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Sensible approach to tidal power is essential

IN the early stages of a new technology, it can be hard to judge the scale of the possible economic benefits, but even so, the potential of tidal energy for Scotland looks impressive. Engineers from Edinburgh and Oxford universities estimate that turbines placed in one stretch of the Pentland Firth could generate 1.9 gigawatts of clean energy – enough to power around half of Scotland.

In some respects, the figure is not at all surprising. Scotland, with its long coastline, is in a particularly good position to exploit the potential of tidal energy, although the development of the technology and infrastructure to make it feasible, and profitable, is still in the early stages.

There are also lessons to be learned from the mistakes made in the first phases of the wind farm industry – the most important of which is that owning an energy resource is not the same as maximising its economic potential. In the 1970s, Scotland built up an impressive infrastructure to exploit its oil and gas but in the case of wind farms, much of the infrastructure and technology ended up being developed and owned abroad. The same must not be allowed to happen with the nascent tidal industry, but it will require more money for research and development, particularly by Scottish firms.

As for public acceptance of the technology, tidal energy has some obvious advantages over wind energy. Wind farms have met with understandable opposition in many communities and the accumulation of turbines near national parks and in

other scenic areas is a cause for concern. The problems with storing electricity from wind power are also well-known.

Tidal power, on the other hand, has potentially none of these problems as the tides are predictable and constant and the technology is hidden away on the sea bed, out of sight of any communities that could object. On the down side, there are still some unanswered questions about the potential risk the tidal turbines pose to marine life.

As the tidal industry develops, there will be a balancing act to be struck between these pros and cons and the environmental costs and economic gains – as there is with any new technology. But, on the face of it, tidal has an important contribution to make to the nation's energy demands. Scotland is already making good progress on meeting its generation targets and tidal power might even give it the potential to produce surplus energy and export it, although any talk of becoming the so-called Saudi Arabia of marine power needs to be treated with caution.

Whatever happens, tidal is unlikely to be a panacea and even when the technology gets going (and as yet not a single commercial tidal scheme has been installed in Scotland) it will have to take its place among a sensible mix of energy sources including wind, nuclear and fossil fuels. The potential is certainly there in the powerful waters of the Pentland Firth, but it will require political will, a coherent strategy and more investment to make it happen.

