 – 6, 2007

DRAFT

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The Sheltair Group



BChydro 

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1. Summary of Public Sessions

1.1. Background

The Council of the Haida Nation (CHN) and BC Hydro hosted a series of public sessions during the week of July 3-6, 2007, to discuss the Haida Gwaii Community Electricity Plan (CEP). Presentations at the public meetings were organized and carried out by The Sheltair Group, a Vancouver-based consulting firm, hired to conduct the CEP on Haida Gwaii. Members of the CHN also presented material, and a representative of BC Hydro was present at 3 of the 4 locations to answer questions related to electricity supply issues.

The first round of public meetings was held in February/March, 2007 to solicit input from island residents on their vision for the island community in 2027. This kind of information is necessary in order to plan for electricity supply and demand side management (DSM) options, given different growth scenarios for the future. In addition to the 'Base Case' scenario, Scenario 1 and Scenario 2 were developed, each representing growth based on a range of population increases provided by community members.

Subsequent to these public sessions, meetings were held with the Working Group¹ in April, 2007, to review the input obtained from the public and to create criteria for evaluating bundles of electricity supply and energy conservation measures. On June 1, the Working Group participated in a day-long structured decision making exercise, led by consultants from Compass Resource Management. The results of this workshop formed the basis of the information taken to the public for the second round of public sessions.

The second round of public sessions was held from July 3 – July 6, 2007, from 7 – 9 pm, in the following communities:

- Old Massett, at Tluu Xaada Naay – July 3, 2007
- Port Clements, at the Community Centre – July 4, 2007
- Skidegate, at the Haida Heritage Centre – July 5, 2007, and
- Sandspit, at the Community Hall - July 6, 2007.

1.2. Purpose of the Sessions

The objectives of these sessions were to:

¹ The Working Group is composed of 11 members – elected officials, Haida Hereditary Chiefs, CHN and BC Hydro. One representative of the Ministry of Energy Mines and Petroleum Resources sits on the Working Group, ex-officio.

- Review resource alternatives for electricity supply options;
- Discuss evaluation criteria and identify/confirm the preferences for demand and supply technology bundles identified by the Working Group; and
- Discuss demand side management options (energy conservation).

Each session began with a slide presentation outlining the different technologies applicable to the Haida Gwaii situation. This was followed by an exercise to identify and rank the preferred attributes² related to different bundles. *Attributes* are defined by BC Hydro as “...the measurement criteria by which impacts of resource alternatives on planning objectives are quantified” (BC Hydro, 2006, Integrated Electricity Plan, Page 2-9). A *bundle* is a combination of electricity supply options. A discussion on the applicability of energy conservation options (also known as Demand Side Management or DSM) concluded the evening.

This report provides a summary of the discussions held during the public sessions. The results of the ranking exercise are presented and discussed for the island community as a whole. Conclusions are drawn based on whether general agreement was found with the results obtained by the Working Group in the one-day workshop.

1.3. Attendance at Sessions

The public sessions were well-attended, with a total of 53 people participating during the week. Attendance was fairly evenly distributed throughout the island communities. The distribution of attendance is shown in Figure 1. The sessions in Old Massett and Skidegate were intended to include residents from Massett, and Queen Charlotte, respectively. All of the sessions were open to residents from anywhere on the islands.

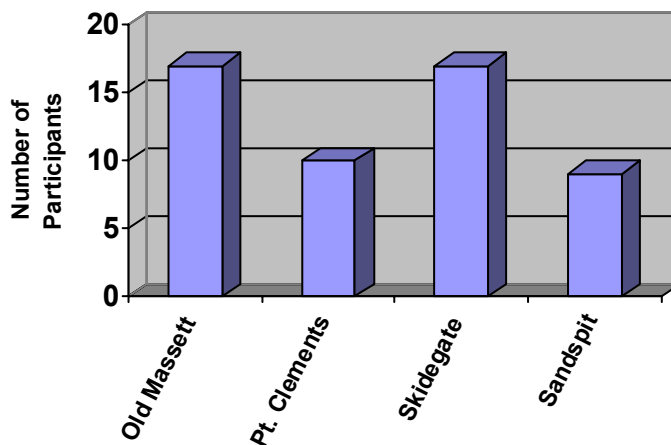


Figure 1: Participation at Public Sessions

² Attributes, evaluation criteria and issues are used interchangeably throughout the report .

