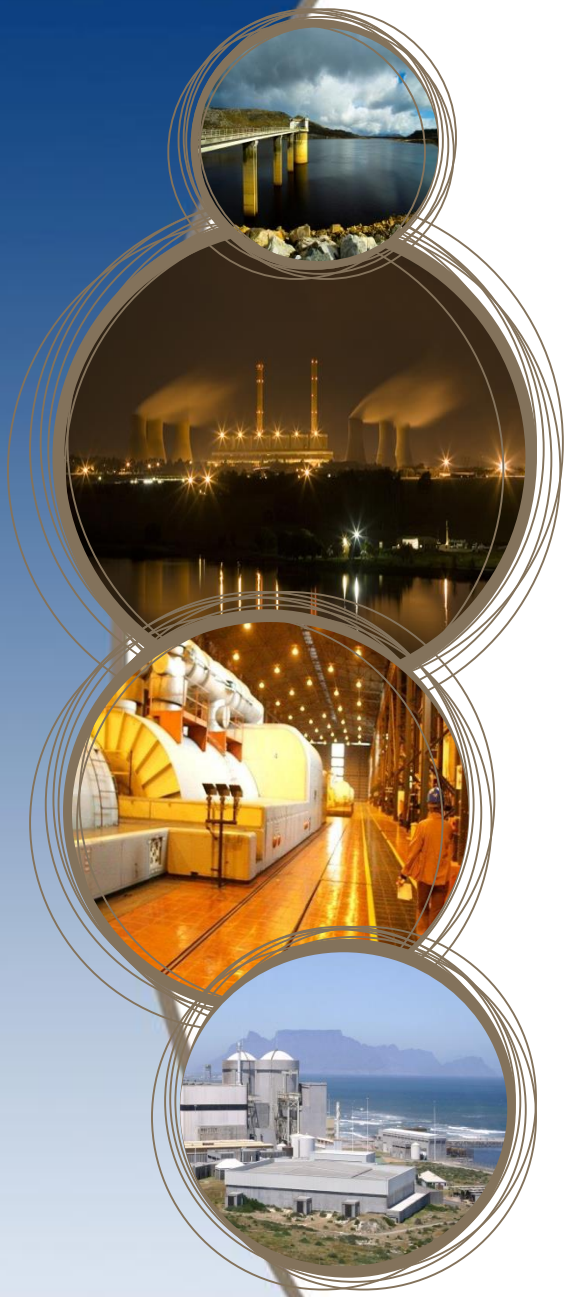


System Status and Outlook Briefing

Jan Oberholzer: Chief Operations Officer
Phillip Dukashe: Group Executive Generation (Acting)
Segomoco Scheppers: Group Executive Transmission

Megawatt Park: Franklin Auditorium
15 March 2021

Contents

Overview and summary of Eskom system performance (1/2)

The impact of **COVID-19 initially reduced** the **energy demand,** allowed for the execution of **increased reliability maintenance,** and opportunity to address emergent issues, including those that contributed to partial load losses (PLLs).

However, the subsequent **move to Levels 4, 3, 2 and 1** during September 2020 to February 2021 saw an **increase** in **demand** and **lower EAF**, significantly **increasing OCGT usage**, especially in July and August 2020, and from December 2020 to March 2021 coinciding with the **peak in maintenance**

Focused investment on **Rain Readiness plans**, safe operation of **Ash Disposal** facilities, **Emission and Water management risks** helped protect against incurring further capacity loss – in particular, tropical **storm Eloise** had **minimal impact** on Generation production

Unfortunately, as at March 2021 increasing breakdowns and low plant availability meant that Eskom was **forced to implement load shedding totaling 43 days since 01 April 2020** (including 15 March 2021)**,** compared to **46 days for the 2020 financial year ended 31 March 2020**

The primary cause of the October – March load shedding was the **high levels of unplanned losses** throughout the Generation fleet. However, the increase in planned maintenance also contributed (the summer plan assumed 11 000 MW unplanned losses):

- **Trips**, other units forced off and late return of units (up to ~4 000 MW)
- **Camden** not available due to ash dam constraints (~1 300 MW up)
- **Koeberg** unit 1 due to Steam Generator leak (920 MW) – **no** nuclear safety concern
- Generally poor performance at **Duvha/Tutuka/Kusile** (~2 300 MW in March 21)

Overview and summary of Eskom system performance (2/2)

