



Fundy Ocean Research Center for Energy

7th Meeting of the Community Liaison Committee (CLC)

Work Station Room
FORCE Visitor Centre
1156 West Bay Road

Tuesday, November 26th, 2013

Minutes

1. Welcome & Introductions

The Agenda, Environmental Monitoring/Programs update, Vectron release & profile, FAST profile sheets, and 2013 Year-in-Review sheet were circulated. The meeting was called to order at 10:40a.m. Present at the meeting were: Tony Wright (TW), Lois Smith (LS), Robert Yorke (RY), Gerard Cormier (GC), Ken Adams (KA), Donnie Fletcher (DF) and Mary McPhee (MM). Dave MacDonald (DM) of R.J. MacIsaac Construction Ltd. (RJM) joined at 11:20a.m. Light refreshments, coffee and tea were provided. GC asked whether a fisher member had been ascertained. MM responded that she hoped to connect with fishers in the upcoming Fishers Information Session. DF suggested Gerry Field of Advocate Harbour. MM indicated that she had added Gerry Field to the list to contact.

2. Regrets

Regrets had been received from Terri McCulloch, Frank Hartman, Cindy Tupper, Steven Collinson, Andrew Wagstaff, Croyden Wood, Joe Kozak. MM indicated that Melissa Nevin & Croyden Wood would be attending a Fishers Information Session in the afternoon.

3. Objectives of Meeting & Review of Agenda

Mary McPhee indicated that the meeting would include a review of the Visitor Centre season & perspectives, as well as a Year in Review for FORCE, including research instruments, and review up upcoming projects, like the recently announced Vectron. MM emphasized the presentation regarding upcoming Barge Trials & Data Cable Deployment.

4. Visitor Centre Update (Mary McPhee)

MM told participants that the Visitor Centre had an excellent season, with over 4300 visitors during the season, which would be an increase of about 16.7% over the inaugural 2012 season. About the same number of visitors from in-Province (50%), an increase in American travellers, visitors from 6 of 7 continents, all over the world, a good percentage of “energy travellers,” as well as broadening range of students from grade schools and universities. DF asked about promotion of other locales and communicating/working with locations like Cape Chignecto. MM spoke to partnerships and co-promotion with Fundy Geological Museum, primarily, as well as Ottawa House (Susan) and Age of Sail (Oralee). DF emphasized the importance of working together and promoting other locations. MM indicated the value of the relationship with Fundy Geological Museum, in particular with Pat Welton. MM finally spoke to some restrictions to programming and events, including insurance, adding that generally community groups, school groups etc. were not prevented from hosting meetings and utilizing the Theatre, Visitor Centre space, and were welcomed to use the space as such. A brief discussion on school and student visits and programs touched on the potential for in-school presentation, though time commitments would have to be considered. MM told the group that schools are welcomed to use the Visitor Centre space to teach a class or host an activity.

5. FORCE 2013 Highlights

A document called “Highlights from 2013” was circulated, as well as fact/info sheets on FAST Platform and The Vectron Project to the membership. The highlights were reviewed around the table. GC asked how the tide gauge measured the tides. TW explained that the gauge is a pressure gauge, which allows the sensor to measure the water height over top of it. TW told the group that the plan for the tide gauge is to have a permanent installation by next year and improve accuracy of tidal predictions, with the accuracy of the sensor to the cm. KA asked if the intent with the tide gauge would include verifying accuracy with Canadian Hydrographic Service (CHS). TW responded that is exactly the intent; to compare to predictive data, adding that refining the sensor data would require advice from experts and that the permanent location for the device would require surveying-in the location for GPS accuracy. RY asked what the importance of the tide gauge is to the turbines. TW responded that this sensor is crucial for data accuracy, and having a refined hydrodynamic model for the site. TW spoke to the complicated set-up of sensors required in order to achieve accuracy; in the case of the tide gauge, having the ability to compare the predicted values and how they align with CHS will be extremely valuable. KA asked if the data from the tide gauge or other sensors would be displayed via a web-site at some point. MM responded that this is the intent, to have both a display on-site as well as a web-site accessible by various end-users. KA asked if there was any intent to measure ice movement in winter, or whether there was a sensor that could be utilized for such observations. TW

responded that there are sensor devices that could be utilized for ice studies.