2. Technical Presentation

2.1. Presentation Summary

Part of the CEP process has been the development and maintenance of a working relationship with community organizations and members of the public throughout Haida Gwaii. Following the first round of public meetings and during conversations with members of the Working Group, Sheltair learned that island residents wished to be better informed about the technical aspects of the different options being considered for electricity supply to the islands. As a result, the first part of the second round of public sessions was devoted to a technical presentation. Slides of this presentation are available on the Haida Gwaii CEP website (www.sheltair.com/haidagwaii) but a brief summary is provided here for ease of reference.

Over half of the current electricity consumption on the islands is used for residential purposes. There are many resource options for electricity supply on Haida Gwaii and opportunities for DSM strategies exist and could result in significant savings of the resource.

The presentation consisted of a review of several relevant electricity supply technologies, including:

- Small hydro,
- Wind,
- Biomass, and
- Tidal.

There was also discussion about DSM options.

In the CEP, opportunities for site-specific projects will not be identified or evaluated, however, some of the known characteristics of the HaidaLink³ project were presented at the public sessions and discussed among the participants.

The presentation addressed the resource potential of each technology, the foreseeable constraints, including the potential environmental impacts, the possible sites on the islands for implementation of the technology, and the costs associated with construction and operation. Examples of locations where the technology exists around the world were also provided.

Residential and commercial scale options for electricity conservation technologies and the environmental and socio-economic considerations of DSM options were presented and discussed.

2.2. Discussion

The discussion period that followed the technical presentation covered a wide range of issues. In addition to questions about the specific technologies, participants had questions about the CEP process, the BC Hydro Call for Energy process and the HaidaLink proposal.

³ HaidaLink is a proposal put forward by Naikun Wind Energy Ltd. and is being reviewed as part of the Environmental Impact Assessment process. This is a separate initiative from the Community Electricity Plan currently underway on the islands.

Planning and Assessment Processes

In Port Clements, one resident, who is also a member of the Working Group, stated that he would like assurance that the values and issues raised during the CEP process are incorporated into the Call for Energy by BC Hydro. This would accord importance to the process and would show that the input obtained from the public was heard and considered valuable. After much discussion on this topic, where BC Hydro explained the processes involved with a public, competitive call for tenders and a public call for energy, BC Hydro indicated that:

- There are typically five areas for evaluation in a Non-integrated Area Call (financial, technical, business, environmental and social), similar to other calls (e.g., Atlin),
- The outcomes of the CEP will support the development of the environmental and social evaluation criteria,
- the Call evaluation will be supported by BC Hydro's Triple-bottom line (financial, social, environmental) evaluation process for business cases,
- A public call must be made available publicly at the same time to all bidders to avoid any advantage to particular bidders,
- Members of the Working Group will have an opportunity to have input on the process, (possibly through the development of some of the social and environmental evaluation criteria, but this process has yet to be laid out) before the Call is finalized.

Another participant in the session in Port Clements wanted to know if the environmental review process for small hydro is the same as for larger hydro projects. BC Hydro responded that there are different processes for small and large projects. Projects that are over 50 MW trigger the Canadian Environmental Assessment process and must then meet specific requirements for an environmental review process.

HaidaLink Proposal

At every community meeting, residents had numerous questions related to the HaidaLink proposal. Residents wanted to know who is conducting the Environmental Assessment for the HaidaLink section of the Naikun off-shore wind proposal, if the electricity flow would be one-way or two-way, how many jobs would be created by the project, how 'clean' the energy produced would be and the timing and costs associated with the project.

The proposal has triggered the Canadian Environmental Assessment (EA) process and Naikun Wind Energy has initiated studies. At the time of the public sessions, it was not yet known which consultant(s) would be involved in the EA process. Many of these questions will be addressed through the EA process and are not known at this time.

