

mtg w/ Shell + Chevron re: Naikun (1-2pm)

31 Aug 2009

David MacGinnis - Chevron (US/US parent has wide energy interests)

Kathy Penney - Shell. (also involved in wind business)

discussions w/ Naikun last year.

" " NRCan over last 18 months. Etic landing (DG)

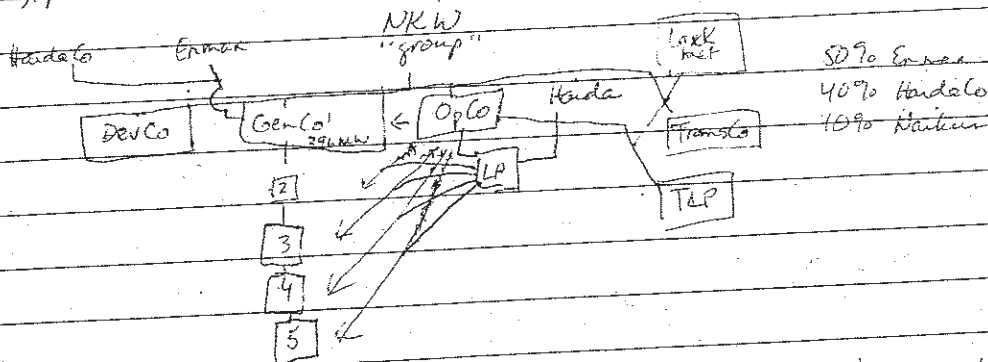
- no discussions w/ Haida to date, but they were cc'd on letter.

Add: Steve Eckert & Matt Burns (Naikun) (2:00pm)

- Naikun met w/ Shell + Chevron in June '08

[Shell + Chevron didn't ~~engage~~ / reach out too much detail early in Naikun's planning as they are "competitors in the wind business". But now that Naikun's fall is in place, Shell + Chevron want to determine / mitigate what the impacts of Naikun's plans will be on offshore petroleum seismic etc.]

Shell argues consideration must be given in the marine planning for the area to which resources / resources development activities are the most flexible / movable (e.g. directional drilling can only go so far to access petroleum sites, whereas wind/wave/tidal may be more moveable?).



- Naikun, Shell + Chevron agreed as next steps to meet again soon to start getting into detailed discussions to address issues (next week in Vancouver)

West, Michele L MEM:EX

From: Larson, Janice MEM:EX
Sent: Friday, November 13, 2009 2:53 PM
To: Bonnyman, Sue MEM:EX; Stockman, Fern P EAO:EX
Cc: Kelly, Susan M AVED:EX
Subject: RE: NaiKun

Hi All:

Just confirming that in addition to the highlighted additions, there are a few additional revisions (primarily grammatical to improve clarity) embedded in the body of the text below.

Cheers,
Janice

From: Bonnyman, Sue EMPR:EX
Sent: Friday, November 13, 2009 2:48 PM
To: Wager, Fern P EAO:EX
Cc: Larson, Janice EMPR:EX; Kelly, Susan M EMPR:EX
Subject: NaiKun

We are suggesting a very minor addition to make clear that should Shell/Chevron choose to not participate, this does not put NaiKun in non-compliance.

Sue Bonnyman
Director, Generation and Regulation
Electricity Policy

- the Proponent commits to ongoing meetings with Shell and Chevron (the "Companies"), as recognized stakeholders in the NaiKun offshore wind energy project ("Project"), as reasonably required to establish a constructive working relationship. The Proponent will provide regular updates to the Companies and ensure that they are informed about relevant design, construction and operations activities, and any Project amendments. This commitment requires the cooperation of the Companies.
- The Proponent will, in its development of Project construction and operational schedules, give reasonable consideration to the interests of the Companies in the Project area, and the Companies will provide the Proponent with reasonable notice of any planned and scheduled operations of the Companies which may impact Project development, construction and operations. This commitment requires the cooperation of the Companies
- The Proponent commits to reviewing engineering plans with the Companies during early detailed design of the Project in a workshop format. This workshop will:
 - Have a schedule, agenda, attendees, and objectives agreed to by the Proponent and the Companies, 60 days in advance of the workshop;
 - Include the review of preliminary design considerations for the Project;
 - Seek to identify potential conflicts and if appropriate refine the project layout, where reasonably practical, in consideration of input provided by the Companies; and
 - At the conclusion of the workshop, it will be determined what additional workshops might be required.

This commitment requires the cooperation of the Companies.



Natural Resources
Canada

Ressources naturelles
Canada

August 7th, 2009

To: Gary Alexander
BC EAO

Fern Wagner
BC EAO

cc. Chris Barlow
Canadian Environmental Assessment Agency
Vancouver

Subject: Naikun Offshore Wind Energy project – NRCan

Mr. Alexander,

Please find below Natural Resources Canada's (NRCan) comments on the document *Application for an Environmental Certificate* dated May 2009 prepared for Naikun Wind Development Inc. on behalf of Naikun Wind Generation Inc. by Hemmera Envirochem Inc. NRCan understands that the proposed project involves the installation of up to 100 wind turbine generators with a plan capacity of 396 megawatts (MW) in the shallow waters off the coast of Haida Gwaii in British Columbia's Hecate Strait. Given that Chris Barlow S22 NRCan is submitted these comments straight to the British Columbia Environmental Assessment Office (BC EAO).

As Chris Barlow (Canadian Environmental Assessment Agency) is S22
S22 I am sending these comments directly to you in support of the Harmonized process under the *Canada-British Columbia Agreement* (2004). NRCan is a likely responsible authority for this project under the *Canadian Environmental Assessment Act* (CEA Act) due to the possible issuance of a license under the *Federal Real Property and Federal Immovables Act*. The consolidated comments submitted below are a joint review effort between NRCan's Earth Sciences Sector technical reviewers, the Energy Sector and the Environmental Assessment Group.

Should you have any questions or comments please do not hesitate to contact me at the number listed below.

Thank you,

Teresa LeMay

Environmental Assessment Officer / Agent d'évaluation environnementale
Environmental Assessment Group / Groupe d'évaluation environnementale
Natural Resources Canada / Ressources naturelles Canada
Tel / Tél. : (613) 992-8791
Email / Courriel : tlemay@nrcan.gc.ca

Canada



Energy Sector Comments

General

When mitigation measures are identified as a means of reducing environmental effects, the proponent must indicate a corresponding commitment to implement the mitigation measures. This must be a clear commitment to mitigation made by the proponent, not simply a recommendation from a consultant that may have prepared the environmental assessment on behalf of a proponent. There are several sections of the document that indicated mitigation measures are 'recommended' or that certain documents 'should be reviewed' or that the proponent 'intends to' do something. A clearer commitment to the implementation of mitigation measures from the proponent is required.

Appendix A1 and A2 - Consultation Report

This document summarizes the results of the Stage 1, 2 and 3 consultation and community engagement activities undertaken by NaiKun Wind Development Inc. from March 2007 through 2008. While this document comments on the Consultation undertaken by both the proponent and the BC EAO, it fails to mention any consultations efforts undertaken by the Federal Government. Because this application is also being used to satisfy the Federal EA process under the *CEAA*; in addition to the fact that the BCEAO is partly representing the Crown in consultations with Aboriginal Groups (Haida Gwaii) it is important that an appendices of Federal consultation efforts is added to the Application.

