



NATIONAL YOUTH DEVELOPMENT AGENCY
OUR YOUTH. OUR FUTURE.

SURVEY: The Impact of Load-shedding on Youth Enterprises

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THE IMPACT OF LOAD-SHEDDING ON YOUTH ENTERPRISES

Executive Summary

The National Youth Development Agency (NYDA) has embarked on new stage of concerted effort to understand the impact of load-shedding on youth enterprises in South Africa. In taking this step the NYDA went on a drive to collect data and assimilated key lessons from similar efforts worldwide with a view of understanding the position of youth in South Africa on load-shedding.

The study is designed to realize a vision that will assist the NYDA to fully understand how responsive young people are to government efforts in relation to the energy crisis. The geographical redistribution and gender representation forms the basis to the key findings of the study, and this will better position the NYDA for recommendations in offering lasting solution to the energy crisis.

These results provide a picture of how young people in South Africa perceive load-shedding in general. There's also a fair gender participation in the survey, this may suggest that both genders are aware of load-shedding and its repercussions. There were also signs of frustration and anger amongst other respondents on load-shedding as many were not certain whether government has the required capability to solve the energy crisis. It has also come to light that other aggravating factors, such as a lack of information, the inability to produce goods and services, as well as the fact that electricity brought productivity to a halt, especially for those businesses that did not have backup power, may have played a significant role in revenue loss and the closure of many businesses due to load-shedding, but the general perception is that young people are willing to offer a long-term solution to load-shedding and its disastrous effects.

At the time of writing this document the President of the Republic of South Africa bestowed wide powers and appointed the minister of electricity and, in terms of Section 97 of the Constitution, would transfer certain powers and functions from other entities to enable the Minister to execute his mandate, which is primarily to significantly reduce the severity and frequency of load-shedding. To effectively oversee the electricity crisis response, the Minister will have political responsibility, authority, and control over all critical aspects of the Energy Action Plan. He will be expected to facilitate the coordination of the numerous departments and entities involved in the crisis response and work with Eskom leadership to turn around the performance of existing power stations and accelerate the procurement of new generation capacity.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
ATM	Automated Teller Machine
FNB	First National Bank
ICT	Information Communication Technology
IYDS	Integrated Youth Development Strategy
NYDA	National Youth Development Agency
RSA	Republic of South Africa
WIFI	Wireless Fidelity

1. Introduction

The NYDA is a South African youth agency established primarily to tackle youth challenges. The youth agency was established by an Act of parliament, viz act no 54 of 2008. The entity was established to be a unitary structure, with a mandate to address issues of youth development at National, Provincial and in Local government sphere. The existence of the NYDA should be located within a broad context of SA's development dynamics. Like many developing countries, South Africa has a large population of youth (viz youth bulge), those with ages between 14 to 35. This youth cohort represent an estimate of 44% out of 60.1 million population in totality (Statistics South Africa).

Given the youthful nature of the South African population much of the socio-economic challenges faced by the nation namely, poverty, inequality, unemployment, and poor health are borne by youth. The gravity of challenges South Africa is faced with, require multi-prolonged efforts, that simultaneously promote the development of sustainable livelihoods, reduce poverty, inequality and prioritize the development of policies which create an enabling environment for youth development.

The NYDA plays a lead role in ensuring that all major stakeholders i.e. government, private sector, and civil society prioritize youth development and contribute towards identifying and implementing lasting solutions which address youth development challenges. Furthermore, the NYDA designs and implements programs aimed at improving the lives and opportunities.

The National Youth Development Agency (NYDA) derives its mandate from the legislative frameworks, including the NYDA Act (54 of 2008), the National Youth Policy (2020-2030) and the draft integrated Youth Development Strategy (IYDS) as adopted by youth formations and parliament of the Republic of South Africa (RSA) in 2021. The NYDA activities could be summarised as follow:

- Lobby and advocacy for integration and mainstreaming of youth development in all spheres of government, private and civil society.
- Initiate, implement, facilitate, and coordinate youth development programs.
- Monitor and evaluate youth development interventions across the board and mobilise youth for active participation in civil society engagements.

2. Background

South Africa is currently experiencing an electricity crisis. A structural shortage of electricity supply remains one of the country's most critical challenges and frequent incidents of load shedding have had a significantly negative impact on the economy and future load shedding remains a possibility as much of the nation's electricity generation infrastructure is approaching an age at which it will need to be replaced (Findt, Scott, & Lindfeld, 2014). Our track record of building new generation capacity since the crisis began in 2007 has not been good. South Africa's two most recent power stations, Medupi and Kusile, are both severely over budget and behind schedule. If this pattern continues the country's electricity reserve margin will remain under pressure, therefore it becomes very important for government to identify how load-shedding impacts on youth enterprises and come up with lasting solutions. The youth form the most important component of South Africa's society and this survey aims at collecting data for the NYDA to assist and identify challenges experienced by youth enterprises caused by loadshedding.

The objectives of this survey include:

- Assessing the impact of load-shedding on youth enterprises.
- To keep track of how government address various load-shedding challenges affecting youth enterprises.
- Recommend ways to improve youth enterprises that have been affected negatively by loadshedding.

3. Discussion

The current load-shedding has had a significant impact on youth enterprises. In this context an understanding of the economic impact of load-shedding is a critical consideration for businesses particularly youth enterprises in South Africa. It is particularly true for all business sectors as the impact of load-shedding on businesses and consumers is dynamic and complex and the value generated by youth enterprises becomes compromised because of constant power disruptions and power outages.

When looking at how load-shedding affects youth enterprises, the main issues the survey depicted is a loss of production. All kinds of businesses and industries require electricity to produce their products and services mainly, businesses in manufacturing, agriculture, mining, ICT, retail trade etc,

services that use electrical equipment (like auto mechanics) and more. Losing electrical supplies results in a pause in the day's work. This could mean a significant loss of business, not being able to fulfil orders or customer requests, or producing product shortages.

One of the main issues with load shedding for young businesses is Wi-Fi outage. Almost every business depends on the internet in some capacity. Some companies conduct all their business online. Business operations must be suspended for a few hours, if not longer, if Wi-Fi is lost. With the rise in popularity of remote employment, this issue has become more crucial. Those who work from home will experience power outages throughout the day, even if certain offices and commercial areas may have electricity during load shedding. During load-shedding, many ATMs are inoperative. Moreover, during load shedding, credit card machines frequently do not function. A small firm cannot function if it is unable to accept payments.