A representative of the CHN stated that talks between the CHN and Naikun have been on-going about whether the HaidaLink would be a one-way or a two-way line. The latest information is that it will be a two-way line, providing islanders with the potential to sell power to the mainland grid. This prompted discussion about the likelihood of this happening. The BC Hydro representative explained that the level of competition currently seen in the integrated grid (mainland) market for providing power is much higher than in the non-integrated system (e.g., Haida Gwaii). She indicated that the generation of electricity on small projects on the islands would likely be more costly than some of the competitive projects on the mainland, making it less likely that electricity could be sold from the islands to the mainland grid.

Questions about Technologies

During the week, there were several questions about different electricity supply options and conservation strategies. Some of these are included below. Questions and answers are preceded with 'Q' and 'A' and comments not requiring a response, with a 'C'.

- Q. What is the cost of electricity generation in Denmark?
A. Don't know the exact cost but the generation costs are relatively high, though they are low to the consumer because they are subsidized.
- C. I would like to see what the different costs between technologies would be before we can make a decision.
- Q. In the evaluation of the performance of the bundles, were all factors considered?
A. No. Assessment was done at a general level because many factors are related to the site chosen for the technologies and the size of the application. The bundles were hypothetical and are not site-specific.
- Q. What speed does the wind have to be blowing to generate electricity?
A. Between 4-50 metres/second.
- Q. Who is doing the feasibility assessment project for the tidal project in the north end?
A. Hatch, with support from a consortium of consultants.
- Q. What impact will wind propellers have if they are placed on land?
A. Would not expect many impacts if these are placed on land. Impacts would be mostly related to aesthetics and noise and perhaps, depending on the size of turbines selected and the types of birds and their flight heights and paths, on bird population. Larger turbines with slower moving blades tend to have a much lower impact on birds than small turbines.
- Q. Regarding biomass – over the long-term, it is considered to be GHG- neutral but in the short-term, it is emitting GHG's. Shouldn't this be reflected in the potential impacts?
A. Under the current system for counting greenhouse gases designed by the International Panel for Climate Change, Biomass generation is considered only a temporary release of carbon.⁴
- Q. Are you aware that synthetic methane can be made from biomass?
A. No, but we will check into this.
- Q. Did you compare costs with other conventional technologies?
A. We compared the alternative technologies to diesel but not to other conventional technologies (e.g., coal, natural gas and nuclear) because these technologies are not feasible on the islands.

⁴ If global deforestation continues and the trees are not replaced, then burning biomass using wood would be a net GHG emitter. Some biomass facilities use municipal solid waste and this would still be GHG neutral.

- Q. What does the Williams Lake biomass plant use for wood waste? I would like to see legislation that if you leave wood to waste, then you lose rights to it; this would keep the price down.
- A. Not aware right now what the plant in Williams Lake uses.⁵
- Q. Has there been a comparison done of the impacts of construction of off-shore wind vs. tidal? Are they similar?
- A. The impacts will be different based on the location. Impacts are very site specific and, therefore, it is not possible to generalize.
- C. There are wind turbines up on the hills in Southern Scotland. There are many seabirds in that area so it would be interesting to know what kinds of impacts there have been at that location.
- Q. How do we incorporate DSM in a power call?
- A. It is not considered part of a Call for Energy but BC Hydro is putting increasing emphasis on energy conservation. Separate calls for tenders, or requests for proposals, would be put out for any work that needs to be outsourced by BC Hydro for a DSM program on the islands.
- Q. Is there infrastructure currently in place in Haida Gwaii for administering DSM programs? Throwing away old appliances is an issue that needs to be dealt with.
- A. Not to our knowledge - this would have to be considered as part of our recommendations for DSM programs.



Public Meeting, Port Clements



Public Meeting, Sandspit

⁵ Subsequently informed that the plant at Williams Lake uses woodwaste from local sawmills

3. Public Involvement Presentation

3.1. Presentation Summary

In the second part of the presentation, there was an overview of the public involvement program, including an update on the Working Group, the Public sessions, and the Standing Technical Committee.

The Working Group met for the first time on December 6, 2006 to kick off the project. At that time, members provided their input for developing the public involvement program component of the CEP. Based on their input, Sheltair designed the first round of public sessions which were held during the week of February 26 – March 3, 2007. At these sessions, residents were asked for their views on what communities might look like in 2027 in terms of population, types of housing and facilities, and what issues concerned them about the supply options for electricity. Subsequently, the Working Group met to review the input obtained at the public sessions, and developed criteria for evaluating the bundles of energy supply and energy conservation measures that the project's technical team devised. The Working Group chose to work with the 'High Growth' scenario that the public had contributed during the public sessions, and which represented a population of approximately 12,500 people. This scenario, they felt, would mean that the Plan would be relevant for the long term, a large population growth and thus, would not be limited by capacity.

