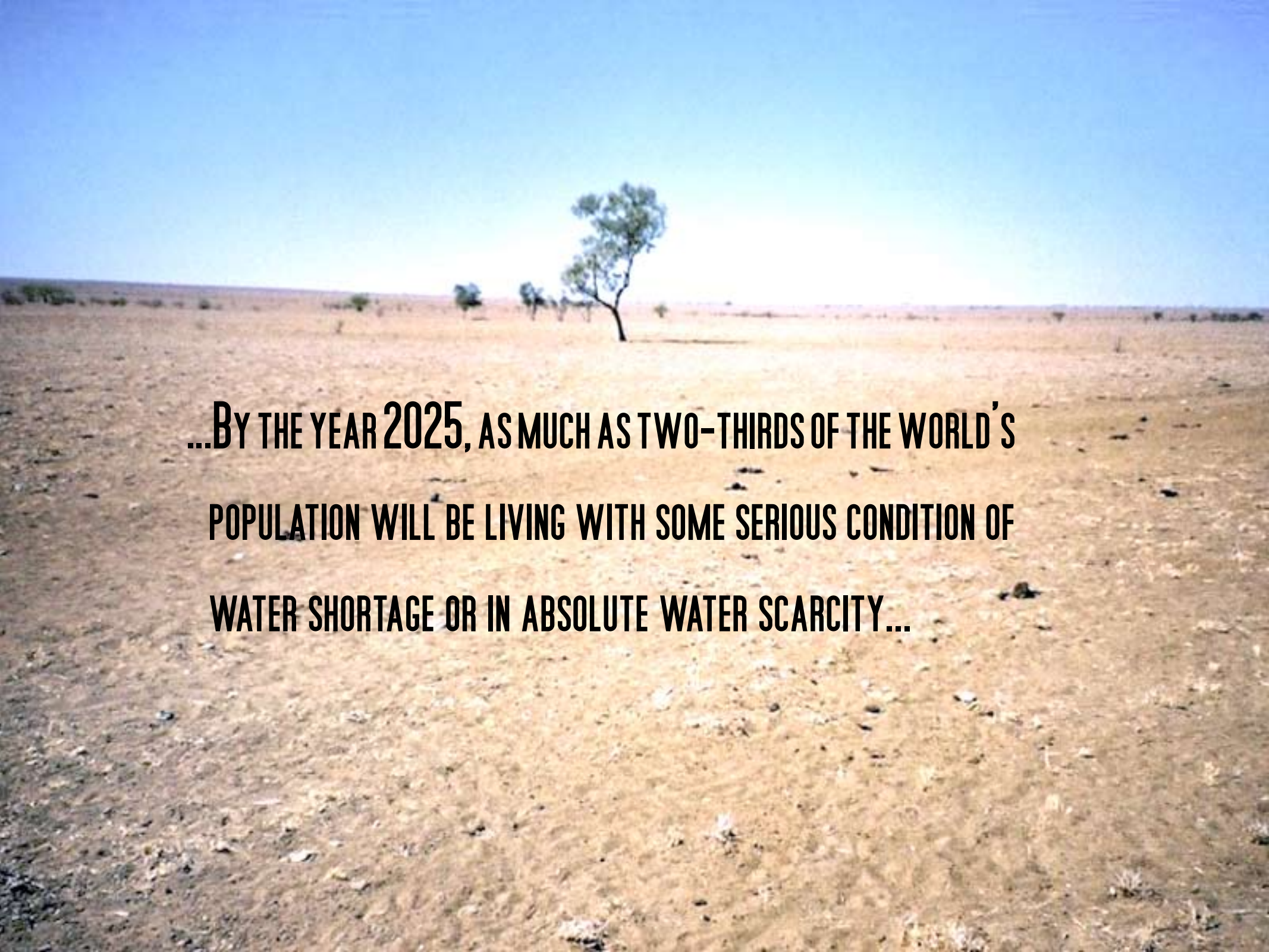


A single, glowing incandescent lightbulb is centered against a solid black background. The bulb is illuminated from within, creating a warm, yellowish-white glow that fades into the dark surroundings. The text "How much is enough?" is printed in a bold, black, sans-serif font in the center of the bulb's glass. The text is arranged in four lines: "How", "MUCH", "IS", and "ENOUGH?".