Section 1- Project Overview

1.3.2.2 Federal Process

This section states: "The Project is also subject to federal review under the *Canadian Environmental Assessment Act*, administered by the Canadian Environmental Assessment Agency (CEAA). This process is triggered by the *Navigable Waters Protection Act* and the federal *Fisheries Act*. Requirements for review under federal legislation are incorporated in the Application ToR".

This section should include reference to NRCan/PWGSC's Federal's s.5(1)(c) CEA Act trigger – issuance of a license under the *Federal Real Property and Federal Immovables Act*.

Section 13 Socio-economic effects

The effects of shadow flicker and the need to mitigate this effect should be considered in this section.



Land Use and Tenure Effects are considered in this section. This is further considered in Volume 11, section 11.3. You will find comments on this below.

15.4 Accidents and Malfunctions

The potential for ice build up and ice throw should be considered here.

Section 18 Follow-up and Monitoring

Further details on the follow-up and monitoring plans are required. In developing these plans the following CEAA guidance documents should be referred to:

- Follow-up Programs under the Canadian Environmental Assessment Act (November 2007)
- Adaptive Management Measures under the *Canadian Environmental Assessment Act* (March 2009)

NRCan understands that the proponent is doing further work on these plans and will comment further once this work is received.

Technical Volume 7 – Marine Mammals

Marine Mammal Observers

How many Marine Mammal Observers are being employed for the observations during the construction phase of the proposed project?

Have the Haida Gwaii been considered for these positions. This could be a good opportunity for the proponent to use their local traditional knowledge of the movement and behaviors of local marine mammal species. In many of NRCan's marine seismic surveys in the Arctic Ocean and Beaufort Sea, Inuit Marine Mammal Observers are hired on as employees of the project for this specific purpose/reason.

Tech Vol. 11 and Volume 1

Section 11.3.5

Although, Volume 11, section 11.3 identifies Shell Canada as the primary tenure holder, consultation between the parties is not in fact discussed in this section as stated on p. 13-32 of the Naikun EA Application. Further details on what discussion has occurred and the outcomes of that discussion should be provided. Please also indicate whether discussions have been held with Canadian Forest Oil and Petro Canada since section 11.3.5 of Volume 11 indicates that the IUP does fall within their tenure areas as well.

Further details and explanation regarding the proposed mitigation measures are required. Section 13.4.5 of Volume 1 indicates that "with appropriate mitigation through such discussion and consultation in the event the moratorium is lifted..." Please outline what mitigation measures are being considered to account for the impact that project



(construction, operation and decommissioning) would have if the moratorium were lifted in the future.

Please consider the following:

- How would the WTGs affect the ability to complete exploration activities, undertaken by seismic vessels, in the area of the wind farm, but also in the adjacent areas as well. These vessels tow large streamers (3-6 km long) and whether they would be able to get near the wind turbines should be considered. Would the accuracy of the data collected be affected and how would this affects, the value of the mineral parcels adjacent to the wind farm?
- How will the proposed cables impact the ability of current oil and gas interest owners to conduct drilling operations, if the moratorium was lifted.
- The assessment could include a more detailed discussion of different design options for the wind farm (e.g. WTG spacing) and alternatives for joint tenure if the moratorium is lifted, such as the possibility of temporarily halting operation of the WTGs to allow for exploration activities to be conducted or perhaps oil and gas exploration technology (e.g. horizontal drilling) that would allow both activities to potentially exist, if required.

Table 11-36

Where it states that the tables are determined by the level of labor force participation, it would be important to project as to whether or not labor force participation in the oil and gas field is with respect to the current status on offshore exploration/drilling (moratorium in place).



Technical Review Comments - Earth Sciences Sector, NRCan

These preliminary technical review comments have been provided by geoscientists from the department's Earth Sciences Sector, Geological Survey of Canada (GSC) with expertise in coastal geomorphology and seabed stability, earthquakes and seismic hazards and marine geology. While there may be some overlap, the individual expert's comments have been kept separate and intact rather than attempting to merge them where there may be commonalities. This approach maintains the unique perspective/discipline of each reviewer and results in complementary and supportive reviews (which reinforce concerns and recommendations) rather than duplicative comments.

Reviewer #1 - Preliminary Technical Review of Coastal Geomorphology and Seabed Stability

1.1 Introduction

Documents Examined

- *Final Terms of Reference for the Proposed NaiKun Wind Generation Facility Project, prepared by Pottinger Gaherty Environmental Consultants Ltd. for Naikun Wind Farm Development Inc., December 2007;*
- *Technical Volume 3 of the Environmental Assessment Application for the Naikun Offshore Wind Energy Project, Marine Physical Environment, prepared by RPS Energy; April 2009.*

1.2 Technical Review Comments

1.2.1 Summary

Although the authors of this technical volume seem to have found much of the work done in the field of seabed stability and coastal geomorphology, improvements could be made to the description of seabed stability and coastal geomorphology aspects of the existing environment and the proposed project's potential effects on these aspects. The chapter outline appears to be scrambled. There is no logical connection between or order in the various sections as there could be.

The authors appear to have access to the sediment transport modeling software Mike21. Perhaps using the sediment module within this software would reveal more information about potential effects of the proposed work and infrastructure on sediment transport. Other software that can be used to model/predict these effects is Delft3d. There is also software available free of charge (Sedtrans) that will model erodibility and 1-d re-suspension of the seabed, and this could be done on all areas where there is a known wave-current field, a depth, sediment type and bottom slope. It is not suitable to use modeling results of another project to describe the impacts of this one.

While this EIS appears to address concerns regarding the operation of a wind farm at the proposed location, it does not address all concerns related to the construction or



maintenance of the wind farm. Will there be dredging? Where? Where will the spoils be taken and deposited. How does a dredge channel affect local hydrodynamics? Will cables be trenched/buried? Will foundations have scour protection? A better description of each of these, and their potential effects, is required.

This technical volume is based on reports from a number of sources. The compilation of these reports is not streamlined. The information given in this volume would be much more easily understood if the results of the various surveys were put together under appropriate headings. For instance, sediment bed properties from various surveys are described in various places throughout this volume.

The report indicates that data are scarce or absent in many places. This is a deficiency that must be addressed before ESS can properly assess the EIS.

NRCan notes that some of the text used to describe the significance of an effect does not seem to be clear. For example "Apart from the immediate vicinity of the..." it is important to know what is expected to happen in the immediate vicinity". In this instance perhaps scour and deposition will take place to such a degree that maintenance dredging is required. NRCan suggests avoiding the use of such statements throughout the EIS.

This EIS refers to much work that has been done outside of this particular EA process. Most of the modeling that is reported is done on alternate projects, with "similar" characteristics. Sometimes, it seemed that only water depth was directly comparable, while small differences in wave or current properties can have important long term effects. Prediction of how long term sediment transport would be affected by the project is missing. Modeling and prediction of effects must be conducted on this specific project.

1.2.2 Specific Comments

1.2.2.1 Pg 12 Section 3.2.3.4 *Consequences and Concerns*

Proponent's Assessment

"In the area of the turbines, the non-tidal currents are of no concern with the exception that there is a net motion parallel to the east shore of Graham Island to the north. This will lead to a gradual erosion of the shoreline (depending on the composition of the beach) and an accretion of shoreline on the north coast. The tidal currents to the east of Graham Island and northern Hecate Strait are rectilinear in a north-south orientation so will move sediment during monopile foundation installation to the north and south of the site. The volumes indicated in the RPS (February 2009) report would be easily dispersed and offer no environmental impact."