Results from the June 1 Workshop with the Working Group

On June 1, the Working Group participated in a one-day workshop conducted by Compass Resource Management (hereafter referred to as Compass) to evaluate the attributes of different technology options and also to rank supply options that were organized into "bundles". These bundles are hypothetical combinations of technologies and are used as a mechanism of showing how the preferred attributes could be achieved. It is possible that there are other combinations which could realize similar results.

The characteristics of the bundles that were evaluated during this exercise are shown in Table 1. Participants took part in two types of ranking exercises - 'Direct Ranking' and 'Swing Weighting'- and evaluated several bundles of energy supply and DSM options that the technical team had created based on the estimated performance and feasibility of several technologies on the islands. The Working Group, the Standing Technical Committee, and the public (through the first round of public sessions) provided input into the selection of the evaluation criteria.

Direct ranking allows participants to directly choose which bundle they prefer. Swing weighting is a technique to evaluate preferences based on how important different evaluation criteria are to each participant and to evaluate the bundles indirectly that way. Swing weighting is an attempt to remove biases that individuals may have for particular technologies and conduct the evaluation solely on their values, expressed through what qualities or, "attributes", are important to them. There are often differences in how participants evaluate bundles using these different techniques.

Data on people’s values are not easily quantified, however, structured decision-making exercises provide a mechanism to measure people’s values and can serve to support qualitative data that are gathered during public sessions, interviews and informal meetings.

Table 1 Characteristics of Mock Bundles Evaluated at June 1 Workshop

Bundle ID	Energy Plan	Future Business As Usual (FBAU)	Mix 3	Mix 4	Connect Grids	Offshore Wind
DSM	0% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth
New Supply Options						
Small Hydro	4 MW			2.5 MW		
Biomass		2 MW	2.6 MW		3.1 MW	
Land-Based Wind		2 MW	2 MW	1 MW		
Off-shore Wind						4.3 MW
Tidal		1 MW		1.0 MW	1 MW	
Diesel Use (% of forecast energy demand)	47%	16%	17%	33%	16%	32%

The complete report from Compass is available on the website but the primary conclusions are highlighted here.

Using the direct ranking technique, Working Group members preferred the ‘Future Business As Usual’ (FBAU) bundle and the ‘Mix 3’ bundle. When using the swing weighting technique, results indicated that the most popular bundles were the ‘Connect the Grids’ bundle and the ‘Mix 3’ bundle. The ‘Minimum BC Energy Plan’ bundle was the least preferred by everyone, using the techniques for both exercises.

After the Working Group completed the ranking exercises with the bundles that had been provided to them, members decided that they’d like to explore how well newly-created bundles might perform, using the same exercises. The Working Group developed four new bundles:

- Big Wind,
- Big Tidal,
- Hydro Plus, and
- Ultra DSM.

Of these four options, the Ultra DSM clearly out-performed the others and was preferred by all members of the Working Group. However, the performance of these last four bundles had not been fully tested by the project team and will need to be more carefully examined before definite conclusions can be drawn. The Ultra DSM bundle was based on values that are, to date, still

theoretical. While it is thought that these levels of energy conservation could be attained, they have not yet been tried successfully.

Discussions took place about how best to take the results of this exercise to the public and how to elicit meaningful input and feedback. It was decided that it would be reasonable to take the top six attributes arrived at by the Working Group (identified in the swing weighting exercise) and seek input on a small and representative set of bundles. The following attributes were ranked in the top six by the Working Group:

1. Green House Gas Emissions
2. Food Harvesting Impacts
3. Unit Energy cost
4. Aquatic Area Impact
5. % Dependable Peak by Renewables
6. Local Air Emissions

As noted in the report by Compass, choosing the top six criteria was an arbitrary decision and, if the creation of construction jobs and permanent jobs had been joined as one attribute rather than split into two, it likely would have ranked in the top six. Partly because of this, the consultant team decided to seek input from the public on all twelve attributes. Five bundles were evaluated to give a broad spectrum of options for members of the public to select. A third modification was made on the charts handed out at the public sessions - % Dependable Peak by Renewables was reworded as 'Reliance on Diesel' because it was thought that this term would be less confusing.