Load-shedding affects networks in South Africa, when the power goes out, so does the cell phone signal. This can be disastrous for youth enterprises, as so many businesses rely on their cell phones for their daily operations. This could mean people can't get hold of a business, or the business can't perform any communication during load-shedding hours.

The survey also indicates that when the power turns on and off throughout the day, this often results in large surges of power. These power surges can cause major damage to businesses electrical equipment. For businesses with vital and expensive electrical equipment, like industrial machines, manufacturing equipment, or computers, damaged electronics could result in the business not being able to operate. Many small businesses must invest in alternative power supplies to help them combat load-shedding. This includes things like generators, power banks, or dongles and routers. These extra power sources can be expensive.

Youth enterprises have endless challenges that they need to face each day, and load-shedding can be one of the worst. load-shedding often forces businesses to close for a large portion of the day. This has many repercussions, all of which result in impacted revenue and profits. It's important that small businesses prepare for load-shedding as best as they can and understand what power sources and alternatives are available to them during these dark hours. Investing in a power supply to combat load-shedding could ultimately save businesses.

The most critical implications of load shedding for youth enterprises are from a revenue and cost perspective. The most significant costs relate to security and the mitigation of load

shedding. It is a worrying insight that youth enterprises still experience a loss of revenue due to load shedding despite their best efforts to mitigate the impacts. In a sense load shedding is too vast a problem for any individual enterprise to get around.

The current survey examines the impact of unstable electricity supply on South African youth enterprises, which arises from the electricity crisis at Eskom and its negative impact on the economy. The crisis, which became publicly evident in 2007 due to a period of widespread load shedding, is characterized by a chronic shortage of supply and is largely attributable to years of poor planning and under-investment — seen as a symptom of failed management at state-owned entities.

Finally, the data suggests that there is a financing shortfall for smaller scale youth enterprises who cannot afford the capital investments required for a generator. Initiatives such as FNB's generator program are targeting this need in the marketplace, but further financial support is required. Perhaps financing could be arranged by government or through the collaboration of youth enterprise operations.

4. Methodology.

The research design for the study constitutes a combination of qualitative and quantitative data analysis. Data collection method for this study is **digital** in a form of a survey where a link with questionnaire was sent to participants via email, bulk short message service and WhatsApp. The study randomly sampled **3 595** NYDA beneficiaries across all provinces and **180** responses of the sample population and geographically distributed in all **SA provinces**.

The approach and methodology adopted for this Survey were as follows:

- *Bulk Short Message Service to Beneficiaries.*
- *Electronic Mail to Beneficiaries across all Branches and District offices of the NYDA.*
- *WhatsApp Services.*

5. Limitations

The survey was digital therefore issues of data and network may have been a challenge particularly for young people who did not have internet and data access. Young people were very conscious of the participation in the study.

