**The problem:**

Energy consumption.

8,492 kWh per year per household (84.9 bulbs per hour, 2037.6 bulbs per day, 743,724 per year (80,040 average households, 2.5 people per household. 200,100 people in Wellington). 59,527,668,960 bulbs per year in Wellington) (on average 100kwh bulb)

Wellington uses enough energy to power at least 59 billion 100kw light bulbs per year. With this much power being used for a single city, it is no wonder that there’s often a lot of arguments centered around renewable energy. That is why we have chosen to create our application with the aim of educating children about the benefits of renewable energy, while also educating them about the costs that are involved with this.

**Climate change**

**World**

**Increase in Energy Demand -** As temperatures in some places get higher, the temperature in others will get lower. The will then be an increase in energy demand for heating and cooling.

**Sea level rise -** Melting of polar caps.

**Economic Loss -** Loss of wildlife (eg fish), Loss of fertile land (farms, crops…)

**New Zealand**

<http://www.mfe.govt.nz/sites/default/files/media/Extra%20downloads/Other%20documents/climate-change-impact-map-a3.pdf>

**Wellington Region by 2090**

**Erosion and Landslides –** More frequent and intense heavy rainfall events are likely to lead to more erosion and landslides

**Coastal hazards** –Coastal roads and infrastructure may face increased risk from coastal erosion and inundation, increased storminess and sea-level rise**.**

**Droughts –** By 2090, for the Wellington region and the Wairarapa in particular, the time spent in drought ranges from minimal change through to more than double, depending upon the climate model and emissions scenario considered. More frequent droughts are likely to lead to water shortages, increased demand for irrigation and increased risk of wild fires.

**Energy Security -** The effects of not having enough energy. Things like energy to power health and military.

**The product:**

Our mobile application is an educational game revolving around managing Wellington’s power. The player starts off with an initial fund and must purchase and build power sources in order to keep the city running and meet the power demands. Core game mechanics will be; the ability to purchase buildings, an income system, and a pollution system that affects the population of Wellington and therefore the amount of money the player has available to them. We are aiming our application at an audience of 5 to 12 year olds, although we will not alienate other age groups by making sure our graphics and gameplay are appealing to different age groups. Our application will use the gyro meter so that the player can tilt the screen to “scroll” through the scenery (with subtle parallax effects), will subtly use the microphone to affect the weather or wind turbines in the game, and also will take use of the touch screen with the typical swipe, tap, or pinch commands.

We are currently in touch with multiple power retailers as well as the power provider, Wellington Electricity, to ensure that we are using accurate information.

**The competitors:**

**Monetary gain?**

We are not including any option for purchases or advertising in this application for a number of reasons. Firstly, it is widely known that educational mobile applications games tend to not make any money. And secondly, as our game is aimed at children, it will be likely that the child will accidentally click on advertisements or accidentally make a purchase which will pause the game, resulting in the parent most likely needing to help them get back to the application so the child can continue playing. If this happens often enough, the game might be uninstalled as it might be considered an annoyance.

However, there is the possibility that a power retailer may be interested in purchasing our game, so we could potentially make a one-off sale.