

KUWAIT UNDER THE SUN

After living in the country of Kuwait for 18 years, growing up in the blistering heat taught me a few lessons on the “livability” of the small Middle Eastern state. Located on the Persian Gulf, bordering Saudi Arabia and Iraq, Kuwait has broken records of some of the hottest temperatures in the world, in ways that were not expected, ([Science Direct](#)). This led to beliefs that the country would possibly not be livable in the decades to come, and thus what alternative measures and implementations could be taken to reduce the climate change issue and improve safety of working minorities directly vulnerable to the heat.

The effects of the desert land required unusual laws and regulations to be placed on the creation of infrastructure and the growth of the economy. Firstly, an odd requirement was that any building built from 1980 and onward was required to be completely made out of stone and concrete. No wood allowed. This action was taken by the Embassy as a safety precaution against the intense temperatures throughout the year, and the shocking numbers around the summertime. The houses are also able to hold cooled air and bigger AC units because of the wall structures.

But this solution is only a temporary one against the scorching heat that may not make a difference for the next 40 years to come. According to [Bloomberg](#), “In 2016, thermometers hit 54 degrees Celsius (129 Fahrenheit), the highest reading on Earth in the last 76 years”. This trend shows a possibility that the temperatures could rise by almost “4.5°C hotter from 2071 to 2100 compared with the historical average”. Experiencing this heat in a cooled, modern home is fairly comfortable, however the jobs outdoors can be a true challenge and a test of strength. The construction of buildings or homes are completed year-round, and because of their strenuous hours and exposure to direct sunlight, the frequency of heat strokes, exhaustion, fainting and breathing challenges are high. A [PubMed](#) study showed that “62%, 38% and 42% of all fatalities in 1994, 1995 and 1996” were related to construction. In comparison, another study “linked 67 percent of heat-related deaths in the capital to climate change”, ([Associated Press](#)). Although it can be debated that it is unsafe not acquiring a safety program, I believe that the heat is what makes a big part of these unfortunate statistics. With almost half million immigrants living and working in poverty, these are the people most effected. To achieve this desired safety factor, the construction hours of the country would need to be adjusted to prevent 13-hour long working days in direct sunlight from 4AM to 5PM. Since the peak daily temperature is from noon to 3PM, the country should require a break or shift to an indoor job during these hours of intense heat for the entire year, and not just the peak months of the Summer.

While climate change has negatively affected the working conditions in the world of construction, I believe that it is what will save the country in the future if done thoroughly. With its neighboring countries like Saudi Arabia and the United Arab Emirates planning on becoming zero-emissions by 2060, and 2050, respectively, Kuwait still has not officially made any movement on going zero emissions in the future, ([IOP Science](#)). However, the prime minister stated a promise to “cut emissions by 7.4 percent by 2035” in the effort towards the reduction of fossil fuel burning practices. Oil remains Kuwait’s main source of income as their vast supply of this natural resource has allowed them to export an average of “2.792 million barrels per day, in 2010”, ([Bloomberg](#)). Having a massive oil reservoir, and almost limitless funding, the

following example is truly an upset to my country's accomplishments and history, and being an Electrical Engineer with a concentration in Energy and Sustainability, it especially upsets me.

An hour away from the city center, in Shagaya Energy Park, Kuwait introduced the first tri-renewable power energy farm on the Persian Gulf, “exceeding expectations” in the first year in 2019, ([AIP Publishing](#)). After the surprise that showed wind power and solar power to be very efficient, instead of diverting more resources into the successful model, the leaders and organizers decided on a different route, regardless of the positive results, to try to attract private investors and money. The management board directed their attention to the “costliest” renewable, Photovoltaic panels, providing solar thermal power, and thus electricity. As a result of the exponentially higher costs of the planned photovoltaic system materials and lack of true commitment, the outcome caused a decade of delays, and eventually interest was completely lost by the majority. The goal was converted into “Let’s just do what we’ve been doing for the last 70 years”, in relation oil and fossil fuels, and stay within the “planning phase”, pushing back the expected completion in 2030, ([AP News](#)).

The possibility of alternative solutions to be built by the government can help the overall living and working conditions of the citizens and immigrants of Kuwait. The surprising lack of solid commitment into the future of sustainability, such as that of Shagaya Energy Park, further proves my argument that Kuwait should begin to decrease its rate of refining oil. It has been proven that these refining processes cause climate change, and with clearly rising temperatures, it will bring the inevitable outcome that Kuwait may be unlivable in the future. The position of climate change and pollution in Kuwait cannot be stressed enough, and the message must be spread to the hearts of its people. Oil cannot be relied on as the one true source of fuel and energy, and the country must be prepared to go all in with sustainable solutions if it is to save its land, citizens, and way of life for the future generations.