



Western Cape
Government

FOR YOU

Department of Health

Impact and Mitigation of Load Shedding

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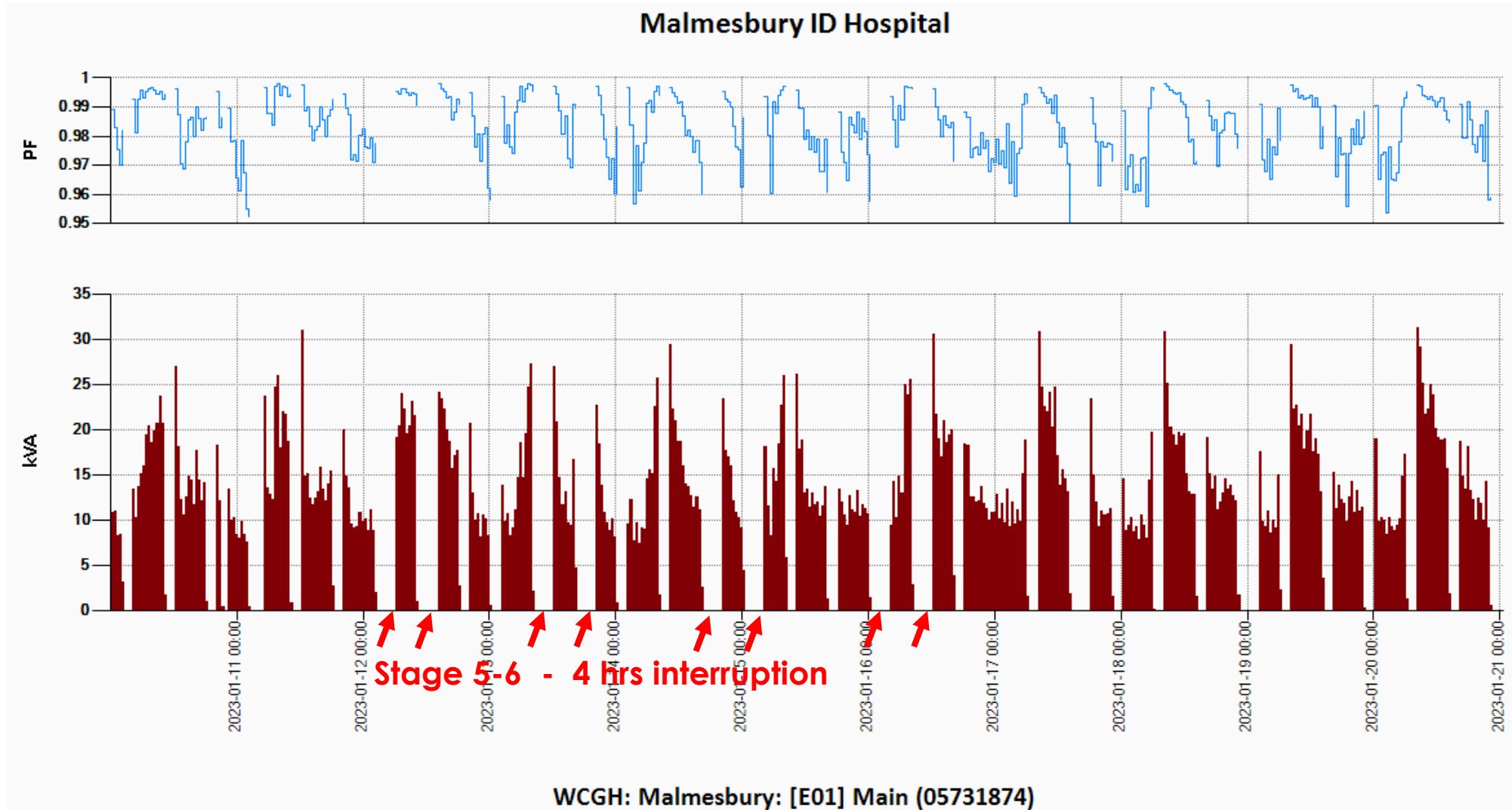
Impact of Load Shedding on WCG Health

