

Workshop on Management Measures

The Connection to Annex IV

A workshop will take place in Scotland in May 2017 to proactively address development of management measures for wave and tidal energy installations. There is an opportunity for broadening the workshop focus to become more international, through bringing Annex IV in as a participant/partner. As an Annex IV country analyst, you need to help determine whether this is a worthwhile endeavor. The information below should help clarify the situation.

Why are Management Measures Needed?

In the process of consenting (permitting) wave and tidal devices, there is generally a need to: assess the baseline of marine resources and environment; propose post-installation monitoring to determine possible effects of wave and development, if potential impacts to the resources and environment are suspected; and propose management measures that will decrease or remove those potential impacts. To date, little emphasis has been placed on determining what those management measures might be for wave and tidal devices, particularly as we move towards larger commercial arrays, as well as determining how effective those measures might be.

The Situation in Scotland

The Scottish Government has determined that they need a set of effective management measures now, to ensure that ongoing commercial establishment of the tidal industry can continue forward in their country. To address this need, a group of researchers, regulators, and developers will come together in a workshop format to address questions about management measures for: tidal collision risk; risk of EMF from cables and devices; effects of underwater noise from devices; and effects on benthic habitats. Management measures will be examined for both wave and tidal devices. The likely outcome will be a “toolbox” of management measures that are specified for use in particular situations (for wave, for tidal, for specific sized arrays, for specific aspects of devices, etc.)

The purpose of examining these management measures is to:

- To ensure that appropriate management measures will be available if and when they may be needed;
- To ensure that proposed management measures have been examined and found to be effective and do not place undue burdens on developers;
- To provide expert assessment of proposed management measures that are not effective; and
- To provide insight into research areas needed to provide for more effective management measures in future.

What is Meant by “Management Measures”?

Sometimes referred to as “mitigation measures”, the areas to be addressed span the continuum of wave and tidal development, as described here.

Once an appropriate location for deployment has been determined, management measures can be applied at the following steps in the development process:

1. Before devices are placed in the water – by working with developers to modify designs of the devices and balance of station, potential environmental impacts can be reduced.
2. During installation – methods and materials used for installation, ranging from pile driving to the number and practices of vessels on site, can be modified to reduce the timeframe or severity of impacts.
3. During operation – methods of operation and safeguards for animals can be used to reduce impacts, including instruments associated with the device like acoustic deterrents, slow starts for turbines, acoustically prominent mooring lines, etc. This group of management measures must be closely associated with any ongoing monitoring and guided by adaptive management principles, where appropriate.
4. Catastrophic mitigation – the final link in the management measures chain should be reserved for catastrophic failures and unanticipated outcomes. These measures might include the need for shutdown of devices and perhaps removal.

What is Being Asked of you as an Annex IV Analyst

If you consider broadening the scope of the Scottish workshop to be worthwhile, you are asked to bring your country's perspective to the discussion. This will entail actively reviewing a briefing paper to be developed before the workshop, and attending and/or actively working to have key researchers, developers, and regulators from your country attend, and reviewing and commenting on materials that come from the management measures effort.