NRCan's Comments

A. "Depending on the composition of the beach" - Has this been examined? What is meant by this exactly? Cohesive versus non cohesive? Fine sand versus sand? What is the composition of the beaches, and will erosion occur?

B. "and an accretion of shoreline on the north coast" - Is there evidence for this?

1.2.2.2 Pg 12 Section 3.2.3.4 Consequences and Concerns

Proponent's Assessment

"The waves present engineering rather than environmental concerns. The wave periods suggest wave lengths that would pass almost unheeded through the monopod field (since wave length much greater than diameter of monopod). No alteration of the wave field would occur.

The Marine Weather Hazards Manual offers this warning: *Southeast gales and heavy seas in Hecate Strait affect shallow area from Cape Ball to Rose Spit ("The Hook"). Waves steepen and break on shallow bars and on tidal currents. With erratic patterns of rocks and sifting sandbars along the east coast of Graham Island, it is often safest to remain about five miles off the coast."*

NRCan's Comments

A. "since wave length much greater than diameter of monopod" - Does having 120 structures affect this rule of thumb? How about scour and transport of scoured sediment? (this is partially answered in later sections of the report)

1.2.2.3 Pg 18 Section 3.3.3 Waves

Proponent's Assessment

"The models were used to produce maps showing wave heights projected for different frequencies of events ranging from 1 in 5 years to 1 in 100 years. Figure 3.3-4 shows the way 1 in 50 year wave heights are distributed in the Hecate Strait and around the wind farm. Wave height in the wind farm is attenuated by the shallower waters."

NRCan's Comments

Where does the shoaling take place? Wave height is attenuated in shallow water, but where (at what depth) is the energy dissipation the greatest?



1.2.2.4 Pg 22 Section 3.4.1 Data sources

Proponent's Assessment

"The Hecate Strait area has not been studied intensively but a regional seismic reflection survey with sea bed sample acquisition has been performed by the Geological Survey of Canada (GSC), the Pacific Geosciences Centre (PGC) and Natural Resources Canada (NRC). The seismic data from two cruises (PGC 91006 and PGS 94007) were examined. They comprise:..."

NRCan's Comments

This should read performed by the Geological Survey of Canada Pacific, Natural Resources Canada.

1.2.2.5 Pg 23 Section 3.4.3 Bathymetry and Current Regimes

Proponent's Assessment

"A summary of the maximum current directions and magnitudes is presented below in Figure 3.4-1. The size of the arrows in Figure 3.4-1 is proportional to the magnitude of the current, the largest being 320 cm/s (6kn) and the smallest 20cm/s, (0.4kn) with an average of approximately 50cm/sec, (1kn) in the centre of Hecate Strait. Near bottom tidal currents are generally in the region of 15 to 25cm/sec, (0.3 to 0.5kn)."

NRCan's Comments

The largest current is 120cm/s, not 320cm/s.

1.2.2.6 Pg 26 Section 3.4.4.2 *Small to Medium Scale Surface Bedforms*

Proponent's Assessment

"Sediment transport direction is determined by the cumulative effect of all current forces. Barchan (horseshoe-like sand features), sand ribbons, gravel waves and obstacle marks are observed throughout the region and indicate current velocities in the region of 150 cm/sec. At present however, the level of survey detail is insufficient to accurately determine the density, localized velocity variations and migratory trends."

NRCan's Comments

There are several reports of current velocities throughout this report. Bottom currents seem to have been measured in the early 80s, up to 120cm/s. However, morphology shows up to 150cm/s. Clearly more work is needed to define bottom current velocities, or to better summarize the existing data. In particular, it would be good to know what they could reach in an extreme event such as a southeasterly storm on a flooding spring tide.



1.2.2.6 Pg 26 Section 3.4.4.3 *Sand Ridges and Sand Banks*

Proponent's Assessment

"Sidescan sonar records reveal smaller active bedforms on surfaces of the sand ridges. It is not known at present if these sand ridges are actively migrating across the sea bed."

NRCan's Comments

Repeat sidescan and/or multibeam required. A mooring may be required too. Would recommend downward looking ADCP and two bed mounted turbidity sensors.

1.2.2.7 Pg 26 Section 3.4.5 Pockmarks and Shallow Gas

Proponent's Assessment

"Available data indicate that these pock marks are confined to the eastern part of Hecate Strait and to the south of Dogfish Banks."

NRCan's Comments

"Available data" might not be sufficient. Is there enough data to indicate that shallow gas, gas release, and pockmarks formation are not an issue in the Dogfish Bank?

1.2.2.8 Pg 27 Section 3.4.6 Seabed Sediments

Proponent's Assessment

"Based on the limited available geophysical sub-bottom (seismic and sidescan) data and the bathymetric data, a gravel lag (coarse sea bed deposits left behind after removal of finer material) is interpreted to be exposed over approximately 30 to 50 percent of Dogfish Banks. Some of these gravels are interpreted to contain material up to boulder size. Based on available data, gravel lag is interpreted to be present at the seabed over large parts of the south-west corner of the Banks.

These analyses were provided by the PGS and are based on analysis of a variety of bottom grab samples including material obtained from Van Veen, Shipek and large volume IKU sampler. Subsurface geotechnical cores were obtained by gravity and vibrocoring systems.

Sand ridges are interpreted to be composed of dense and possibly very dense sand, densified due to wave action. Similar features are encountered in other offshore areas. Based on the bedform characteristics observed from the data reviewed, sand waves appear to be most active in the eastern regions of the study area.



Interpretation of the reviewed data suggests that there is significant variability in thickness of the surficial sands. These records suggest that sand thickness ranges from less than 0.5m to 12 m over a horizontal distance of as little as 300 m, although a more complete data set may reveal a greater range of sea bed sediment thickness variation.

Measured sediment transport rates from previous surveys conducted within the area are in the order of 0.0005 kg/m²/s but can be as high as 0.05 kg/m²/s during storm events. These transport events produce regions of net erosion and deposition within the Dogfish Banks area.”

NRCan's Comments

More work is required here. It is clear that the area is highly dynamic, which will produce difficulties for building and maintaining structures. It is clear that there are large sand ribbons and dunes that are “probably” migrating. What happens if an 8m high sand dune migrates around one of the structures? At what time of the year were these gravel deposits surveyed? The type of sediment could be (is likely) seasonally dependant. How were these sediment transport rates calculated, and by who? Are there seabed maps available to show distributions of grain sizes? PGS referred to several times- is this PGC (or more correctly GSC Pacific)?

1.2.2.9 Pg 37 Section 3.4.8.1 Regional Seismicity

Proponent's Assessment

“The Dogfish Banks area is subject to earthquakes (Figure 3.4-11) and storm-related sediment transport. Strong semi-diurnal tides combined with southeast winter winds generate bottom currents strong enough to erode and transport seafloor sediments to the north.”

NRCan's Comments

NRCan suggests separating seismicity and sediment transport into two sections for clarity and to avoid duplication. In the EIS there are instances within this chapter where information is duplicative and sometimes conflicting. NRCan requests that the proponent clarify sections with conflicting information and provide information under streamlined headings.

1.2.2.10 Pg 37 Section 3.4.8.1 Regional Seismicity

Proponent's Assessment

“The liquefaction potential of the sand ridges observed on Dogfish Banks is not known at this time.”