At the public sessions, the update of the Public Involvement Program included a brief description of the exercises that the Working Group members undertook during the one-day workshop, but their results were not revealed until after the participants had undergone their own ranking exercise that evening. This will be described in further detail in the Section 4.



Public Meeting, Sandspit

4. Bundle Ranking Exercise

4.1. Purpose of Exercise

Following the technical presentation and the update on the public involvement program, the audience was asked to participate in a modified ranking exercise of attributes associated with electricity supply, and several bundles of electricity supply and DSM options. While the structured decision making tool used in the evening sessions was simpler than those used in the day-long workshop, we believed that it would provide us with a good indication of residents' preferences and values. We could then compare these to the results arrived at with the Working Group.

As we outlined at the public meeting, if we found that the results obtained during this round of public meetings were similar to those of the Working Group, we would proceed with the development of the Plan. If the two sets of results were highly variable, or significantly different, than we would schedule a meeting with the Working Group to determine how to proceed.

4.2. Format

The ranking exercise that we used for the public sessions was a simplified version of the structured decision making process used by Compass. After the presentations, the time available for the exercise was very short (approximately 1 hour), therefore, the exercise needed to be easy to understand and participants needed to be able to complete it in a short time frame.

Each participant was given a chart grid with five anonymous bundles across the top, labelled Bundles A- E. On the left-hand side was a list of all the attributes⁶ that would help differentiate between the bundles. Each bundle was assigned a value of Low (L), Medium (M), or High (H), based on its evaluated performance for each attribute. The chart that participants were asked to fill out is included in Appendix I⁷.

The step-by-step process for the ranking exercise is described below:

1. Participants were asked to rank all of the attributes from 1- 12 in order of importance to them, with 1 being the highest importance and 12 being the lowest.
2. For the top six attributes (1-6), participants were asked to go across the rows and to circle the letter of the desired outcome. i.e. If the selected attribute was 'GHG emissions', then the participant would go across the row and circle all the L's indicating that low GHG emissions was the desired outcome; if it was 'Job Creation', then they would circle all the H's indicating that a high number of jobs was the desired outcome.

⁶ These were developed by the Working Group based on the information gathered at the first round of public sessions.

⁷ Please note that the row labelled 'Reliance on Diesel' should read H, L, L, L, M. This was taken into account in the analysis and thus, changes were made, accordingly.

3. The number of circled values were added for each column, representing each bundle.
4. The column with the highest number of circles represented the preferred bundle for that participant – or the bundle that met more of the participant’s desired outcomes.

The composition of the bundles was not made known until after participants had completed the exercise. In this manner, participants would truly be ranking the attributes, not the technologies in the bundle. The bundles simply served to illustrate how residents’ preferred attributes could be expressed as a combination of technologies. This is important because when BC Hydro makes the call for energy, it will not be for specific technologies but the attributes of the proposed technology will need to be compatible with the attributes preferred by the residents. Many people have strong preferences for a specific technology; conducting the exercise in this way attempts to remove this bias. At each meeting, several participants expressed surprise when the bundles were revealed because they had picked a bundle with technologies that ‘they do not like’.

It is important to note here that the CEP will not include recommendations for specific technologies but rather, will reflect residents’ preferred attributes.

4.3. Results

The data from the four public sessions were analyzed both for the islands as a whole. In total, 53 people attended the meetings, 50 participated in the exercise, and two entries were discarded for being incomplete or not properly filled out.

Preferred Attributes

The first task that participants were asked to perform was to rank the twelve attributes in order of importance to them, from 1-12, with 1 being the most important and 12, the least important. For data analysis purposes, each attribute that had a number 1 assigned to it was awarded 12 points; number 2 was awarded 11 points; number 3, 10 points, and so on until the choice numbered as 12 was awarded one point. The island-wide results are shown in Table 2.

