An Ocean Distillery for Distilled Water Run on Hydroelectric Power

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Hydropower is one of the most abundance sources of renewable energy in the U.S. Water Distilleries remove almost all chemicals and pesticides, which produces water that can be better for people who live in areas that lack clean water. Combining these two processes would allow a place to be more self reliable without depleting resources from either collecting water from other areas (waterfalls) that are less abundant and have risks of not being reliable all year round, or spending money to import bottled water. This is a start to the entire process of combining these two structures. Simulators were created of each component. An ocean was mimicked by using a large bin with a hose, to represent a water passageway, to control the flow of water into turbines which were connected to the end of the hose. The Water Distillery was a simple science lab that had added features such as a longer tube to cool the water and simulate a Distiller's cooling system and an Activated Carbon Filter to purify the simulated ocean water even more. Both simulations had some minor errors that were able to be fixed in their final trials and each component was a separate success. While there would still need to be many more trials to be tested to be able to combine the two simulations to reach the end goal, this start paved the way to be able to efficiently begin the next step of connecting the two features.