Impact

- Over **3000 hours** of any stage of load shedding **during 2022** (over 200 days)
 - This impacts each electricity customer in some way (3000 hours total)
- **Every day so far during 2023** being impacted by load shedding – **45 days** (up to Stage 6 at times)
- Rural areas outside City of Cape Town Metro badly affected, as no Stage reduction in Rural Municipalities -
 - City of Cape Town Metro has **generation capacity to reduce stage(s) 5am – 10pm** due to Steenbras Pumped Storage Power Station
- All **Rural Health Facilities without generators** affected by Eskom's load shedding schedule unless Local Municipality is able to maintain supply to that hospital, while switching off all other customers on same electricity network

Impact of Load Shedding on WCG Health

Visual understanding of impact on Operations/ Service – Facilities without generators



Impact of Load Shedding on WCG Health

Risks

- **Elective theatre time** lost when theatres not with UPS backup
- **Electronic equipment failure**, due to multiple switchovers to generator and back. This impacting health facilities and laboratories
- **Regular batteries fail in rural areas** (backup for electronics: fire alarm, intruder, access)
- **Forensic Pathology negatively impacted – fridges normally not on generator** having long interruptions, especially Stage 5 upward with 4 hour interruptions
- **Water pressure** being reduced impacts water supply
- **Autoclaves** used for sterilisation of surgical equipment become **compromised**
- Potential **Cold Chain compromise**
- **Generators** – increased incidents of generator **failures**
- **Diesel** - Supply becomes **constrained especially at higher stages** of Load Shedding. The suppliers are unable to meet the increased demand
- Other **basic essential utility services** are being affected – **sewer / water treatment plants**
- Health services **impacted negatively in Rural areas** – service halts when power goes off **due to IT network disconnection** (local server failure)

Impact of Load Shedding on WCG Health

Mitigation Measures

- Apply for **load shedding exemption** where the **electrical grid allows** for it
- Maintain **relationship with City of Cape Town and Eskom**. They deliver **immediate assistance** when **facilities suffer generator failure**
- **Same approach** with **other municipalities** with **large and/or regional Hospitals**
- **Central online portal** to **monitor diesel levels** at health facilities
- **Diesel resilience** by means of **dedicated diesel bowser** (trailer). Able to **deliver diesel to facilities** in cases where the **RT supplier is unable to** (only in the Metro)
- **Active monitoring** of the situation with **immediate response capability**
- The Department has **representation across all Disaster Management platforms** – this allows for **early warning** as well as **assistance from various role players**, as and when required
- **Battery and Inverter Strategy** for **Rural PHC Clinics** to maintain continuity of electricity supply without installing generators, using ESCO, now also FPS

Backup generation capacity – WCG Health

- Emergency **standby generators** at **all Hospitals, Community Health Centres, Community Day Centres** and **some other facilities as approved or part of hospital sites**
- Part of **overall WCGH Electrical Supply Preparedness Plan** to respond to serious power interruptions and blackouts
- Facilities in WCGH with backup power – **290** Facilities
 - out of **436**, as clinics, satellite clinics, some other facilities, do not have generators
- Total backup power capacity – **51 500 kVA**, or **41.2 MegaWatt (MW)**

Less Dependence on Eskom Power – on-site Renewables

- Participating in WCGTPW ESCO (Energy Service Company) Contract
- 1st - Reducing energy consumption at **15 hospitals:1 – 3 MW** electricity **demand reduction**
- 2nd - Install financially feasible (10-year payback) **grid-tied or hybrid solar PV systems** at these **15 hospitals to start**, then further to **all hospitals via ESCO contract**:
 - ESCO contract provides the **maintenance for 10 years**
 - 15 hospitals – total of **5 MW (peak) renewables contribution** to daytime grid power supply, either via:
 - ✓ feed-in (grid-tie), or
 - ✓ reduction of energy consumption (hybrid)
 - ✓ Install energy storage where appropriate to support power to essential services during load shedding, via hybrid systems
- Applying for **new dedicated feeders for hospitals** where this is feasible (e.g. **Khayelitsha Hospital**) – will prevent switch-off during load shedding

List of Facility exempted by load shedding up to Level 6

Mitigation Measures

- Load shedding **exemption where the electrical grid allows** for it:
 1. George Hospital
 2. Groote Schuur Hospital
 3. Karl Bremer Hospital
 4. Mitchell's Plain Hospital
 5. Mowbray Maternity Hospital
 6. New Somerset Hospital
 7. Red Cross Children's Hospital
 8. Tygerberg Hospital
 9. Victoria Hospital
 10. Wesfleur Hospital

Khayelitsha Hospital - working with ESKOM to provide a dedicated feeder from the main sub-station, to allow for exemption

Thank you