Table 2: Ranking of Residents’ Preferred Attributes

Rank	Attribute	Number of Points
1	GHG Emissions	387
2	Local Air Emissions	381
3	Aquatic Area Impacts	364
4	Creation of Permanent Jobs	362
5	Food Harvesting Impacts	358
6	Reliance on Diesel	344
7	Unit Energy Cost	339
8	Land Area Impacts	311
9	Noise Impacts	254
10	Creation of Construction Jobs	243
11	Visual Impacts	219
12	Level of Innovation	194

These results show that the top six attributes for residents were, in order of preference: GHG Emissions, Local Air Emissions, Aquatic Area Impacts, Creation of Permanent Jobs, Food Harvesting Impacts and Reliance on Diesel. The most frequent number one choice was GHG Emissions and Food Harvesting Impacts (each with a frequency of 10), followed by Reliance on Diesel (frequency of 9), and Creation of Permanent Jobs (frequency of 7).

The findings in the public sessions correspond closely with the top six attributes as ranked by the Working Group during the June 1 Workshop. Creation of Permanent Jobs was not included in the Working Group’s top six criteria and Unit energy Cost was not included in the top six evaluated by the residents. As was discussed earlier, if permanent and construction jobs had been combined, they would have likely been included in the top six criteria of the Working Group. It is expected that Unit Energy Cost ranks as more important to decision makers and business people than to residents because this cost does not reflect the amount that residents actually pay, although it is interesting to note that Unit Energy Cost still ranked as #7, very closely behind Reliance on Diesel. Other than these two exceptions, the results for both groups were very similar.

Preferred Bundles

In this part of the exercise, participants were asked to circle the desired outcomes for each attribute that was ranked from 1-6 (described as step 2 in Section 4.2 above). The composition of the bundles that were evaluated by the residents during the public sessions are shown in Table 3, however, this was not revealed to participants until they had completed the exercise.

Table 3: Composition of Bundles Evaluated at Public Sessions

Bundle ID	Bundle A (Energy Plan)	Bundle B (Future Business As Usual or FBAU)	Bundle C Mix 3	Bundle D (Connect the Grids)	Bundle E Big Tidal
DSM	0% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth	40% of existing 50% of growth
New Supply Options					
Small Hydro	4 MW				5.7 MW
Biomass		2 MW	2.6 MW	3.1 MW	
Land-Based Wind		2 MW	2 MW		
Tidal		1 MW		1 MW	9 MW
Diesel Use (% of forecast energy demand)	47%	16%	17%	16%	34%

The results were tallied in two ways. First, the number of circled values (desired outcomes) was counted for each bundle. This number was used to rank the bundles. For example, if Bundle A had a total of 6 circles, Bundle B- 3, Bundle C – 4 and Bundles D and E each had 0, the bundles would be ranked as A - #1, C - #2, and B - #3. Bundles had to have at least one value circled to be

ranked. If two (or more) bundles tied for the same number of desired outcomes, the same ranking was awarded to both bundles. Analyzing the data in this way produces the most preferred bundle with attributes anywhere in the top six (i.e. not weighted). The bundles most frequently chosen as #1 are shown in Table 4.

Table 4: Ranking of Most Preferred Bundles (Non-Weighted)

Bundle	A	B	C	D	E
Frequency Chosen as #1	0	3	31	27	20

Residents most often picked Bundle C as their #1 choice, closely followed by Bundle D and then Bundle E. Bundle A was not the preferred choice of any of the participants.

The results were then analysed a second time, with weighted rankings. For each submission, the attribute that was ranked first was awarded 6 points; the second – 5 points and so on until the attribute that was ranked sixth received one point. The scores for each bundle were then tallied to arrive at a cumulative, or weighted, score. The results are shown in Table 5. It should be noted that this weighting is somewhat arbitrary and does not necessarily reflect the ranking community members would provide. The weighting exercise is for illustrative purposes only. When the Working Group conducted a somewhat similar weighting exercise for the attributes, Working Group members were able to weight attributes themselves.

Table 5: Weighted Scores for Bundles

Bundle	A	B	C	D	E
Weighted Score	41	443	658	680	583

These weighted scores, which reflect residents' rankings of the attributes, show that the most preferred bundle, island-wide, was Bundle D – Connect the Grids. The next most preferred bundle was Bundle C – Mix 3 and the third was Bundle E – Big Tidal. These results are similar to those obtained by the Working Group; both bundles D and C ranked highest using the swing weighted scores. When the Big Tidal bundle was created and evaluated, its performance was close to Bundles D and C. The least preferred bundle, for both the Working Group and the residents, was Bundle A, the BC Energy Plan.