The VECTRON and FAST sheets were not discussed in great detail, sharing purposes only.

6. Environmental Programs Update (Mary McPhee for Joe Kozak)

Mary McPhee circulated the document called “Update on FORCE’s Environmental Effects Monitoring Program (EEMP) as of November 2013” and reviewed the contents.

MM told the group that Joe Kozak was unable to join the group today, but was available to answer any questions, should they arise. There were no questions and no further discussion on the EEMP update.

7. Barge Trials & Data Cable Deployment (Tony Wright with Dave MacDonald)

Tony Wright introduced the plan for the Barge Trials and Data Cable Deployment Project. Having joined the meeting at 11:20, Dave MacDonald, RJ MacIsaac Project Manager was introduced as supporting the presentation of details, and was available to answer questions. RJ MacIsaac contractor for the entire Barge Trials and Data Cable project, from Antigonish, NS, complete various marine projects in the region. TW described to the membership the nature of seeking feedback from various stakeholders, and defining the project path into “uncharted waters.” TW: Site conditions hamper development, ergo require good site characterization, including the different dynamics on the flood tide vs. ebb tide. Black Rock is problematic for turbine developers as its wake creates lots of issues in turbidity, gyres. The potential is tremendous but with these condition need to pay attention to defining success, i.e. is success one working turbine? FORCE is not a commercial company, rather tasked with creating a test site and supporting infrastructure. FIT now established, have project infrastructure in place, but require more investment in electrical infrastructure to get to the 50MW level.

GC asked if the t-line was FORCE infrastructure solely or NSP? (TW: both, in-kind infrastructure installation).

TW: EEM/EMAC, lead by Joe Kozak, help to define how we monitor the site, and incremental developments, but with current turbine technologies, FORCE site would soon reach capacities for current EEM. Infrastructure in place has some additional capabilities, but permitting for 5MW. In order to move forward, require up to 20MW, for example current RFP (Dec. 16 closing) is for a 5MW turbine development. Developers want more capacity. On-shore infrastructure complete, now moving on to marine operations, the first marine install being a data cable (after trials prove safety, concept of deployment) which will have a separate, add'l vault on-shore. This cable does not have to be terminated permanently on the day of install, but will involve a temporary termination. This

deployment may demonstrate that this is not the best site for cables, and may impact power cable routes, including installation, due to factors of turbulence, etc.

RY stated that FORCE was limited by cables, the length of the power cables (TW: more influence by operational abilities, influences by cross-flows, other factors, particularly the routes).

KA stated that the bedrock in the deployment area is quite unique, and as bed-rock goes, is a best-case-scenario for stability, etc. (TW: stability for gravity-base units but can also be challenging for pinned/piled units).

Tony Wright summarized the potential uses for the data cable (SL-21, 4km of length, 50mm diameter) as a real-time interface with FORCE sensor programs, including the FAST platform, VECTRON. This data cable is also first FORCE sub-sea cable, proof of concept, testing of terminations, integrity under stress & strains from the environment. The data cable will be installed using a spud barge and tugs, spud barge being smaller, having capability to manoeuvre onto beach, where land-based machinery can assist, barge remains on beach through ebb tide and then can depart the beach on the next flood tide.

RY asked when trials would happen and if they had already occurred (TW: Trials part of process, proof of concepts, control of vessels, keeping station).

DF asked if use of fishing boats for this process had been considered (TW: too much weight for such vessels, and currents preclude station keeping, but FORCE has worked with several fishing boats in sensor deployments previously).

