

**Maine Ocean Energy Task Force (OETF)
Subcommittee #5: Tidal Power
Scope Area: Generation Potential**

3/10/2009 Conference Call Notes

In Attendance: Bob Blackmore(Cianbro/TEDEC, Scope Leader), Parker Hadlock(Cianbro, Tidal Power Chair), Don Perkins(CO-Chair Maine OETF), Dr. Huijie Xue(UMaine), Jeff Brant(TRC), John Fernald(ORPC), Normand Laberge(Tidewalker Associates)

Today's objective: Brainstorm the two primary elements of the Generation Potential Scope Area (Resource Potential and “State of the Art” Tidal Technology” to determine what information is currently available on the subjects. Based on the discussion, define a path forward for developing recommendations for tidal development in Maine.

Tentative Schedule: Preliminary information to Subcommittee Chair by mid-April, Scope Area recommendations to OETF by end of May, final report by August.

Parker briefly provided some background information based on discussions of the OETF to help further refine the scope of our mission. In response to some earlier questions, Parker further acknowledged that the project being proposed in Wiscasset and any wave energy related activities would not be considered as part of the Tidal Power Subcommittee scope. The Wiscasset project is a water storage project and wave devices are not tide dependent.

Open discussion summary

Potential Resource Discussion

Bob opened the discussion by suggesting that the resource potential and subsequently the tidal technology best suited for that resource fell into two categories;

- Large utility scale - >1MW/ deep water
- Small distributed power(DP) scale - <1MW/shallower more restrictive sites

Norm Leberge reminded the group that, although there seemed to be a definite mindset toward hydrokinetic (in-stream) tidal power, in an effort to ensure a comprehensive assessment we should also consider small tidal power barrages. It was agreed that we would consider that technology to the extent that we could obtain information that would help us to make a credible comparison. He offered to provide Bob with information on tidal barrages.

Huijie offered that the EPRI report (Report:EPRI-TP-003-ME Rev 3) provides a baseline assessment of the potential tidal energy resource in Maine and some advancements to the study have been done since its publication, but there are literally thousands of potential sites in Maine, some of which that are yet to be identified. For this reason, we should not attempt to identify them all but rather limit our efforts to those sites where we know significant resource potential exists. These sites can best be identified by reviewing all

available data and reviewing all preliminary permits issued by FERC to determine what the consensus is for the best sites.

Other comments from the discussion that were deemed pertinent and should be considered when we formulate our recommendations include:

- “ the need to interact with the community and the importance of gaining its support can not be over emphasized”
- “ tidal energy development presents an opportunity to take advantage of Maine’s core competency of working on and around the water and the other unique qualities and opportunities that exist in Maine”
- “ need to consider infrastructure issues at both the utility and the DP scale projects”

“State of the Art” Technology Discussion

In discussing the various technologies currently under development it was agreed that, at least for the time being, that our discussions should focus on the type of technology (such as axial flow turbine, horizontal flow turbine, oscillating hydrofoil, etc.) rather than a specific developer (OpenHydro, Verdant, ORPC, etc.)

Tidal device technology development is starting to move at a very rapid pace and what is “State of the Art” today may not be next week. For this reason we should try to keep up to date as the technology evolves and base our recommendation accordingly.

Because of the potentially high degree of variation in site characteristics between the sites we identify, it is most likely that the technology recommended for each site will be specifically matched to that site based on site characteristics and attributes of the device that make it particularly well suited for that site.

Summary

It was therefore generally agreed that since the resource potential is large and not real well defined, that we should focus on those sites (4-6) where:

- The tidal resource is obviously high
- The supporting infrastructure exists (or could exist relatively easily)
- Tidal development would most likely meet with stakeholder support
- Maine’s core competencies of honest hard working people working on and around the water can be optimized
- A technology exists that is fairly mature and reasonably matches the sites.

Next Step

I would like to have an in person meeting in the near future, preferably on either 3/30 or 3/31.

Respectively submitted
Bob Blackmore – Scope Leader