NRCan's Comments

While not known at this time (before the development were to proceed), the geotechnical properties of sediment, and susceptibility to liquefaction must be considered in the engineering design. Shallow gas and large tidal amplitudes, when combined, may also lead to excess pore pressure build-up, which could impact the seafloor's ability to provide a solid foundation.

1.2.2.11 Pg 41 Section 3.5.2 Results of Geophysical Field Studies

Proponent's Assessment

"Seafloor scour is variable geographically within the site. There are large areas of the site with little change (i.e. less than 0.5 metres year-over-year) and areas where vertical changes in seafloor elevation of up to 3.5 metres have occurred between successive year surveys – both erosion and accretion. These areas of greatest change are related to specific bedforms located east of the central sand in the study area (wind farm)."

NRCan's Comments

"Seafloor scour is variable geographically within the site" - is there a map showing this? Erosion of 3.5m of seabed around a structure might have significant consequences to that structure.

1.2.2.12 Pg 43 Section 3.5.2 Results of Geophysical Field Studies Area 1 Summary

Proponent's Assessment

"There is very little change in seafloor elevation between 2007 and 2008 in this area....There are small, localized concentrations of boulders at the seafloor in this area, and these are thought to correspond to areas of outcropping of bouldery muds."

NRCan's Comments

Just for clarification, is this indicating that this area is completely bypassed by sediment? Would this be altered by placing many monopiles in the area? Some work later in this report addresses this, but not sufficiently (and mainly from other projects).

1.2.2.13 Pg 43 Section 3.5.2 Results of Geophysical Field Studies Area 2 Summary

Proponent's Assessment

"Area 2 is the most dynamic part of the wind farm in terms of year-over-year changes in seafloor elevation."



NRCan's Comments

This requires further explanation. There are sand waves and ridges, but how much do they move? What is the mass flux of sediment through this area?

1.2.2.14 Pg 43-44 Section 3.5.2 Results of Geophysical Field Studies Area 3 Summary

Proponent's Assessment

"There are no large areas of gravel mapped in this area, however there are occasional shallow channels infilled with softer sediment."

NRCan's Comments

Are these channels active? Do they carry sediment through the wind farm? Do they shift position?

1.2.2.15 Pg 55 Section 3.5.3 Summary of Sea Bed and Sediment Conditions

Sediment Mobility

Proponent's Assessment

The scale of the profiles makes visualization of the differences year-over-year somewhat difficult, so plan view maps were produced. An example of the changes that occurred in the NE quadrant of the wind farm, east of the central sand ridge is shown in Figures 3.5-13, 3.5-14 and in a cross-sectional profile in Figure 3.5-15....The scale of the profiles makes visualization of the differences year-over-year somewhat difficult"

NRCan's Comments

This needs clarification. Provide more information regarding the collection (especially of the navigation) for both single beam and multibeam datasets.

1.2.2.16 Pg 58 Section 3.5.3 Summary of Sea Bed and Sediment Conditions

Sediment Mobility

Proponent's Assessment

"Areas of the seafloor where seabed forms were not present had very little change year-over-year (this includes the shallow water areas on the west side of the site and the deeper water areas on the east)....The areas of greatest change in the seafloor are associated with the areas of steep slope. The following is a seafloor gradient map showing these areas."



NRCan's Comments

This is not clear. There is no seafloor gradient map. Does this conclusion come from "Figure 3.5-15 2007 Single Beam and 2008 Multibeam Comparison Area"? Is the greatest change at greatest slope simply because the plots seem to be shifted horizontally (either real, or due to navigation offsets)? Is this referring to the slope of the sand wave surfaces, or the slope of the surrounding area?

It is important to note that even if the seabed elevation does not change, this does not indicate a lack of sediment transport- it only indicates a balanced condition.

If the statement is true, why are the areas of steepest slope associated with greater sediment transport? Is it in the downslope direction? Would dozens of turbine foundations affect this? (or the other way around, which is really up to the project engineers)

1.2.2.18 Pg 64 Section 3.5.3.3 *Littoral and Coastal Areas near the Wind Farm – An Overview*

Proponent's Assessment

"It also predicted that the ridge is in dynamic equilibrium with the storm systems and that it is modified only slightly by each storm. Rose Bar appears to be fed by sand transport from southern Dogfish Banks during storms. Little if any sand comes from the coastline of eastern Graham Island (this material being trapped and transported within the nearshore channel off Rose Spit). It concluded that Rose Bar is not an extension of Rose Spit as it is not feed by its adjacent shoreline."

NRCan's Comments

If this EIS needs to confidently predict the effect of 120 turbines, with scour protection, cable laying, dredging, in this dynamic equilibrium, NRCan suggests modeling.

1.2.2.19 Pg 64, Section 3.6. MODEL STUDIES OF COASTAL IMPACTS OF AN OFFSHORE WIND FARM - A CASE STUDY OF CODLING BANK, IRISH SEA

Proponent's Assessment

"These studies have shown that apart from the area immediately around the turbine foundations, these developments have little or no impact on the coastal processes of the area or on the adjoining shoreline."

NRCan's Comments

Does this statement mean that the area immediately around the turbine foundation is deemed to be not important?



1.2.2.20 Pg 69 Section 3.6.1.3 Impact on Waves

Proponent's Assessment

"There is a small, local reduction in wind speed within the wind farm site, in the order of 10%, that slightly changes the wave climate around and immediately downwind of the turbines. The reduction in wave height at the leeward end of the farm does not exceed 25mm. This is not significant in the context of the wave heights on the site during these events, as it is only approximately a 0.5% reduction in wave height."

NRCan's Comments

What is the statement that this reduction in wave height is "not significant" based on? What does long time scale modeling show? How much are the waves decreased during large storms? Does it affect wave erosion, re-suspension and transport? Does it affect the balance that currently generates adjacent coastlines and bars? Again, long term sediment transport modeling is required.

1.2.2.21 Pg 73, Section 3.6.3 Conclusions from Codling Bank Modeling

Proponent's Assessment

"The proposed development will have no impact on coastal erosion or deposition along the adjoining shorelines."

NRCan's Comments

NRCan strongly recommends collecting site specific data to model the impacts on coastal erosion or deposition along the adjoining shorelines. NRCan suggests either comprehensive modelling of the Naikun site, or comparison to a similar site where real data were collected. Mike21 has sediment modules.

1.2.2.22 Pg 74, Section 3.7 STUDIES OF IMPACT OF OFFSHORE WIND FARMS ON COASTAL PROCESSES - A CASE STUDY OF SCROBY SANDS

Proponent's Assessment

"Scour pits are associated with monopiles and are typically up to 5 m deep, with a horizontal diameter of 60 m (30 m radius)."

NRCan's Comments

Given the above example, according to a conservative (worst case) scenario each scour pit is $14,000\text{m}^3$. Loosely consolidated sand/gravel is 2.0 tonnes/m^3 . This means that 28,000 tonnes of sediment could be eroded from base of 120 monopiles. That is 3.5 million tonnes of sediment. Erosion and deposition of this much sediment could blanket



an area of 12km by 12 km with a 10cm thick layer, just within the first few months of operation. The analyses shown do not include any long term effects.

1.2.2.23 Pg 74 Section 3.7 STUDIES OF IMPACT OF OFFSHORE WIND FARMS ON COASTAL PROCESSES - A CASE STUDY OF SCROBY SANDS

Proponent's Assessment

"An important finding is that the wind farm resulted in no change in overall elevation across the bank and the bank has appeared to maintain its overall morphology, with no creation of channels across the bank's flanks or crest. Monopiles may act to initiate trains of sedimentary bedforms. However such bedform generation is unlikely to alter either the net sediment transport rates along sandbank flanks or the overall sediment budgets of such sandbanks."