**How
MUCH
IS
ENOUGH?**

A wide-angle photograph of a dry, arid landscape. The ground is a mix of light brown and tan soil with sparse, dry vegetation. In the middle ground, a single, small, green tree stands prominently. The horizon is flat and extends to the edge of the frame. The sky is a clear, bright blue. The text is overlaid in the center of the image.

**...BY THE YEAR 2025, AS MUCH AS TWO-THIRDS OF THE WORLD'S
POPULATION WILL BE LIVING WITH SOME SERIOUS CONDITION OF
WATER SHORTAGE OR IN ABSOLUTE WATER SCARCITY...**



AVERAGE 15 MINUTE SHOWER (WATER RUNNING):

150 GALLONS / 567.81 LITRES WATER

- Washington Suburban Sanitary Commission

‘WORLD ELECTRICITY DEMAND IS EXPECTED TO DOUBLE BETWEEN 2000 AND 2030, WITH THE GREATEST INCREASE OCCURRING IN THE DEVELOPING WORLD AND THE MOST RAPID GROWTH IN PEOPLE’S HOMES.’

‘ELECTRICITY PRODUCTION IS THE LEADING CAUSE OF INDUSTRIAL AIR POLLUTION IN THE UNITED STATES, AND IS RESPONSIBLE FOR 40 PERCENT OF THE NATION’S CARBON EMISSIONS THAT CONTRIBUTE TO GLOBAL CLIMATE CHANGE.’

- World Watch Institute



**IF ENERGY USE IS DIRECTLY PROPORTIONATE TO
HOW COMFORATBLE WE ARE.....
MAYBE WE'RE TOO COMFORTABLE.**

**IT USED TO BE THAT WHEN YOU TOOK TOO LONG OF
A HOT SHOWER, THERE WAS NO HOT WATER LEFT...**

IT WAS UNCOMFORTABLE.