GC asked if RJ MacIsaac owns the spud barge or rents the barge? (DM: RJ MacIsaac owns barge, as well as other marine assets).

TW and MM highlight FAST platform and Vectron. TW: VECTRON a flagship of sensor programs, measuring specifically the middle water column, which we previously haven't been able to do. Partnership with DAL/MUN has made this possible. TW elaborated on sensor program increasing our abilities in site characterization, including meteorological data, as our working schedule for deployments, installs will be dictated somewhat by weather.

Timeline for the Data Cable trials and install: TW

Tony Wright told the membership that ultimately the schedule would see the data cable deployment occur December 12/13. Preceding this deployment would be 3 days of marine trials (1 day controlling vessels, 1 day trialing spud/beach processes, ½ day re-trial), RJ MacIsaac would require approximately 2 days for barge prep and mobilization of equipment. The barge will be arriving at and mobilizing in Parrsboro. A structural survey

of the Parrsboro wharf was complete, aware of constraints, power at wharf was available, craning of equipment onto barge would mean restricted access at the wharf for other users at times, FORCE would post bulletins and share this information on closures in advance with the public, wharf users. Dave MacDonald told the membership that RJ MacIsaac anticipates arrival of the barge in Parrsboro on December 4th, with Seaforth Geosurveys mobilizing gear as well on Dec. 4/5/6, followed by first day of trials on Dec. 7th. TW: International Telecom (IT) will mobilize equipment on Monday, Dec. 10. A lay-down area for equipment at the wharf site, as well as parking, essential to RJ MacIsaac (RJM) and IT; need to confirm what property is belonging to the wharf site/Harbour Commission. TW: important aspect at the wharf if access, specifically no intention to deny access but with the danger presented by project activities, have to restrict access at times to protect public and users, specifically lobster fishers. MM: meeting with fishers, users this afternoon. DM: Installation of spuds (70' long) will represent the task that will take the most time at the wharf with the crane, but work boats will also be craned in and onto water, can pull crane for access and access possible when craning operations not active. DM: bottom area beside wharf may require preparation.

Mary McPhee told the membership that a news release will be prepared for media, public information in advance of the events.

Dave MacDonald described the process of the tug entering the harbour to take the barge out (tug cannot bottom out at Parrsboro Wharf so limited by timing).

Tony Wright described the cable equipment for IT mobilization: Metal cable gantry, cable motors, etc.

TW asked the membership about what security scenario would be best at the wharf site. RY suggested barricades, traffic control. TW: RJM would be contractor so would provide for security as deemed necessary. DM: criminal records check for any security contractor. DM: vandalism potential? Require 24/7 monitoring? Membership generally felt that 24/7 monitoring was not required, safety during operations big concern. DM: RJM may contract some site security.

Tony Wright described final details: no beach vault installed at this time, temporary anchor, surplus cable at beach for use with vault termination in future. After deployment, third use of wharf will be for demobilizing barge. Auxiliary work should benefit community, as well as contractor presence, supplying, fuel etc. during operations. FORCE & RJM develop schedule with tides, weather in mind, challenging but positive going forward for data cable trials and deployment.

Don Fletcher suggested an information session in the New Year for the community. TW: FORCE would be willing to work towards a community update. MM: Later in winter, once

data cable project wraps up, CLC could host update.

RY: Local people are losing faith in FORCE even though demo of turbine occurred. TW: baseline aspects, including infrastructure, safety need to be achieved first.

GC suggested that publicizing actions, plans before-hand might garner more community interest. TW: news releases, share info in advance, but after completion of risk assessment, safety of public, personnel comes first.

DM reiterated to membership that in coming weeks RJM would be liaising with local contractors for the project plans and would be happy to be in contact with various local contractors in that regard.

Next Meeting: TBD, pending schedules of community update, project plans, membership.

Meeting Adjourned: 12:13pm