SMART HOME REGULATOR

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THE CHALLENGE TO BE SOLVED

INEFFICIENT USE OF ENERGY

Everyday, a large amount of energy is wasted by electrical appliances in homes which are left on long after use. Not only in our homes but in our workplaces as well. Government-controlled appliances such as street lights are also left on long after the sun has risen. More energy is wasted than being used.

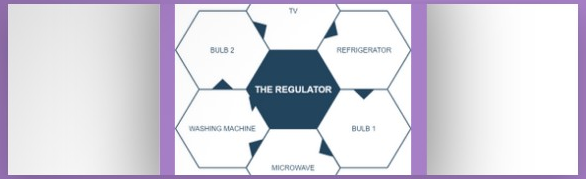
WASTE OF MONEY

In practically every house in America, money is being wasted on energy consumption. That's because the average amount of electricity spent per year is at least $1,368.36 and 35% of the power paid for is actually wasted. This is similar in a lot of homes and industries today. We pay bills upon bills for electrical appliances we do not use but are constantly left on. As a result, our finances are dissipated and the economy is negatively affected.

MASSIVE CARBON EMISSION

Electricity and heat generation is the economic sector that produces the largest amount of man-made carbon dioxide emissions. This sector produces a large amount of fossil fuel related carbon dioxide emissions and relies heavily on coal, the most carbon intensive of fossil fuels. Since electricity is a product of burning fossil fuel, waste of energy from electricity is directly proportional to emission of carbon which pollutes the environment.

OUR SOLUTION



STEP 1: CONNECT ALL ELECTRICAL APPLIANCES TO THE SMART HOME REGULATOR

All electrical appliances in the home are connected to the hub— regulator. This is done by connecting the regulator to the electrical circuit breaker panel which in turn is connected to all the electric appliances in the building.

STEP 2: CONTROL THE REGULATOR VIA THE MOBILE APPLICATION

A mobile application designed specifically to control the smart home regulator is made. This app is to be connected to the regulator as it would be the means by which the user controls all the appliances in the building. The user therefore has indirect access to the electrical appliances in question and can decide on if an app should be left on or switched off.

STEP 3: DETAILS OF THE MOBILE APP

- The mobile app displays different independent plans for energy consumption per appliance for each month.
- A user then selects a plan. The regulator ensures that the appropriate power is supplied to each appliance.
- The app will run frequent maintenance checks on all appliances to ensure each appliance is within acceptable parameters.
- The mobile app also has control over the power on/power off button of all the appliances

WHAT SETS OUR SOLUTION APART

- **USERS ARE DECISIONS MAKERS**

  With our solution, the user has complete control over what energy consumer plan is to be used. If he/she also wants a plan with just the TV and light switches on, the app will help the user achieve this and many more.

- **USERS SPEND WITHIN THEIR BUDGET**

  Our solution also helps the user stay within desired budget. When a plan is chosen,the user gets the opportunity to chose a plan depending on the price and the app makes sure the user does not spend more than the chosen plan per month.

- **USERS HAVE REMOTE ACCESS TO APPLIANCES**

  A user can also be in control of the application at home or away from home. Any user who leaves home in a hurry and forgets to turn off an appliance can turn it off via the mobile application. This is very convenient and it ensures less energy is wasted.

- **SOURCES**

  http://cpparesearch.org/nu-en-pl/wp-content/uploads/2017/10/wastetoenergy.jpg

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  https://s-i.huffpost.com/gen/1263319/images/h-CARBON-EMISSIONS-628x314.jpg