NRCan's Comments

This implies that as well as there being no far field impacts on sediment patterns there is little impact in the near field (i.e. sediment transport patterns within the wind farm area are not modified beyond the immediate vicinity of the monopiles and those impacts are limited to scour pits and scour wakes).

NRCan agrees that the surveys at Scroby have been well done but the current report should provide more information. What period of time between building of monopole and investigation at Scroby? Over a year there was no net change? What about 5 years, predicted 20 years? More information is required. Also more points of comparison are required, other than just water depth, between the proposed wind farm and the example wind farm. Are peak waves and/or frequency of storms at Scroby and Naikun comparable?

1.2.2.24 Pg 76 Section 3.8 HAIDALINK

NRCan's Comments

This section does not provide any information on the techniques to lay and secure the cable. It also does not provide any information on potential impacts. It should be expanded to include each of these.

Reviewer #2 - Preliminary Technical Review of Earthquakes and Seismic Hazards

2.1 Introduction

Earthquakes are examples of effects of the environment on the project. To minimize the potential for adverse environmental effects caused by project element failures as a result



of earthquakes, project elements and infrastructure can be designed using design earthquake loading criteria, based on a rigorous seismic hazard assessment.

Documents Examined

- *Final Terms of Reference for the Proposed NaiKun Wind Generation Facility Project, prepared by Pottinger Gaherty Environmental Consultants Ltd. for NaiKun Wind Farm Development Inc., December 2007;*
- *Technical Volume 3 of the Environmental Assessment Application for the NaiKun Offshore Wind Energy Project, Marine Physical Environment, Section 17.3.3 Earthquakes; April 2009.*

2.2 Technical Review Comments

2.2.1 Summary

Seismicity and seismic hazard are addressed in Section 17: Effects of the Environment on the Project; specifically in section 17.3.3 Earthquakes.

The proponent clearly recognizes that earthquakes need to be considered in the design of its structures and is aware of the correct source of information for seismic design ground motion parameters, the Earth Science Sector website at:

<http://earthquakescanada.nrcan.gc.ca/hazard-alea/interpolat/index-eng.php>

which allows the calculation of seismic hazard spectra at the National Building Code of Canada probability level, and other probability levels that may be used for earthquake resistant design. It is not mentioned if a probability level for seismic design is specified by the regulator for wind farms, but the numbers used in the text are at the national building code level probability level of 0.000404 per annum.

The proponent mentions the peak acceleration and the largest historical earthquake in the immediate vicinity of its proposed site. Depending on the design of the structures, peak acceleration may not be the best design parameter and the appropriate part of the design spectra may not come from nearby earthquakes but from great (magnitude 8+) earthquakes on the Queen Charlotte fault off the west coast of the Queen Charlotte Islands. While the proponents have correctly identified the largest historical earthquake in the immediate vicinity of their site is magnitude 5.7, they should realize that the hazard calculator on the ESS website above that is used for the national building code assumes that earthquakes in the immediate vicinity of their site can range up to magnitude 7.



Reviewer #3 - Preliminary Technical Review of Marine Geology

3.1 Introduction

Documents Examined

- *Final Terms of Reference for the Proposed NaiKun Wind Generation Facility Project, prepared by Pottinger Gaherty Environmental Consultants Ltd. for NaiKun Wind Farm Development Inc., December 2007;*
- *Technical Volume 3 of the Environmental Assessment Application for the NaiKun Offshore Wind Energy Project, Marine Physical Environment, Section 3.4 Regional Geology of the Dogfish Banks and Environs, prepared by RPS Energy; April 2009.*

3.2 Technical Review Comments

3.2.1 Summary

The assessment of the regional geology undertaken for the NaiKun Wind Development (Section 3.4) incorporated all NRCan data and supplemented this data with new data collection in 2007 and 2008. Interpretation of these data sets was undertaken using published methodologies and classifications for temperate to high-latitude continental shelves and was clearly presented. The data sets are limited and the interpretation does not go beyond what can be well defended. The need for further data collection are clearly stated.

Shallow gas is a serious issue in Hecate Strait and many seep sites have been recently identified that release thermogenic gas from the underlying Skonun formation (e.g. Halliday et al., 2008). This issue should be given more consideration within the regional geoscience section. The document mentions biogenic gas, but should consider the risk of very shallow gas to the construction of the wind turbines and the potential of releasing both biogenic and thermogenic gas as part of the construction phase.

Clearly the interaction between the Geological Survey of Canada (Pacific) of NRCan and the proponents of this project has benefited both organizations. The area where the wind farm is proposed to be set up by its very nature is an area that is very difficult to collect data. The additional data collected by NaiKun has been a great benefit to regional geological outputs of NRCan and the presentation of our geoscience to NaiKun has been very beneficial to the wind farm development planning.

Reference:

Halliday, E.J., Barrie, J.V., Chapman, N.R., Rohr, K.M.M., 2008. Structurally controlled hydrocarbon seeps on a glaciated continental margin, Hecate Strait, offshore British Columbia. *Marine Geology*, 252, 193-206.

Hamdi, Rhiannon SSBC:EX

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:46 PM
To: Canham, Michele MEM:EX
Subject: FW: Shell/Chevron Commitments with Naikun

From: Larson, Janice EMPR:EX
Sent: Tuesday, November 10, 2009 5:40 PM
To: Bonnyman, Sue EMPR:EX; Kelly, Susan M EMPR:EX
Subject: FW: Shell/Chevron Commitments with Naikun

From: Matt Burns [<mailto:mattburns@naikun.ca>]
Sent: Tuesday, November 10, 2009 5:38 PM
To: Larson, Janice EMPR:EX
Subject: Shell/Chevron Commitments

Here are the commitments as they will appear in our TOCA. Let me know if you want to discuss further.

Regards, Matt

1. NaiKun Wind Development Inc. (the "Proponent") commits to ongoing meetings with Shell and Chevron (the "Companies"), as reasonably required to establish a constructive working relationship as a recognized stakeholder in the NaiKun offshore wind energy project ("Project"). The Proponent will provide regular project updates to the Companies and ensure that the Companies are informed about relevant design, construction and operations activities, and any Project amendments.
2. The Proponent will give reasonable consideration to planned activities of the Companies in its development of Project construction and operational schedules. The Companies will provide the Proponent with reasonable notice of any planned and scheduled operations of the Companies which may impact Project development, construction and operations.
3. The Proponent commits to reviewing engineering plans with the Companies during early detailed design of the Project in a workshop format. This workshop will:
 - a. Have a schedule, agenda, attendees, and objectives agreed to by the Proponent and the Companies, 60 days in advance of the workshop;
 - b. Include the review preliminary design considerations for the Project;
 - c. Seek to identify potential conflicts and if appropriate refine the project layout, where reasonably practical, in consideration of input provided by the Companies; and

d. At the conclusion of the workshop, it will be determined what additional workshops might be required.