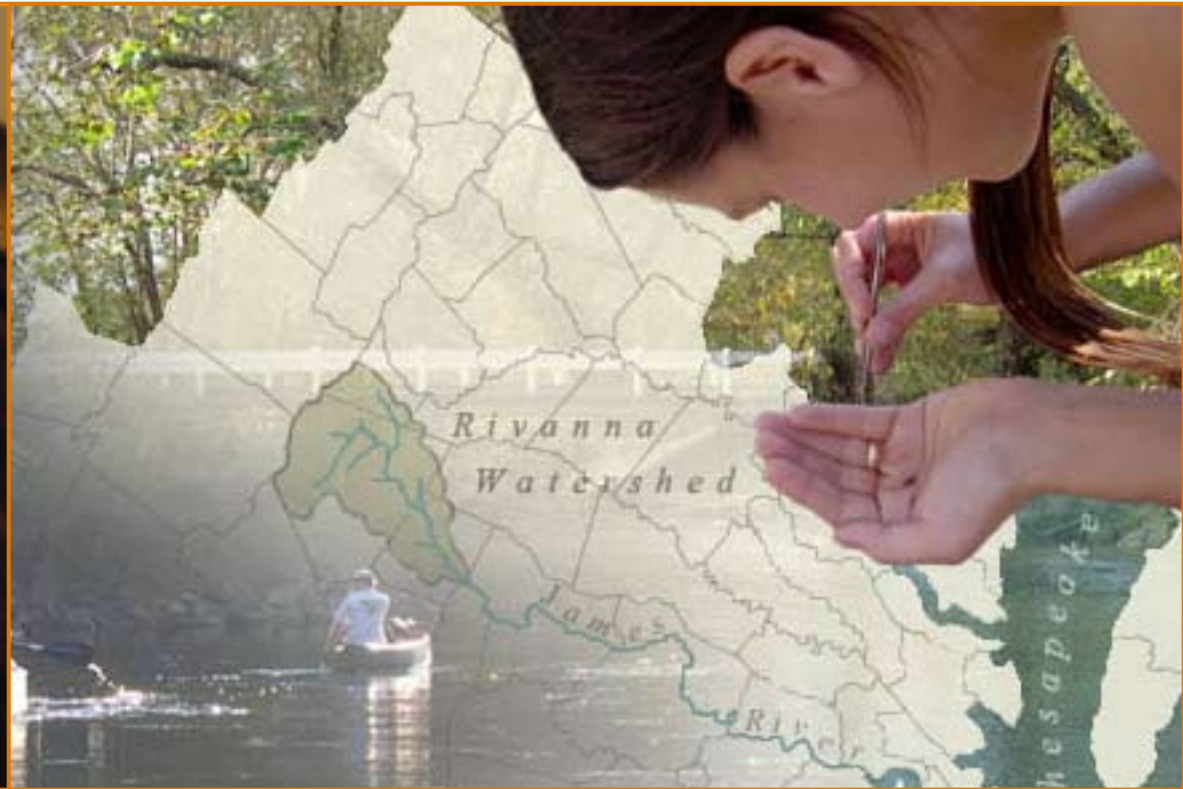
MAYBE WE NEED THAT AGAIN



IMPACT

Change never happens all at once.

- The home because this is crucial in forming attitudes
- People's choices are affected over time
- Our bad habits took a long time to develop and will take time to undo too



CONSTRUCTIVE (Dis)COMFORT

Conservation has to be appealing logically and emotionally.

- Wasting should be uncomfortable
- People should be forced to think twice - change in habits
- Interest can be sparked by industry - want to market and profit from goods



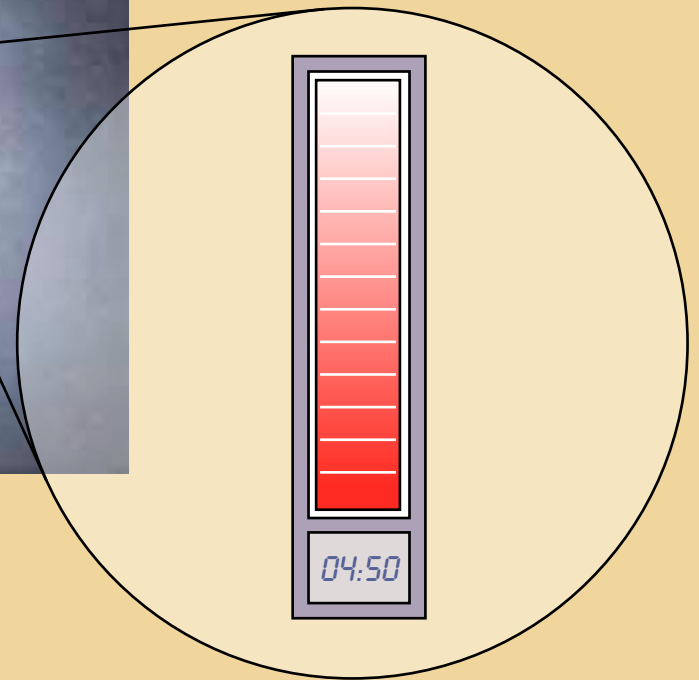
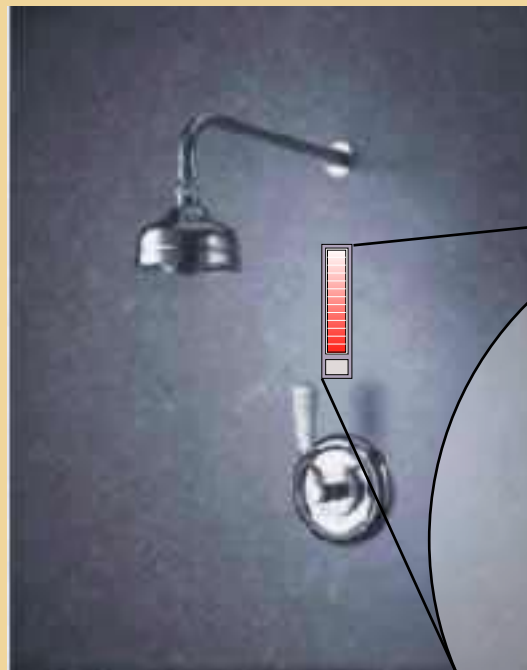


What if when the TV was on too long, it started to stop working properly?

