

Better Water Maker Power Generation System
Prototype Test Plans

Approximately 7 to 10 volunteers will be required to begin testing of the prototype. Selection of volunteers will be based on height and gender. Volunteers must be either female adults or children below the age of 13. To successfully select an appropriate group, both women and children must be included in the test group. All volunteers must be within the following height range: 59 to 65 inches or 4'11" to 5'5".

Additional tests will be performance to test other metrics aside from usability. These include testing the durability of the device and failure modes.

The following tests are necessary to produces results valuable in evaluating the development of a successful device.

I. Test for Ease of Assembly

- A. Provide volunteers with a user manual
- B. Discretely time volunteers to avoid any pressure regarding assembly time
- C. Ask volunteers to rate the effectiveness of the user manual and difficulty of assembly

II. Test for Ease of Gearbox Repositioning on Track

- A. Ask volunteer to change the current position of the gearbox to another position
- B. Ask volunteer to rate the difficulty of repositioning the gearbox

III. Test for Ease of Power Generation

- A. Ask users to power the device by pedaling for 5 minutes, if volunteers cannot sustain this after three attempts, make note otherwise measure the level of water sanitized.
- B. Ask users to rate the difficulty of use

IV. Test for Comfort

- A. After using the device for an extended period of time, ask volunteers to rate the comfort of the seat and the positioning of their body during use