6. Section A

6.1 Survey Results

6.1.1 Demographic Information

Age

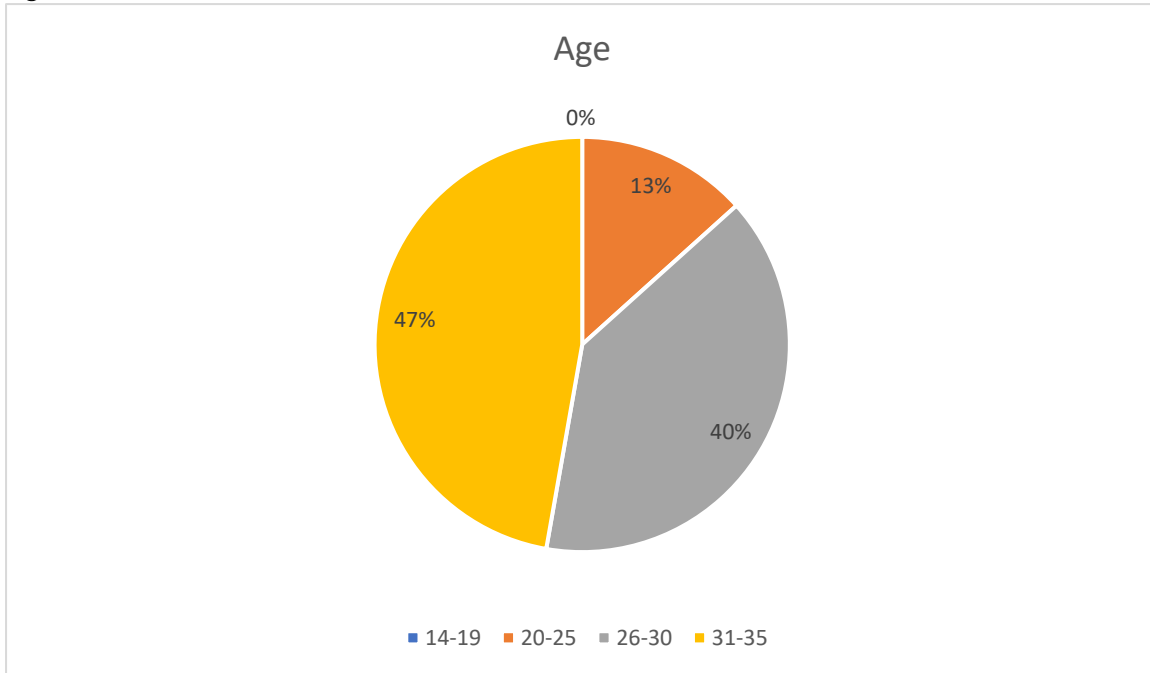


Figure A

Gender Representation

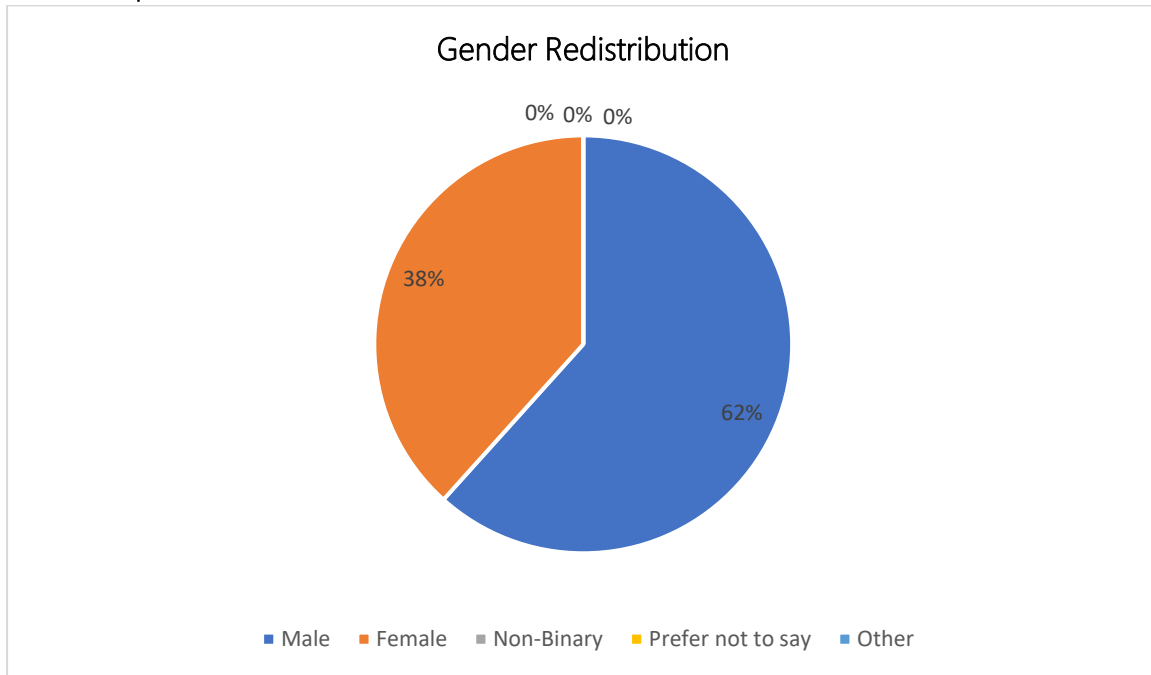


Figure B

Majority of the participants in the study were male about 62%% and 38% female across all provinces.

Provinces

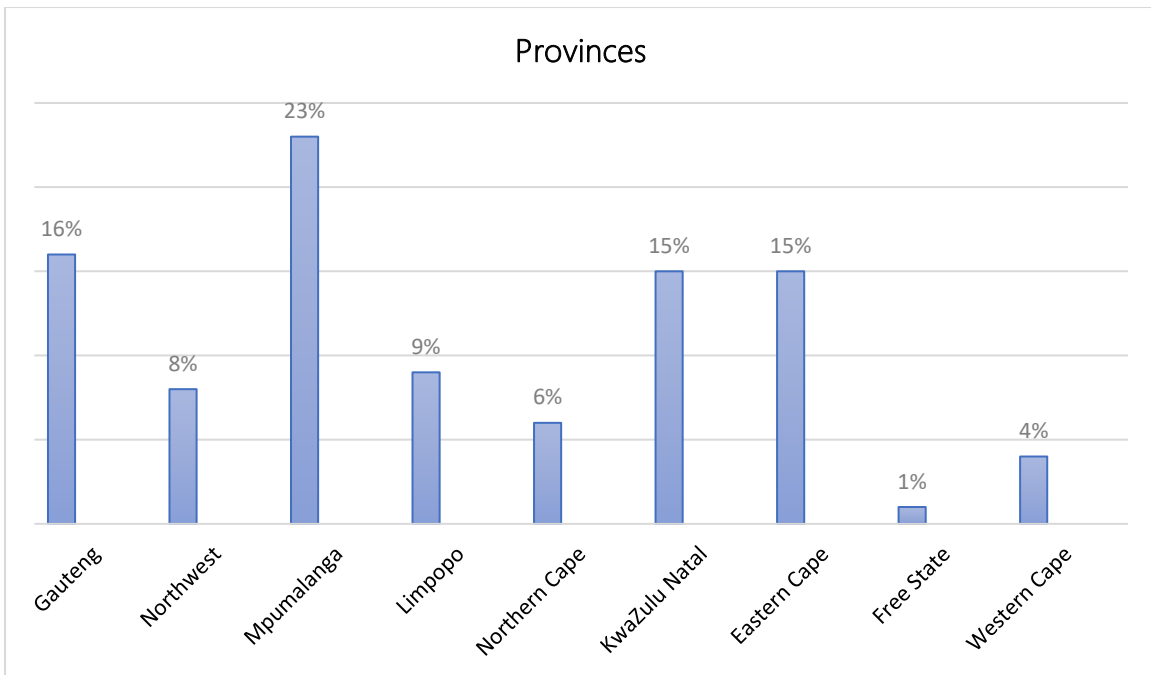


Figure C

There was a representation from all provinces in the study however Mpumalanga participated more on the study with Gauteng (second) and Eastern Cape (third). Some provinces had least participation such as Western Cape, Northern Cape, and Free State.