5. Summary

The Community Electricity Plan (CEP) is composed of a Technical Program and a Public Involvement Program, both of which have been on-going concurrently. A Standing Technical Committee (STC), composed of 17 island residents, representatives of the CHN, and technical experts from BC Hydro and The Sheltair Group have been researching and compiling technical information for the Plan. As part of the Public Involvement Program, the consultant team has been working with the Working Group and with the public through public meetings, to determine residents' values with respect to electricity supply options and energy conservation strategies.

The CEP process began with a kick-off meeting between the consultant team and the Working Group in Skidegate on December 6, 2006. Work on the Plan has proceeded on-schedule and is expected to be finalized in the fall, 2007.

To date, there have been three meetings with the Working Group, one meeting with the Standing Technical Committee and two rounds of public sessions throughout the islands. The first round was held in February-March, 2007 to solicit input from residents on what their vision for their community would be in twenty years and what issues related to electricity supply were most important to them. This information was used to develop a set of attributes against which to evaluate several mock bundles of electricity supply options and electricity conservation strategies. A second round of public sessions was held during the week of July 3-6, 2007. At this time, residents were presented information on the technical and public involvement programs of the Plan and they were also provided with an update on the work that had been conducted to date. Residents were asked to rank their preferred attributes and the bundles that incorporated their preferences. The data gathered at the public sessions were compared to the data obtained from the Working Group during a one-day workshop where they participated in a structured decision making exercise.

Results of the data analysis obtained from island residents at the public sessions confirmed the data obtained from the Working Group. This shows that the preferred attributes of Working Group members are very similar to those expressed by residents who participated in the public sessions. The data show that the attributes most important to the public and the Working Group include:

- food harvesting impacts,
- greenhouse gas emissions,
- reliance on diesel,
- local air emissions,
- unit energy cost
- aquatic area impacts, and
- creation of permanent jobs.

Assessing the evaluation of the bundles against these preferred attributes led to the following ranking of top three bundles for both the public and the Working Group:

Bundle D - Connect the Grids – 3.3 MW Biomass, 16% Reliance on Diesel for Back-Up, DSM measures;

Bundle C – Mix 3 – 2.6 MW Biomass, 2 MW Land-Based Wind, 17% Reliance on Diesel for Back-Up, DSM measures; and
Bundle E – Big Tidal - 5.7 MW Small Hydro, 9 MW Tidal, DSM measures.

6. Next Steps

The results of the second round of public sessions held in July, 2007 confirm the results obtained from the Working Group during the day-long workshop on June 1. Given that the results are similar, the CEP will proceed as planned. Several activities remain:

1. Meet with the Standing Technical Committee to summarize findings to date and obtain any further technical input from the Committee;
2. Meet with the Working Group to:
 - Review June 1 meeting as well as the results of the public meetings,
 - Show how the different mix of preferences impact preferred bundles,
 - Seek consensus on the prioritization of preferences,
 - Describe how results of bundles and preferences will be used in the Call for Energy by BC Hydro, and
 - Discuss the role of the Working Group in the implementation phase;
3. Write the draft of the final Plan; and
4. Present the final Plan.



7. Appendix I

SAMPLE BUNDLES

Attribute	Bundle A	Bundle B	Bundle C	Bundle D	Bundle E
Unit Energy Cost (L)	H	M	L	M	H
GHG Emissions (L)	H	L	L	L	M
Local Air Emissions (L)	M	M	H	H	L
Land Area Impacts (L)	H	M	L	L	H
Aquatic Area Impacts (L)	M	H	L	L	L
Creation of Construction Jobs (H)	M	H	H	H	H
Creation of Permanent Jobs (H)	L	H	H	H	H
Noise Impacts (L)	H	L	M	M	L
Visual Impacts (L)	L	M	M	M	L
Food Harvesting Impacts (L)	M	H	M	L	L
Level of Innovation (H)	L	L	M	L	H
Reliance on Diesel (L)	H	M	M	L	L