Matt Burns
NaiKun Wind Energy Group Inc.
p. (604) 639-8460
d. (604) 631-4484
www.naikun.ca

Hamdi, Rhiannon SSBC:EX

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:44 PM
To: Canham, Michele MEM:EX
Subject: FW: Shell/Chevron meeting

From: Kathy.Penney@shell.com [<mailto:Kathy.Penney@shell.com>]
Sent: Monday, September 28, 2009 3:14 PM
To: Larson, Janice EMPR:EX
Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com; Kelly, Susan M EMPR:EX; Bonnyman, Sue EMPR:EX; Krista.Breau@shell.com
Subject: RE: Shell/Chevron meeting

Hi Janice. We have a meeting scheduled with Naikun for Wednesday of this week in the afternoon to further the dialogue. We appreciate your support and the message to Naikun that the offshore resources are important to the people of BC, if at some time in the future, the moratorium is lifted to allow exploration, development and production activities to benefit the Province.

We will follow up with you and Susan after that meeting.

Thank you again for your interest and support.

Kathy

Kathy Penney
Venture Support Integrator; Grosmont, Klappan, Mackenzie
Shell Canada Limited
400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada

Tel: +1 (403) 691 4542
Email: kathy.penney@shell.com
Internet: <http://www.shell.ca>

-----Original Message-----

From: Larson, Janice EMPR:EX [<mailto:Janice.Larson@gov.bc.ca>]
Sent: September 28, 2009 3:53 PM
To: Penney, Kathy SCAN-EPW-S-SD
Cc: DMacInnis@chevron.com; Mitchell, Bruce T SEPCO-EP-Americas; Kelly, Susan M EMPR:EX; Bonnyman, Sue EMPR:EX
Subject: RE: Shell/Chevron meeting

Greetings Kathy:

Further to our August 31st meeting, I'm just checking in on the status of your discussions with Naikun. How's it going? Let us know if we may be of any assistance.

Regards,
Janice

Janice Larson

Director, Renewable Energy Development Branch
BC Ministry of Energy, Mines and
Petroleum Resources
Phone: (250) 952-0706
Fax: (250) 952-0258
Email: Janice.Larson@gov.bc.ca

From: Kathy.Penney@shell.com [<mailto:Kathy.Penney@shell.com>]

Sent: Tuesday, September 1, 2009 8:22 AM

To: Kelly, Susan M EMPR:EX; Larson, Janice EMPR:EX; Bonnyman, Sue EMPR:EX

Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com

Subject: Shell/Chevron meeting

Susan, Janice and Sue, thank you for meeting with David and I yesterday. We appreciated the opportunity to sit with you to discuss the challenge of marine resource planning, with the objective that all appropriate development should be considered. We also look forward to the next steps for dialogue with Naikun.

Kathy Penney
Venture Support Integrator; Grosmont, Klappan, Mackenzie
Shell Canada Limited
400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada

Tel: +1 (403) 691 4642

Email: kathy.penney@shell.com

Internet: <http://www.shell.ca>

Hamdi, Rhiannon SSBC:EX

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:46 PM
To: Canham, Michele MEM:EX
Subject: FW: Naikun

-----Original Message-----

From: Bonnyman, Sue EMPR:EX
Sent: Tuesday, November 10, 2009 1:31 PM
To: Larson, Janice EMPR:EX; Kelly, Susan M EMPR:EX
Subject: Naikun

S13, S16

Cheers
Sue

Hamdi, Rhiannon SSBC:EX

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:45 PM
To: Canham, Michele MEM:EX
Attachments: discussions with Shell; RE: discussions with Shell

Hamdi, Rhiannon SSBC:EX

From: Larson, Janice MEM:EX
Sent: Monday, September 28, 2009 3:16 PM
To: 'mattburns@naikun.ca'
Cc: Kelly, Susan M AVED:EX; Bonnyman, Sue MEM:EX
Subject: discussions with Shell

Greetings Matt:

I hope this note finds you well.

Further to our August 31st meeting with yourself and representatives from Shell, I'm just checking in on the status of your discussions with Shell. How's it going? Let us know if we may be of any assistance.

Best Regards,
Janice

Janice Larson

Director, Renewable Energy Development Branch
BC Ministry of Energy, Mines and
Petroleum Resources
Phone: (250) 952-0706
Fax: (250) 952-0258
Email: Janice.Larson@gov.bc.ca

Hamdi, Rhiannon SSBC:EX

From: Matt Burns [mattburns@naikun.ca]
Sent: Monday, September 28, 2009 3:53 PM
To: Larson, Janice MEM:EX
Cc: Kelly, Susan M AVED:EX; Bonnyman, Sue MEM:EX
Subject: RE: discussions with Shell

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Janice,

Thanks for the note. We have a meeting scheduled with Shell this Wednesday and we can report back to you with a progress report.

Best regards, Matt

From: Larson, Janice EMPR:EX [<mailto:Janice.Larson@gov.bc.ca>]
Sent: September 28, 2009 3:16 PM
To: Matt Burns
Cc: Kelly, Susan M EMPR:EX; Bonnyman, Sue EMPR:EX
Subject: discussions with Shell

Greetings Matt:

I hope this note finds you well.

Further to our August 31st meeting with yourself and representatives from Shell, I'm just checking in on the status of your discussions with Shell. How's it going? Let us know if we may be of any assistance.

Best Regards,

Janice

Janice Larson

Director, Renewable Energy Development Branch

BC Ministry of Energy, Mines and

Petroleum Resources

Phone: (250) 952-0706

Fax: (250) 952-0258

Email: Janice.Larson@gov.bc.ca

Hamdi, Rhiannon SSBC:EX

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:45 PM
To: Canham, Michele MEM:EX
Attachments: RE: Shell/Chevron meeting ; RE: Shell/Chevron meeting ; RE: August Meeting; Naikun/Shell

Hamdi, Rhiannon SSBC:EX

From: Kathy.Penney@shell.com
Sent: Wednesday, September 2, 2009 3:15 PM
To: Kelly, Susan M AVED:EX; Larson, Janice MEM:EX; Bonnyman, Sue MEM:EX
Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com
Subject: RE: Shell/Chevron meeting

Thanks to you Susan for organising. Let's keep in touch!

-----Original Message-----

From: Kelly, Susan M EMPR:EX [mailto:Susan.Kelly@gov.bc.ca]
Sent: September 2, 2009 3:49 PM
To: Larson, Janice EMPR:EX; Penney, Kathy SCAN-EPW-S-SD; Bonnyman, Sue EMPR:EX
Cc: DMacInnis@chevron.com; Mitchell, Bruce T SEPCO-EP-Americas
Subject: RE: Shell/Chevron meeting

I will add my thanks too. I really appreciate the time that you both took to come out to Victoria. I am attaching a website for the Gislason Report "Economic Contribution of the Oceans Sector in British Columbia".

http://www.empr.gov.bc.ca/OG/offshoreoilandgas/ReportsPresentationsandEducationalMaterial/Reports/Documents/BC_Ocean_Sector-Final_Report.pdf

Susan

From: Larson, Janice EMPR:EX
Sent: Tuesday, September 1, 2009 8:33 AM
To: 'Kathy.Penney@shell.com'; Kelly, Susan M EMPR:EX; Bonnyman, Sue EMPR:EX
Cc: 'DMacInnis@chevron.com'; 'bruce.mitchell@shell.com'
Subject: RE: Shell/Chevron meeting

Thanks Kathy to you and David for making the time to meet with us and with Naikun yesterday. Keep us posted re: your discussions with Naikun, and let us know if we may be of any further assistance.