Residential Area

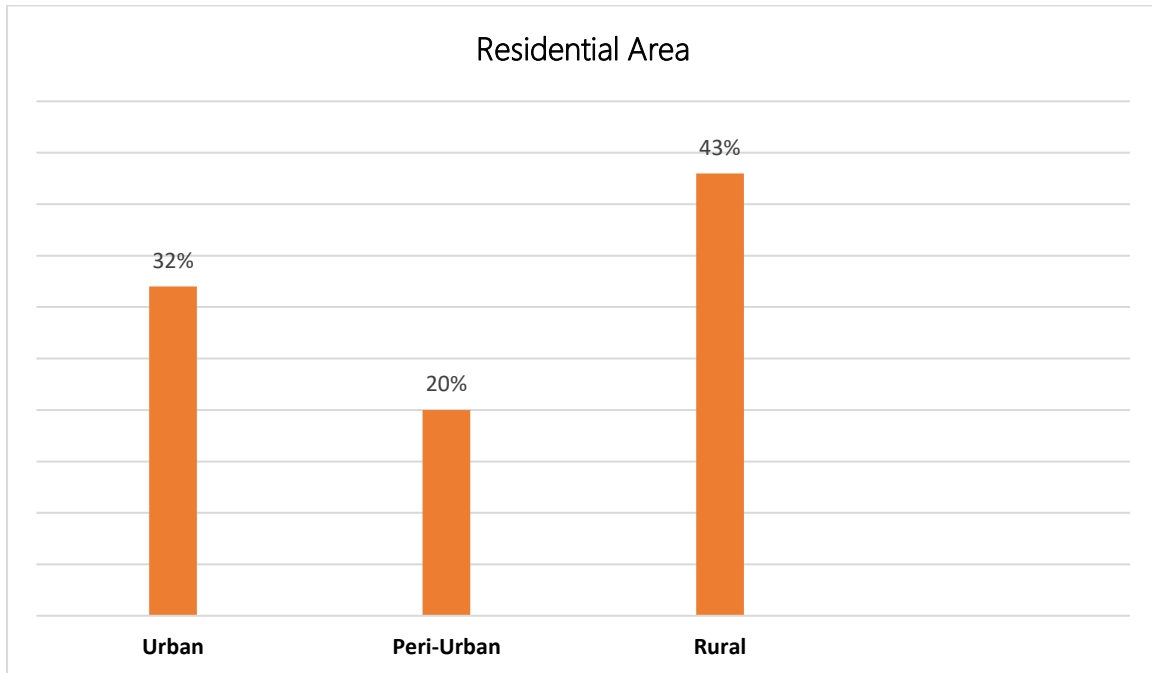


Figure D

The level of participation in the rural area was predominantly higher as opposed to urban and peri urban areas.

