ENGINEERING SKILLS

NEIGHBOURHOOD ASSIGNMENT

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| STUDENT NUMBERS | GROUPS | SURNAME& INITIALS |
| 1. 221718702 | E1 | MOTOBOLI T |
| 1. 218483015 | E1 | KHANYE L |
| 1. 220171645 | E6 | DAGADA DE |
| 1. 214115968 | E7 | MBEDZI NE |
| 1. 221718974 | E3 | NALEDI KR |
| 1. 221595902 | E6 | MAKHUBELA TE |
| 1. 221041087 | E4 | MKANSI N |
| 1. 221395385 | E3 | PHUMO RS |
| 1. 218507615 | E7 | SELLO B |
| 1. 221198016 | E9 | CHAVALALA S |
| 1. 221306676 | E6 | PHOSA MC |
| 1. 221320415 | E4 | MOJAKGOLO OB |
| 1. 220159009 | E9 | ILUNGA LJ |
| 1. 220099952 | E7 | RAMOTSO AS |
| 1. 221392122 | E4 | MOKOENA L |
| 1. 221107819 | E1 | NEMATANDANI N |
| 1. 221741852 | E7 | KHUZWAYO S |
| 1. 221553940 | E7 | SAUL L |
| 1. 221147152 | E3 | SEKOADI KT |
| 1. 221560106 | E6 | MASETLE R |
| 1. 221128581 | E1 | MABIRIMISA MA |
| 1. 221659838 | E6 | MANDIWANA C |
| 1. 221525394 | E1 | NHLENGETHWA T |
| 1. 221228659 | E3 | MANAMELA MP |
| 1. 221607692 |  | MUDAU TM |
| 1. 221412174 | E3 | SALANE K |
| 1. 221238751 | E3 | APHANE T |
| 1. 218506872 | E6 | TSHIKOVHELE E |
| 1. 221415890 | E2 | MONTSHO L |
| 1. 221321640 | E6 | THWALA VS |
|  |  |  |

[Date]

There have been constant and frequent power cuts all around in Gauteng province. Therefore, the constant power cuts and outages have therefore been identified as an infrastructure disaster and failure.

There used to be constant and uninterrupted electricity supply but now it is no longer the case because load shedding/power outages have been introduced due to the electric system being overloaded because electricity supply is high in demand.

ESKOM, which is the main power/electricity power supplying company in South Africa, they can fasten the delays in setting up new power plants/power stations in various areas around Gauteng because the current electric systems are always overloaded due to a constant high demand of electricity supply.

Load shedding has a high impact on the environment, on the communities of Gauteng provinces. As Gauteng province is full of small and large townships, during load shedding our townships become dark as the streets lights are off and this increases the crime rate in townships. Traffic lights are not working during load shedding and that leads to high numbers of accidents across the province.

The power cuts that are taking place, they are negatively affecting people’s health. When there is no electricity most people are eating fast foods and those foods are not good for people and especially those who have chronic diseases as they are not healthy. The hospitals are mostly using the electrical machines (e.g X-rays, oxygen machines, etc) to help and to cure patients, the load shedding negatively affect the patient’s health and it puts their lives at risk. Ambulance service are the primary providers of a 24/7 response to medical and trauma related emergencies. If they are not serviced, therefore medical emergencies would not be reached as required. We may experience a lot of deaths, due to people not receiving quick medical attention when being transported to nearest medical facilities. We may also experience ambulance accidents with other cars because there may be faults within the ambulance car systems, they may also catch fire due to gas (petrol/diesel) leaks as a result of not being serviced.

Households receive uninterrupted electricity on a daily basis, largely because of stolen electrical cables and illegal connection. Theft of electric cables is a concern and interrupts the power supply. These illegal connections are a major hazard and cause electricity failures in the community. Valuable time and money have to be directed on a daily basis to rectify problems caused by the theft of copper cables. Another thing that delays the maintenance of the infrastructure is the issue of corruption, of course corruption will never end but still it will destroy everything. Many maintenances fail because of it. we will never have a proper maintained infrastructure as long as there is no transparency in every project implemented. Illegal connections, stealing of electrical cables and corruption are the main reason why our infrastructure is not maintained. These three reasons have led our government to having large portion of debts, that is why we will keep having a poor infrastructure.

Load shedding costs the country significantly in terms of loss of revenue. According to the CSIR, in 2019 the South African economy lost about R59 billion and R118 billion due to 530 hours of planned power cuts. Estimations state that stage 2 load shedding costs the country approximately R2 billion a day. That is a cost the country can ill-afford in the wake of the devastating economic impact resulting from the lockdown implemented in an effort to contain the spread of the Covid-19 virus. Compounding the economic cost is the fact that persistent load shedding impacts investor confidence and poses a significant risk to already struggling small businesses. Inadequate maintenance, however, has not only occurred at the country’s power utility but has also occurred within the water, waste management, sanitation, and road sectors, amongst others.

The changes that can be made is that Eskom and Johannesburg Municipality needs to work together to increase the power production level because it seems like there is more power being consumed than power being produced and that causes load shedding, this can be done by building more power stations and by supplying more power saving appliances. The government working in hand with the energy and power companies should implement new ways of generating electricity (e.g. hydropower, nuclear power and geothermal energy). In order to prevent an energy crisis, it is also crucial that we consume less energy by improving and modernizing energy infrastructure such as smart grid solutions, and smart cities. It is also important that we replace old devices by energy efficient solutions, such as replacing traditional light bulbs by LEDs. All occupants/habitants of the Gauteng province and ESKOM needs to play their part in the repairing and maintenance of the electric and power cuts. To be more specific, the occupants reduce the amount of electricity we use in a daily and gradually in a month. Government can also procure funds for ESKOM to build more power plants in various areas around Gauteng that are more demanding .All these mentioned actions from all the involved parties can help release the overload on the electric system and help maintain the constant electric power cuts.

South African is one of the rich countries with Coal and fuel however Because of theft; greed and Corruption in the government South Africa proves to not have enough capital but have an adequate skill to improve the electricity problem; Hence even by this day electricity is an enormous problem in our country. Eskom company is in huge debts of money, and this impacts negatively in the country's economy and citizens as well. Electricity is one of the most Expensive Infrastructure that the country could have afforded but sadly cannot currently because there is just not enough money to do so. It is safe to say that the ESKOM employees are the human capital in South Africa with regards to our electric systems. Due to South Africa being in junk status, the funds provisioned to the operation of ESKOM are released .As for ESKOM to operate of, they have to cut costs and one of the cost cutting measures is retrenching some employees. Retrenching employees is indirectly impacting the South African electric systems .This is because they are the human capital of ESKOM. If the human capital at ESKOM is reduced therefore the skills and knowledge to deal with electric power cuts in Gauteng/South Africa is put at risk, therefore ESKOM is unable to maintain and repair the electric power outages because they are currently planning about 4 000 job cuts in the next business year.

South Africa has to have good business relationship with other Countries, people have to use electricity efficiently and Property, Eskom have to launch Programs that will educate the youth about the importance of electricity, new methods of Distribution of electricity have to be introduced, In the country's yearly budget electricity debts and settlement have to be included.

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