

Educational videos reveal water power's potential on virtual island

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On REDi Island, water power plays an integral role in powering communities, monitoring the environment, and providing clean drinking water. Credit: IKM 3D

Fly over Hydro Heights, where a pumped storage hydropower station stores energy until it is needed on the grid. Dive into Tidal Town, where energy from the ebb and flow of tides drives underwater turbines. Or follow the path of seawater as it gets pumped onshore to Desalination

Station and is turned into drinking water using clean wave power.

These are just a few of the fascinating stops on Renewable Energy Discovery ([REDi](#)) Island, a new educational resource developed by the water power team at the National Renewable Energy Laboratory (NREL) and IKM 3D. Created by IKM 3D, the videos are now available to the public and are intended for educators, students, parents, or anyone seeking to better understand water power.

The island currently hosts six water-powered waystations, featuring animated videos that offer a closer look at how hydropower can create and store [energy](#) for when it is needed on the grid or how marine energy can power activities—such as ocean monitoring and desalination—that will become more crucial in a warming climate.

The educational reach of REDi Island will continue to expand as new waystations are added in the coming months—15 stops will be available in total—that cover even more of NREL's cutting-edge water power research. And an interactive web-based app that allows students and teachers to dive deeper into REDi Island will be released later in 2023.

"REDi Island was designed to demonstrate, in a simple but meaningful way, how water power can play so many different roles in our clean energy future," said Arielle Cardinal, a project manager for NREL's water [power](#) program who leads the REDi Island initiative at NREL. "We hope that the videos make their way into high school and college classrooms, where they can inspire the next generation to consider a career in marine energy or hydropower. These growing industries are going to need their participation."

Provided by National Renewable Energy Laboratory

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