Employment Status

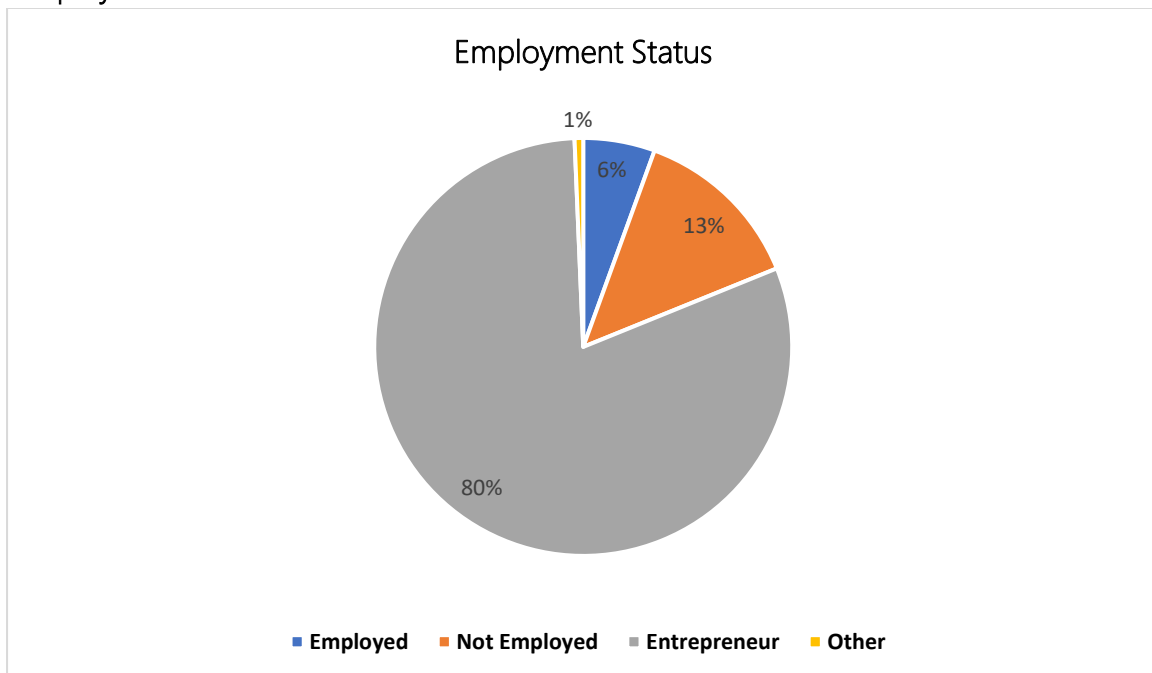


Figure E

Highest Qualification

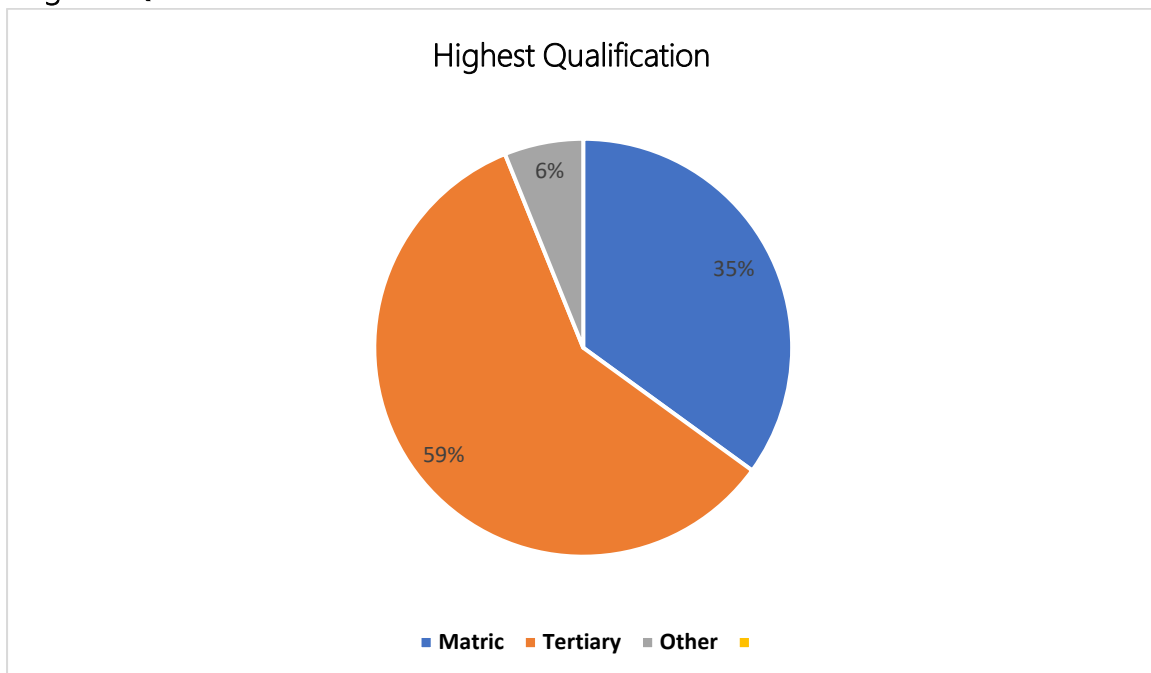
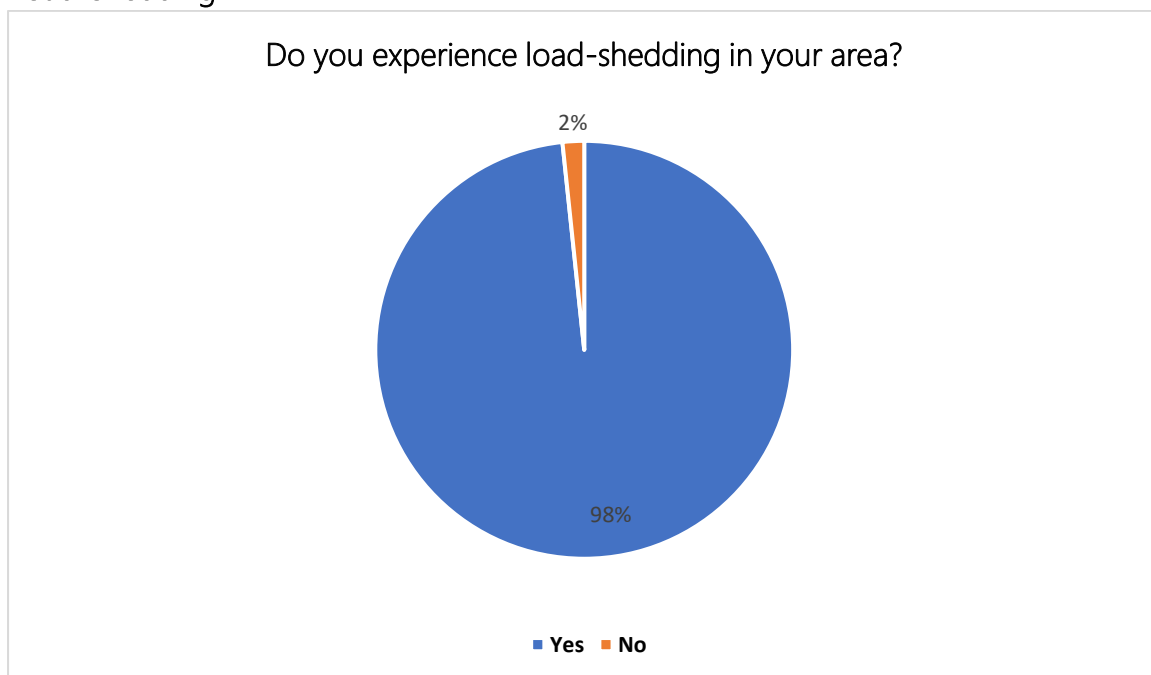


Figure F
Majority of respondents have tertiary qualifications (59%)

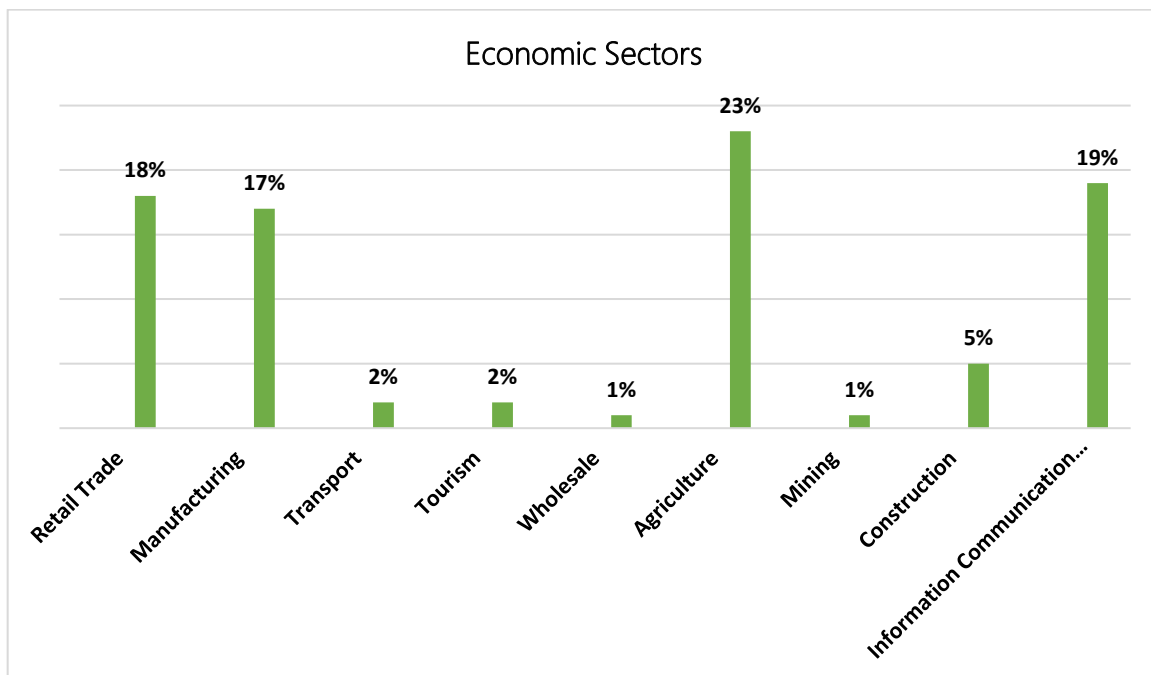
6.2 Section B – Loadshedding effects

Load-Shedding



(Figure G)

