



# *Renewable Energy and Energy Efficiency in Industry and COVID-19 realities*

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# Presentation Points

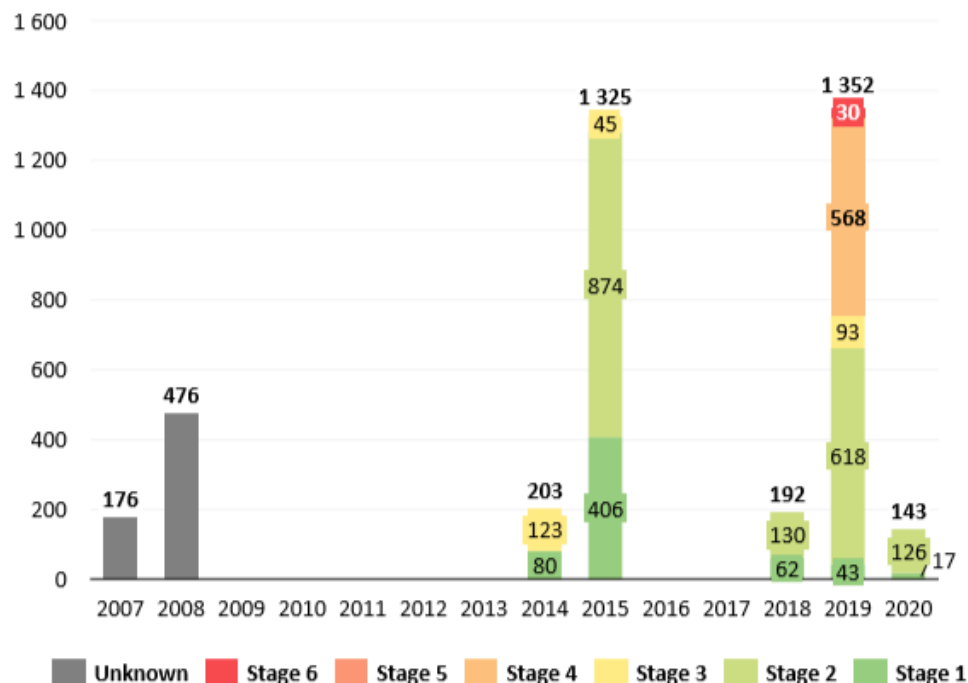


- Covid-19 Realities
- Mitigation Measures
- Case Study
- Opportunities

# 2019: Most intensive load shedding year



Load shed [GWh]



Year	Duration of outages (hours)	Energy shed (GWh)	Est. econ. Impact (ZAR-bln)
2007	-	176	8-15
2008	-	476	21-42
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2014	121	203	9-18
2015	852	1325	58-116
2016	-	-	-
2017	-	-	-
2018	127	192	8-17
2019	530	1352	59-118
2020 (YTD)	80	143	6-12

# South Africa – Post Covid V-Rebound



# Global Equity Markets Rebound



Top 5 names have been responsible for all the US equity performance this year



Tech leadership has led to significant concentration → higher than tech bubble





## Shift in priorities:

- Government identified the green economy as one of 12 job drivers which aims to create 5 million additional jobs by 2030.
- Government's New Growth Path envisages that as many as 300 000 new direct jobs could be created in the areas of natural resource management and renewable energy construction.

## Covid-19 Impact:

- Hospitality, Chemicals, Retail, General Industrials and Financial sectors were worst affected.
- Metals & Mining, Pharmaceuticals and Agro-processing least affected.
- Digital technology is the medium for a rapid and smart recovery.
- Renewable Energy adoption was accelerated by influx of large scale energy project developers.
- Investors keen to shape a new RE investment frontier.

# Covid Support Measures



## Government:

- Debt Relief Finance Scheme
- Restructuring SEFA-funded loans
- Business Growth Resilience Facility
- Agricultural Disaster Support Fund
- Tourism Relief Fund
- Tax Relief Measures
- Loan Guarantee Scheme

## Business:

- Cash, PPE, Food, Water, Sanitizer, Safe Water Access, Hospital Upgrades,.
- Developed unique blend of alcohol-based chemicals to be used in the manufacture of hand sanitizers
- Developed a novel track and trace solution to identify affected people
- Manufactured face shields from recycled beer crates



# South Africa: Embedded Generation Potential



- Small-Scale Embedded Generation (SSEG) market is dominated by rooftop solar PV.
- Estimated current installed capacity in SA is ~700MW.
- More than 200MW of solar PV panels were installed in 2018.
- Retrofitting 100 000+ public buildings which could exceed 1GWp of rooftop solar PV installations by 2025.
- 18% local electricity distribution utilities are regulated for SSEG.
- €12.5 billion invested since 2011 with additional 6.3 GWp RE generation capacity, through REIPPPP.
- Annual RE procurement of 1.1 GW: 670 MW of wind and 450 MW of solar PV.
- Mining sector embedded generation approval.





- Largest paper and plastics packaging and recycling business in Southern Africa.
- Operating divisions: Paper Manufacturing, Paper Converting, Paper Recycling and Plastic Converting.
- Its integrated circular business model is focused on closing the loop in plastic and paper packaging through recycling and beneficiation of recyclables.
- In 2016 its Mpact Atlantis plant commenced EnMS implementation.
- Conducted steam and compressed air system optimization assessments at various sites.
- Regularly train their management teams at the quarterly Mpact Centre of Excellence workshops.



## Mpact Paper

- Energy efficiency projects and DSM strategies continue to be implemented across the Group.
- Mpact installed a 750kWp solar PV plant at Versapak Paarl, a 1 000kWp solar PV plant at Springs and is developing a Group-wide solar PV roll out programme.
- Extensive work is being done to find cost effective alternative energy supply concepts such as combined heat and power plants and waste-to-energy solutions.

### MPACT'S FOOTPRINT

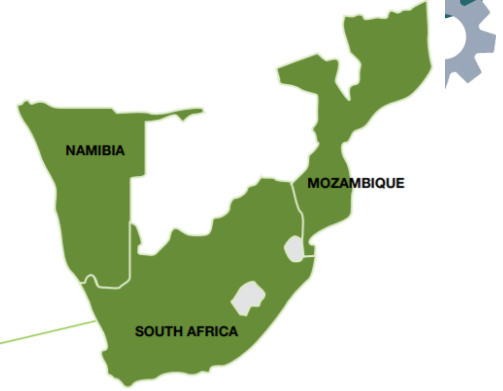
Mpact's national footprint, leading market positions and proximity to customers contribute to faster response times, reduced transport costs and economies of scale.

**4,889**  
employees

**3** countries

**Level 3** ★ ★ ★  
B-BBEE Contributor

**41**  
operations across South Africa,  
Namibia and Mozambique



# Covid Opportunities



- Redouble efforts on EnMS action plans to drive down kWh consumption
- Squeeze every kWh out of energy systems through optimisation
- Lower interest rates mean lower hurdle rates, while lower inflation levels means lower IRRs, presenting interesting investment opportunities
- Lower production volumes forces review of energy intensity metrics and also presents opportunity to train staff
- Invest in digital technology to improve controls and shorten response to anomalies
- Automate plant systems to limit human contact
- Change shift patterns, reconfigure work environment and work remotely
- Expand use of Scada systems to track process and operator movement to drive resource efficiencies
- Exploit low hanging embedded generation and renewable energy opportunities, e.g. waste heat recovery



**Thank you**

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