

9. Wave power generation

Wave energy harnesses the energy moving across the surface of the sea. One leading design resembles a long snake floating on the surface. As a wave passes along its length, it causes it to flex. This movement is used to pump fluid which in turn captures energy. The ideal location for such technology is facing outwards into a large ocean with steady winds, such that large, regular waves can build up before they reach the coastline and generator.

The last decade

There has not been any work carried out with this technology in Bangladesh.

Assumptions of model

Current technology is experimental. It is assumed that wave plants are operating at peak output 25% of the time.

Levels

Level 1

Least effort. No wave power is built.

Level 2

Current policy. No tidal power is built.

Level 3

A trial unit of 0.15 GW installed in 2010 and capacity expanded to 1.2 GW by 2050.

Level 4

A trial unit of 0.6 GW installed in 2010 and capacity expanded to 4.4 GW by 2030.

Interaction with other levers

There is no interaction with other levers.

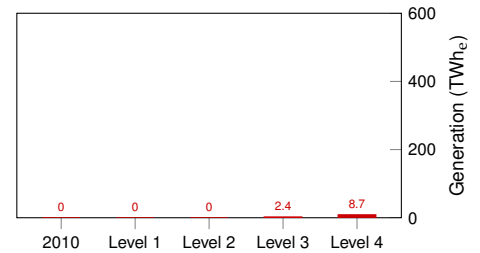


Figure 9.1: Projected Capacity in 2050

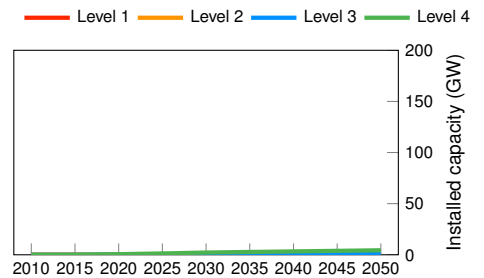


Figure 9.2: Development of capacity by scenario



Figure 9.3: An example of a surface wave power generation method