Best Regards,

Janice Larson

Director, Renewable Energy Development Branch
BC Ministry of Energy, Mines and
Petroleum Resources
Phone: (250) 952-0706
Fax: (250) 952-0258
Email: Janice.Larson@gov.bc.ca

From: Kathy.Penney@shell.com [mailto:Kathy.Penney@shell.com]
Sent: Tuesday, September 1, 2009 8:22 AM
To: Kelly, Susan M EMPR:EX; Larson, Janice EMPR:EX; Bonnyman, Sue EMPR:EX
Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com
Subject: Shell/Chevron meeting

Susan, Janice and Sue, thank you for meeting with David and I yesterday. We appreciated the opportunity to sit with you to discuss the challenge of marine resource planning, with the

objective that all appropriate development should be considered. We also look forward to the next steps for dialogue with Naikun.

Kathy Penney
Venture Support Integrator; Grosmont, Klappan, Mackenzie
Shell Canada Limited
400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada

Tel: +1 (403) 691 4542
Email: kathy.penney@shell.com
Internet: <http://www.shell.ca>

Hamdi, Rhiannon SSBC:EX

From: Larson, Janice MEM:EX
Sent: Tuesday, September 1, 2009 8:33 AM
To: 'Kathy.Penney@shell.com'; Kelly, Susan M AVED:EX; Bonnyman, Sue MEM:EX
Cc: 'DMacInnis@chevron.com'; 'bruce.mitchell@shell.com'
Subject: RE: Shell/Chevron meeting

Thanks Kathy to you and David for making the time to meet with us and with Naikun yesterday. Keep us posted re: your discussions with Naikun, and let us know if we may be of any further assistance.

Best Regards,

Janice Larson

Director, Renewable Energy Development Branch
BC Ministry of Energy, Mines and
Petroleum Resources
Phone: (250) 952-0706
Fax: (250) 952-0258
Email: Janice.Larson@gov.bc.ca

From: Kathy.Penney@shell.com [<mailto:Kathy.Penney@shell.com>]
Sent: Tuesday, September 1, 2009 8:22 AM
To: Kelly, Susan M EMPR:EX; Larson, Janice EMPR:EX; Bonnyman, Sue EMPR:EX
Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com
Subject: Shell/Chevron meeting

Susan, Janice and Sue, thank you for meeting with David and I yesterday. We appreciated the opportunity to sit with you to discuss the challenge of marine resource planning, with the objective that all appropriate development should be considered. We also look forward to the next steps for dialogue with Naikun.

Kathy Penney
Venture Support Integrator; Grosmont, Klappan, Mackenzie
Shell Canada Limited
400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada

Tel: +1 (403) 691 4542
Email: kathy.penney@shell.com
Internet: <http://www.shell.ca>

Hamdi, Rhiannon SSBC:EX

From: Kathy.Penney@shell.com
Sent: Tuesday, September 1, 2009 8:22 AM
To: Kelly, Susan M AVED:EX; Larson, Janice MEM:EX; Bonnyman, Sue MEM:EX
Cc: DMacInnis@chevron.com; bruce.mitchell@shell.com
Subject: Shell/Chevron meeting

Susan, Janice and Sue, thank you for meeting with David and I yesterday. We appreciated the opportunity to sit with you to discuss the challenge of marine resource planning, with the objective that all appropriate development should be considered. We also look forward to the next steps for dialogue with Naikun.

Kathy Penney
Venture Support Integrator; Grosmont, Klappan, Mackenzie
Shell Canada Limited
400 4th Avenue S.W., P.O. Box 100 Station M, Calgary, Alberta T2P 2H5, Canada

Tel: +1 (403) 691 4542
Email: kathy.penney@shell.com
Internet: <http://www.shell.ca>

Hamdi, Rhiannon SSBC:EX

From: Kathy.Penney@shell.com
Sent: Wednesday, August 12, 2009 10:34 AM
To: Kelly, Susan M AVED:EX
Subject: RE: August Meeting

Susan, let me know when you have determined a good date. We appreciate you setting this up.

Our concern of course is that Naikun's plans will be firmed up before our concerns are taken into consideration, and accomodated.

Kathy

-----Original Message-----

From: Kelly, Susan M EMPR:EX [<mailto:Susan.Kelly@gov.bc.ca>]
Sent: August 11, 2009 4:21 PM
To: Penney, Kathy SCAN-EPW-S-SD
Subject: RE: August Meeting

Sorry Kathy,
The 27 & 28th is not going to work after all. I am trying to find an alternate date again.

Susan

From: Kathy.Penney@shell.com [<mailto:Kathy.Penney@shell.com>]
Sent: Tuesday, August 11, 2009 2:13 PM
To: Kelly, Susan M EMPR:EX
Subject: RE: August Meeting

Susan, if you could confirm this asap, thanks!

-----Original Message-----

From: Kelly, Susan M EMPR:EX [<mailto:Susan.Kelly@gov.bc.ca>]
Sent: August 6, 2009 8:55 AM
To: Penney, Kathy SCAN-EPW-S-SD
Subject: Re: August Meeting

Thanks Kathy. I'll confirm a date later today.

From: Kathy.Penney@shell.com <Kathy.Penney@shell.com>
To: Kelly, Susan M EMPR:EX
Sent: Thu Aug 06 07:08:05 2009
Subject: RE: August Meeting

Hi Susan, either of these dates can work for us. Thank you for setting this up for us.

-----Original Message-----

From: Kelly, Susan M EMPR:EX [<mailto:Susan.Kelly@gov.bc.ca>]
Sent: August 5, 2009 6:27 PM
To: Penney, Kathy SCAN-EPW-S-SD
Subject: August Meeting

Hi Kathy,

We are not able to bring gov't and Naik'un representatives together on August 18. Are you able to come out for August 27 or 28th in the afternoon?

Susan

From: Larson, Janice MEM:EX
Sent: Tuesday, August 11, 2009 2:03 PM
To: Kelly, Susan M AVED:EX; Bonnyman, Sue MEM:EX
Subject: Naikun/Shell

Whose finger belongs in the proverbial pie?

The Daily News (Prince Rupert)

Monday, August 10, 2009

Page 3

By George T. Baker

The question over who has priority rights over the patch of water that NaiKun Wind Energy Inc. has earmarked for its wind farm is apparently a difficult question to answer.

It appears that neither the provincial government nor the federal government can clearly answer whether or not Shell Canada's 40-year old drilling leases trump NaiKun's plans.

According to Jake Jacobs, the media relations officer for the Energy, Mines and Petroleum Resource Ministry, its hard to actually pinpoint where the call is made and by whom.

He said it is hard to tell because there is no agreement over jurisdiction on the seabed to the east of the Haida Gwaii or north of Vancouver Island to the mainland.

"There have been two court cases regarding disputes between British Columbia and Canada regarding jurisdiction over the seabed and its resources," said Jacobs.

What resulted from these cases, said Jacobs, was that British Columbia would have jurisdiction over the seabed and the subsurface resources for Vancouver Island and the Mainland, while Canada would have jurisdiction to the seabed west of Vancouver Island and the Queen Charlotte Islands (Haida Gwaii).

But nothing was ever decided about what would happen on the North Coast.

"What I am told is British Columbia continues to work with the federal government and other stakeholders to coordinate activities in the area and all along our coastline through the Oceans Coordinating Committee," said Jacobs.

Both levels of government formed that committee in 2005 after many disputes over who had jurisdiction. But to provide policy direction to the OCC, the DFO is supposed to be committed to developing a coast-wide federal-provincial Oceans Regional Implementation Committee.