Economic Sectors



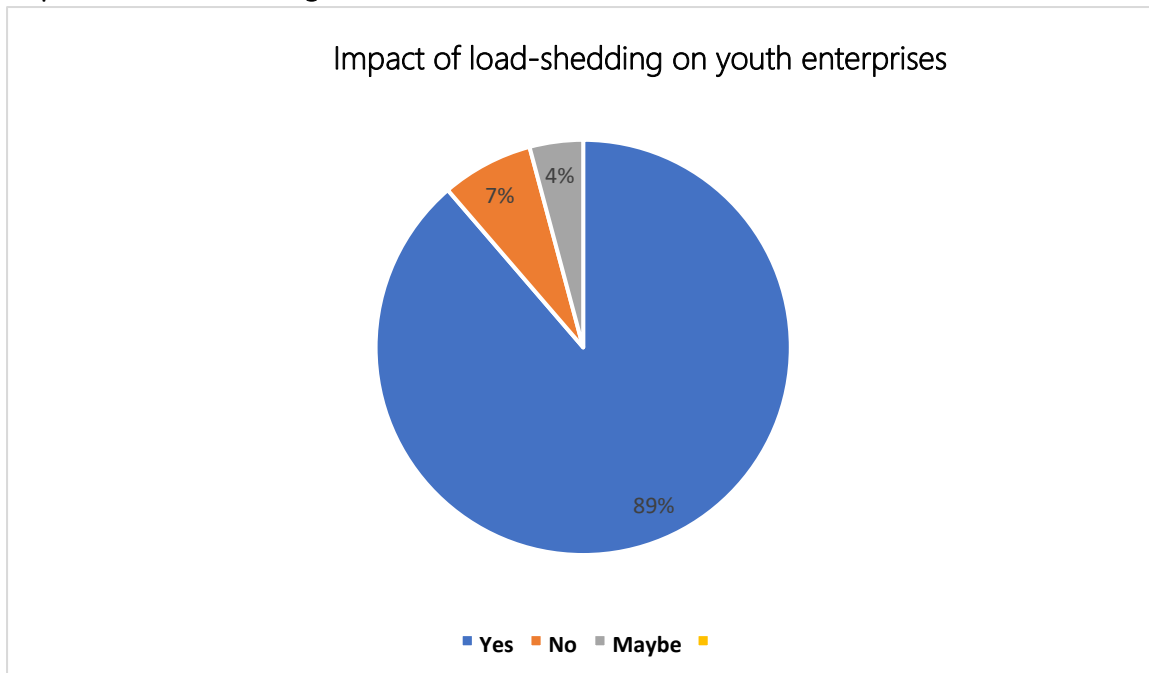
(Figure H)

Agriculture, Retail Trade, Manufacturing, and Information Communication Technology had a huge level of responses and participation.

Different times of load-shedding experienced by youth enterprises.

Thematic Explanation	Responses
Load shedding schedule	<ul style="list-style-type: none"> • Three times a day. • Two to three times a day. • Three to four times a day. • Everyday. • The whole day. • More than three times a day. • Up to stage 8. • Once per day. • Everyday. • All the time. • Sometimes. • Daily.

Impact of load-shedding on businesses



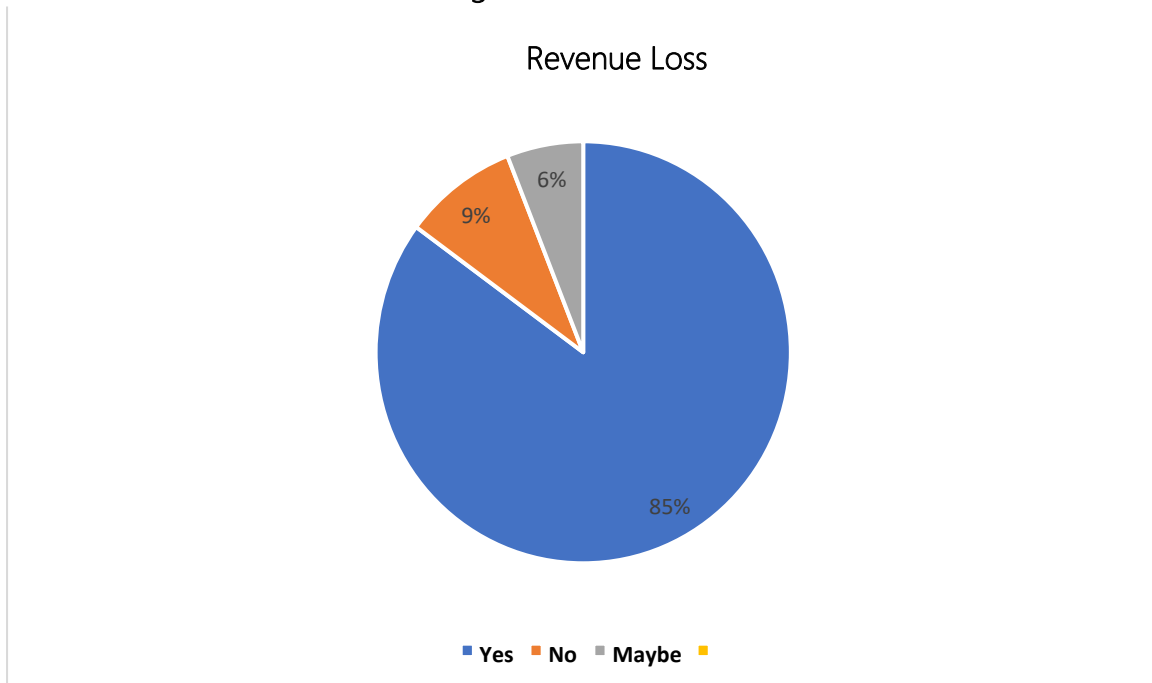
(Figure 1)

How load-shedding affected youth enterprises

Thematic Explanation	Responses
Poultry Farming	<ul style="list-style-type: none"> • High chicken mortality rate. • Chicken farming need constant electricity to function effectively. • Agro-processing environment cannot function without electricity. • Incubator hatcher machinery produces less during load-shedding.
Retail Trade, Construction, Transport and Wholesale.	<ul style="list-style-type: none"> • Most of daily work and production uses electrical equipment. • Low Productivity. • Employees must be paid even when productivity is low. • Increased crime particularly theft during load-shedding. • Perishable goods and items disposed due to load-shedding.
Manufacturing, Agriculture	<ul style="list-style-type: none"> • difficulties operating in the dark and cleaning of equipment. • Delays in supply.