- ambient
- unobtrusive



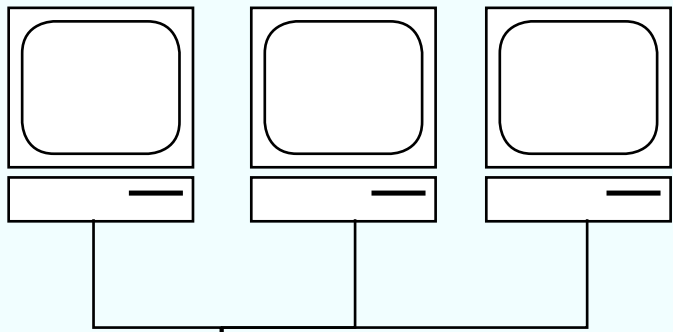
What if the thermostat controlled your financial and not your physical comfort?



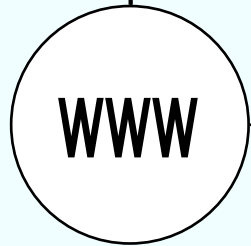
- **physical**
- **direct**

What if you could see how much you were actually using?

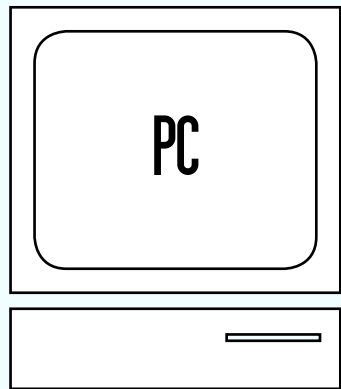
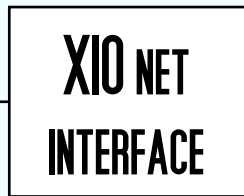
What if the the lamp left on too long told you so?



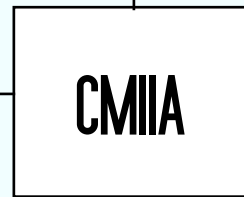
External computers
linked to home system
through internet



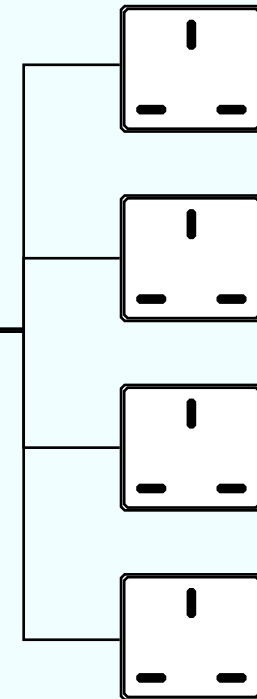
Interfaces to home system

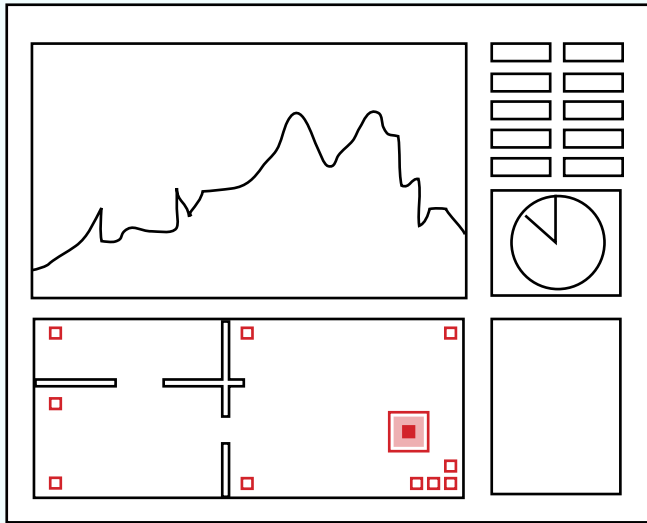


Communication to
devices from CM11A
through regular
power lines



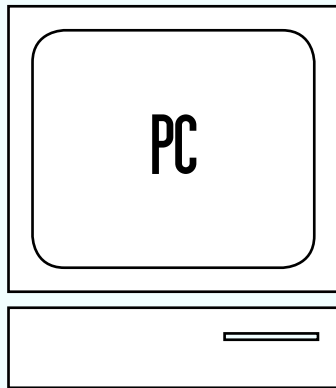
Powered devices
(on X10 network)





Control of device parameters:

- Set levels of "discomfort" per device
- Daily/weekly/monthly statistics
- Where need to improve energy spending habits



Data from device received:

- This amount is being wasted



Controls for device sent:

- When is enough/ too much