As NaiKun Wind Energy was going through its environmental assessment on its 110-wind turbine project slated for Hecate Strait, not many considered the ramifications of a deal struck between the federal and provincial governments and oil giant Shell in the 1960s.

That deal gave Shell almost all of the oil and gas tenure rights in Hecate Strait and Queen Charlotte Sound. Shell then struck a deal with Chevron to help drill around the Queen Charlotte Basin. During that time, early returns for oil were poor, but both companies remained optimistic that significant oil reserves could be discovered in the area.

It is likely they would have continued drilling, but a moratorium on oil drilling in 1972 prevented that. Shell's 15 active oil and gas leases, along with Chevron's four, have remained dormant until such time as the federal government lifts the temporary ban.

Hamdi, Rhiannon SSBC:EX

From: Canham, Michele MEM:EX
Sent: Tuesday, June 21, 2011 3:55 PM
To: Cho, Gayle MEM:EX
Subject: FW: Naik'un Meeting notes
Attachments: 20110621154952.pdf

Gayle, her black book meeting notes for the FOI.

Cheers

Michèle

From: Kelly, Susan M AVED:EX
Sent: Tuesday, June 21, 2011 3:54 PM
To: Canham, Michele MEM:EX
Subject: Naik'un Meeting notes

Hi Michelle,

Here are the notes from my "black book". The first half of the page was the meeting with Shell/Chevron. The second half was with Shell, Chevron, Naik'un & EMPR – me, Janice & Sue. There were no formal minutes of that meeting.

Susan

From: Susan.Kelly@gov.bc.ca [mailto:Susan.Kelly@gov.bc.ca]
Sent: Tuesday, June 21, 2011 3:51 PM
To: Kelly, Susan M AVED:EX
Subject:

Acquire inner peace and a multitude will find their salvation near you.
— Catherine de Hueck Doherty

31 Monday

daily notes David MacBurnis 31st Day 172 Left Week 36

Kathy Penny David MacBurnis

3:30 PM instruction N to talk to Sheld / Chm
↳ mktg @ leases - SLC
↳ mktg @ project - N - generalization to point
↳ mktg @ project - N - generalization to point
↳ mktg @ project - N - generalization to point
↳ mktg @ project - N - generalization to point

↳ conversations w/ Paul Taylor
↳ w/ NRC - Eric Landry
↳ no recent conversations w/ Haide

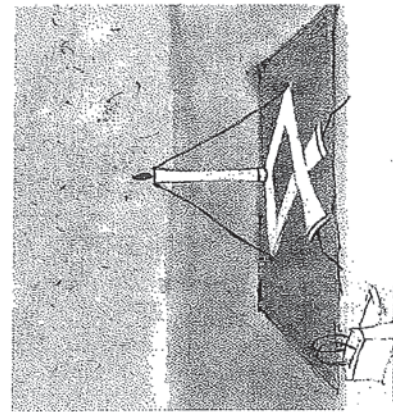
planning -

Kathy Penny - Shell - nonregulatory Risk
David MacBurnis - Chevron - policy, right affairs Canada
Steve Eckert - Niskun - lead designer
Matt Burns - 1st 2nd lead, working w/ Haide for final
Zoe Brumby
Danae Larzer

S21, S16

↳ would like technical people to get together to talk to deal w/ issues

S21, S16

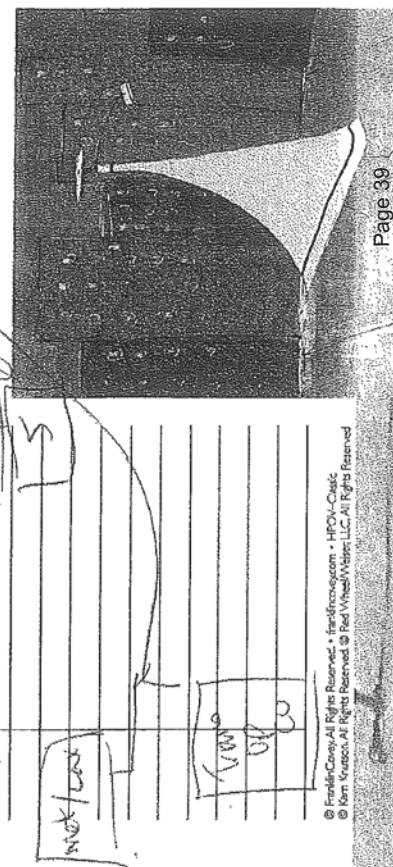
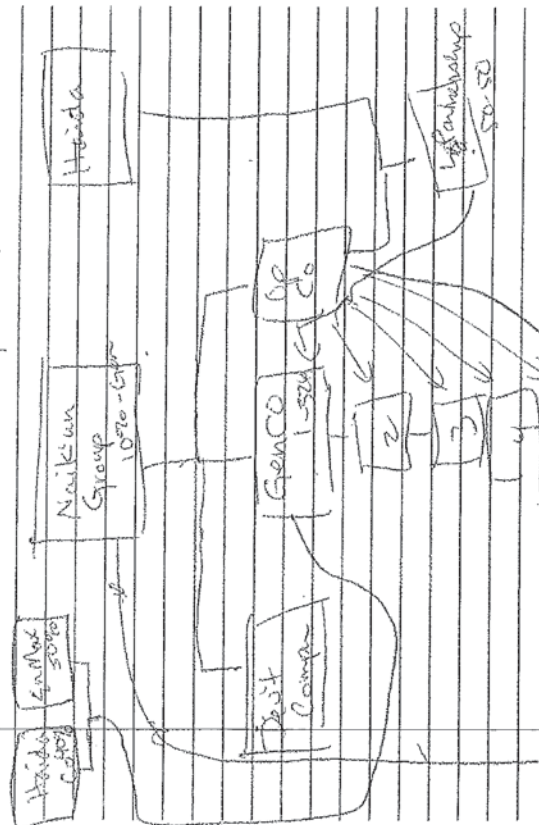


AUGUST 2009							SEPTEMBER 2009						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
30	31	1	2	3	4	5							
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30			

© Franklin Covey All Rights Reserved • FranklinCovey.com • HFOU-Classic
© Kim Kravon All Rights Reserved © Red Wheel/Barrett LLC All Rights Reserved

dated Aug 13/11 ON

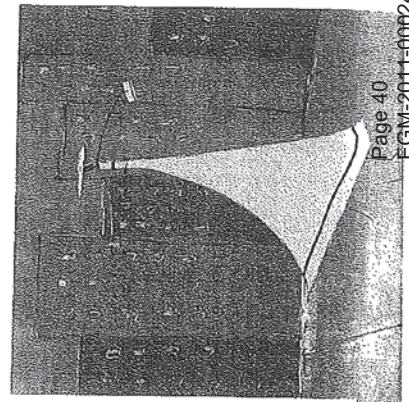
- M is working on issues raised @ EAPs
- SLC - put real mitigation options in the water
- application only for Phase II, would have to go back thru EA
- Haide signed MUA to acquire up to 40% of project



© Franklin Covey All Rights Reserved • FranklinCovey.com • HFOU-Classic
© Kim Kravon All Rights Reserved © Red Wheel/Barrett LLC All Rights Reserved

date / /

next step: , internet - Vancouver
↳ entry is technical staff
[Timing - draft to Ministers mid-October]



© Fidelity Investments All Rights Reserved. • fidelityinvestments.com • FIDELITY INVESTMENTS
© Fidelity Investments All Rights Reserved. • Fidelity Investments L.L.C. All Rights Reserved