ICT	<ul style="list-style-type: none">Usage of generator as an alternative but petrol is extremely expensive.
Tourism	<ul style="list-style-type: none">Drop in sales

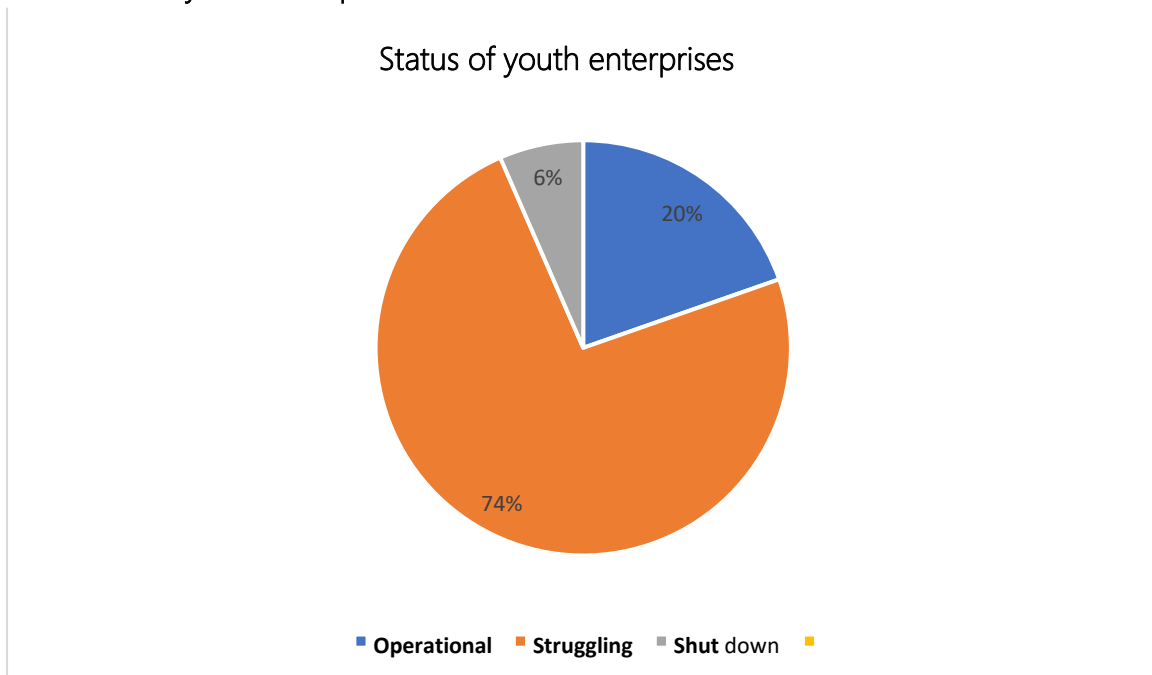
Revenue Loss due to load-shedding



(Figure J)

There has been a significant revenue loss on youth enterprises with 85% indication due to loadshedding.

The status of youth enterprises



(Figure K)

Survey indicated a huge showing of youth enterprises that are currently struggling due to loadshedding sitting at 74% and 6% that have shut down because of load-shedding.

Responses on how load-shedding impacted on youth enterprises.

Thematic Explanation	Responses
Operational Aspects	<ul style="list-style-type: none"> • Young people have indicated how their business couldn't operate without electricity and some of them struggled to make deliveries on time due to load-shedding. Some outlined how difficulty it has been to make deliveries in the dark. • Those who use high tech industrialized machines struggled as they needed electricity to operate.

	<ul style="list-style-type: none"> • Some indicated that without generators their food items were damaged. Other respondents also outlined how they failed to meet customer demands and consequently lost clientele. Some had to close and shutdown their businesses due to load-shedding.
Revenue Loss	<ul style="list-style-type: none"> • Respondents highlighted that load shedding made businesses very slow in terms of productivity and poultry farming chickens were greatly affected when heaters were off. • Some businesses cannot make revenue when power is off. • Ice machine not operating to full capacity consequently products are damaged. • When the store system is often offline it becomes difficult to recover even when electricity comes back. • Incubation facility relies on electricity and chicken mortality rate very high. • Inability to complete orders.
Working Hours	<p>Forced to work outside normal hours due to regular power cuts. Additional working hours to recover lost revenue. Working unusual hours which kills employee morale.</p>

Network	<ul style="list-style-type: none"> • No network when there is load-shedding and working online becomes extremely difficult when there is no electricity. • Internet connection becomes difficult when there is load-shedding. • ICT businesses struggle to maintain operations when there is power cut.
Damage to Equipment/Machinery	<ul style="list-style-type: none"> • Damage to Industrial machines due to constant loadshedding because they function on a 24-hour electricity demand. • Constant interruptions lead to equipment failure.
Productivity Reduction	<ul style="list-style-type: none"> • Businesses cannot operate when electricity is off. • Most businesses rely on electricity to generate production. • Businesses operations stalls until electricity is back.

Short, immediate, and long-term solutions to load-shedding

Thematic Explanation	Responses
Power Generation and Capacity	<ul style="list-style-type: none"> • Load-shedding should be suspended until later hours to allow businesses to operate fully during the day. • Provision of solar energy. • Eskom must maximize capacity. • Generators are a short-term solution. • Stabilize the situation at Eskom to minimize harmful effects of load-shedding. • Give the provision of electricity to competent corporates.

	<ul style="list-style-type: none"> • The government should provide alternative power supply. • Introduce gas as an alternative. • Build new substation. • Effective maintenance at Eskom. • Build environmentally friendly power plants. • Proper leadership and privatize Eskom. • Fix electricity blackouts and reduce hours of load-shedding. • Government should offer free solar panels to business owners. • Try reducing load-shedding stages by 80%.
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7. The impact of load-shedding on youth enterprises

- The impact of loadshedding on businesses can range from economic losses, disruption to daily operations and lost profits. When loadshedding occurs, businesses are unable to access electricity, resulting in an inability to complete tasks such as selling products, providing services, and accessing online resources. This can have an immediate and long-term impact on the business, leading to decreased sales and lower levels of customer satisfaction.
- Moreover, when businesses are unable to generate profits, this can affect the economy as a whole. The costs associated with loadshedding may include additional electricity charges for generators and fuel, additional labour costs for staff working extra hours, or even equipment damage due to power outages. Furthermore, planned electricity hikes mean that businesses have to raise their prices to compensate for their losses and this can result in a further loss of revenue.
- Overall, loadshedding has far-reaching consequences for businesses in South Africa. With the right preparation and solutions, businesses can minimise the effects of loadshedding on their operations.

8. Key Findings: What is the situation?

- These findings paint a picture of how South African youth view and to comprehend load-shedding. The survey had a very even gender distribution, which may indicate that both sexes are aware of the load-shedding crisis. In contrast to urban (32%) and peri-urban (20%) areas, rural (43%) engagement levels have been higher.

- Several respondents were unsure whether the government had the requisite capacity to tackle the energy situation, which led to some of them expressing anger and irritation toward load-shedding.
- The study's gender participation rate shows that significantly more men (62%) than women (38%) participated. All provinces were represented, with Mpumalanga having the largest percentage (23%), and Free State having the lowest (1%). Although young people have strong opinions and understanding of the energy situation, many have not taken part in the study. This is a worrying situation, especially because load shedding is expected to last into 2023. Loss of production: where most businesses use electricity for machinery, technology and light to complete the day's work, loss of electrical power means that the day's target cannot be completed.
- Loss of profit: with the loss of production, there is a loss of profit, and in some cases, a large loss. Businesses cannot keep pay their employees to be present during a power outage as essentially, they will be paying a 'non-worker'.
- Theft and burglary: small businesses are choosing to close for business during load shedding as the incidences of theft increase. During the power outage, burglar alarms are rendered useless, unless they have an alternate power source, which in turns increased risk of burglary.
- Damage to electronics: the surge of electricity when the power is returned upsets the steady voltage flow in the electrical system. This in turn can cause damage to electronic components.
- According to survey data, many young businesses are having difficulty (74%) and are on the verge of closing completely (7%) because of load-shedding. The damaging impact of load-shedding on young businesses is highlighted by this indication.

9. Recommendations

- The South African government and other relevant organizations, such as the NYDA, must direct their campaigns and programmes to address the load-shedding concerns raised here. They must also prepare a recovery plan for struggling youth enterprises and revive those that have shut down with the goal of reintegrating them into the mainstream economy.
- It is important for business owners to have a backup plan in place to ensure business continuity during times of loadshedding. Investing in renewable energy sources, such as

solar power, can reduce reliance on the grid and gives more control over electricity supply. In addition, installing water and energy conservation systems can not only protect businesses from Eskom's electricity hikes but also save money in the long run.

- Investment in renewable energy sources or water and energy conservation systems is important to weigh the short-term costs against the long-term benefits. Not only will it save money by reducing energy consumption, but also contribute to environmental protection by reducing carbon footprint. Investing in these technologies now could protect businesses from any future power outages while helping to create a more sustainable future.
- Green Overall, a company that manufactures and installs water and energy conservation systems, is offering a franchise opportunity for entrepreneurs who want to help people save water and energy.
- Since data was collected online, it is possible that we did not contact vulnerable populations, such as those from lower socioeconomic backgrounds, illiterate people, or people who are disabled. This calls for more research.
- To help failing youth companies, the NYDA should consider implementing some of the short-term fixes suggested in the poll.

10. Conclusion

The current survey intends to illustrate the effects of load shedding on South African youth enterprises. The outcomes also demonstrate how substantial and wide-reaching the influence was. The disruptive impact of load shedding has increased costs to the bottom line and cut revenues, especially for young businesses in a nation where margins are thin. The survey's findings also indicate significant issues that young businesses have because of load shedding. These findings will help the government and NYDA deal with the situation and will act as a strong motivator to make sure the right steps are taken to address it.

At the time of writing this document the South Africa's energy crisis has been declared a national disaster. The president of the Republic of South Africa consequently appointed the minister of electricity in the presidency who will oversee all aspects of the country's electricity crisis response.

To avoid confusion the president indicated that the minister of public enterprises, currently will remain Eskom's shareholder representative and will steer the power utility's restructuring.

The state of disaster will according to the president enable practical measures that are needed to support businesses in the food production, storage, and retail supply chain, including for the rollout of generators, solar panels, and uninterrupted power supply and where technically possible, the freshly gazetted regulations will enable the government to exempt critical infrastructure and institutions such as hospitals and water treatment plants from load-shedding. This will enable the government to accelerate energy projects and limit regulatory requirements while maintaining rigorous environmental protections, procurement principles and technical standards.

Other efforts to address the crisis include supporting Eskom with additional funding for diesel, needed to run its gas-fired turbines, as well as tax incentives for businesses and households that install solar panels.

The 15-year energy crisis has threatened to break the back of the country's already fragile economy. The South African Reserve Bank forecast that the economy would grow a mere 0.3% in 2023 because of load-shedding's onslaught. At that rate, the country's unemployment will remain stubbornly high, as the country risks a repeat of July 2021 unrests.

Load-shedding means that households and our supermarkets and shops are unable to keep food fresh, water supply is often disrupted, traffic lights do not work, streets are not lit at night. Without a reliable supply of electricity, the efforts to grow an inclusive economy that creates jobs and reduces poverty will not succeed.

In addition to the solar panel tax incentive announced by the minister during budget speech is expected to give more detail about the government's plan to relieve Eskom of a portion of its R400 billion debt. The debt takeover, which was announced in the treasury's medium-term budget policy statement in October 2022, is expected to free up the power utility's finances so that it can invest in critical maintenance.

The national treasury is also working on adjustments to the bounce-back loan scheme to help small businesses invest in solar equipment and to allow banks and development finance institutions to borrow directly from the scheme to facilitate the leasing of solar panels to their customers.

11. References

Abdullar, S & Mariel, P, (2010). Choice Experiment Study on the willingness to pay to improve electricity services. *Energy policy*, 4570-4581.

Bisser, C (2015, May1). How load-shedding hurts the economy.

Nersa.(2015). Consultation Paper Eskom Costs of Unserved Energy. Pretoria: Nersa.

The Mail & Guardian. 2023-02-09. Retrieved "sona; Ramaphosa announces state of disaster, new electricity minister to tackle energy crisis".