- **Six Power Station Manager positions filled** (one vacant) – will soon fill the position of Group Executive Generation.
- **Planned maintenance** (PCLF) which focuses on reliability maintenance **increased** and currently around **12%** (between 5 500 MW and 7 000 MW) compared to **9%** the previous year.
- The power system remains **vulnerable** and **volatile with the risk of load shedding to be significantly reduced after the completion** of the first and second tranches of reliability maintenance
- Ongoing focus is placed on **correcting new build design defects**, **extending the life of operating units**, **reducing unplanned outages** and **managing coal quality** and **wet coal handling issues**.
- The **Koeberg Long Term Operation (LTO)** project is proceeding as per schedule, to achieve extension of plant life by 20 years from 2024 to 2044/5.
- **Transmission** network **performance** has seen a marked **improvement** with continued focus on maintenance.
- **Distribution customers** continue to experience **better** than target network **restoration time** and **improved system performance** both from a frequency and duration of interruptions
- We **regret** that we are **inconveniencing customers** while we address system constraints

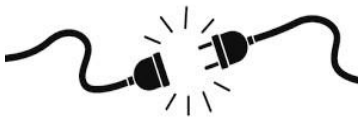
Nuclear Performance YTD 28 February 2021

82.64%

EAF Actual YTD vs YTD Target of 84.65%

0

UAGS Trips vs. target of 1 for Q3 YTD FY21



2.07%

Forced Loss Rate vs. YTD Target of 2.80%

88.5%

SGR Readiness vs target plan

95%

LTO Readiness vs target plan

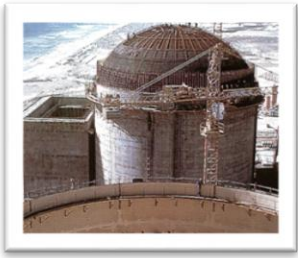
- **Steam Generator Replacement** (SGR) – The readiness was impacted by design and manufacturing challenges and readiness of facilities, which are being addressed with the contractor. Three of the six SGs are on site, and installation is planned to commence in January 2022.
- **EAF declined** in the period due to Unit 2 outage delays and early start to the outage of Unit 1 due to a steam generator tube leak.

Koeberg Nuclear Power Station
Recent noteworthy items related to Koeberg

- **Unit 1 refueling and maintenance outage currently in progress,** started on 03 Jan 2021,
  - The Outage started five weeks earlier than planned, due to a forced shutdown caused by a Steam Generator Tube Leak.
  - After the fuel was unloaded from the reactor, the steam generator leak location has been identified and the unit is planned to return to service in May 2021. **No nuclear safety risk**
- **Unit 2** operating at **full power** for **142 days,** since previous refueling and maintenance outage, completed on 21 October 2020. **71 days vs the 56 day plan, due to 19% scope of works growth and COVID-19 impact** (contributing to the lower EAF).
- **Steam Generator Replacement** (SGR)
  - The first three SGs have been completed and delivered to Koeberg.
  - The first steam generator replacement is planned for the next Unit 2 Outage in January 2022

- The **September and November 2020 earthquakes** in the Western Cape area, which measured 2.7 and 3.5 respectively on the Richter scale, had **no impact the plant.**
  - Koeberg is designed for a Richter scale 7.0 earthquake & further improvements have increased resilience of plant to major events.

- Koeberg's **containment buildings remain fully effective** to withstand even the most severe possible accident as shown by in-service testing and analysis – the maintenance, testing and inspection programmes will continue to manage the containment health for the remainder of the plant life.



Group Capital Performance YTD 28 February 2021

799MW YTD

vs YE target of 1 594MW

Execution of Major Plant Defects Correction

vs target plan

Execution of Emissions Control Projects

Execution of Ash Dam Projects

- Commercial Operation (CO) of Kusile Unit 2 successfully achieved on **29 October 2020**
- CO of Kusile Unit 3 and Medupi Unit 1 is targeted for **March 2021 and July 2021**, respectively
- **Major plant defects correction:** First design modification successfully completed on Medupi Unit 3 in April 2020 as the first unit. Subsequently, these modification also completed on Medupi Units 1, 2, 4 & 6). The design modifications will be rolled-out across the remaining Medupi unit and all Kusile units, as part of the major plant defects correction plan.
- **Execution of emissions control projects:** Tutuka dual flue gas conditioning (DFGC) and Lethabo high frequency transformer (HFT) projects completed. Installation of high frequency power supply (HFPS) at Kendal underway. However, the portfolio is experiencing notable construction and contractual challenges, and COVID-19 constraints that are negatively impacting execution.
- **Execution of ash dam projects:** Commercial issues, inclement weather and COVID-19 constraints are impacting execution of the projects. Lessons learned on the Camden Ash Dam are implemented on the other projects.

Major plant defects correction: progress feedback

Medupi Power Station

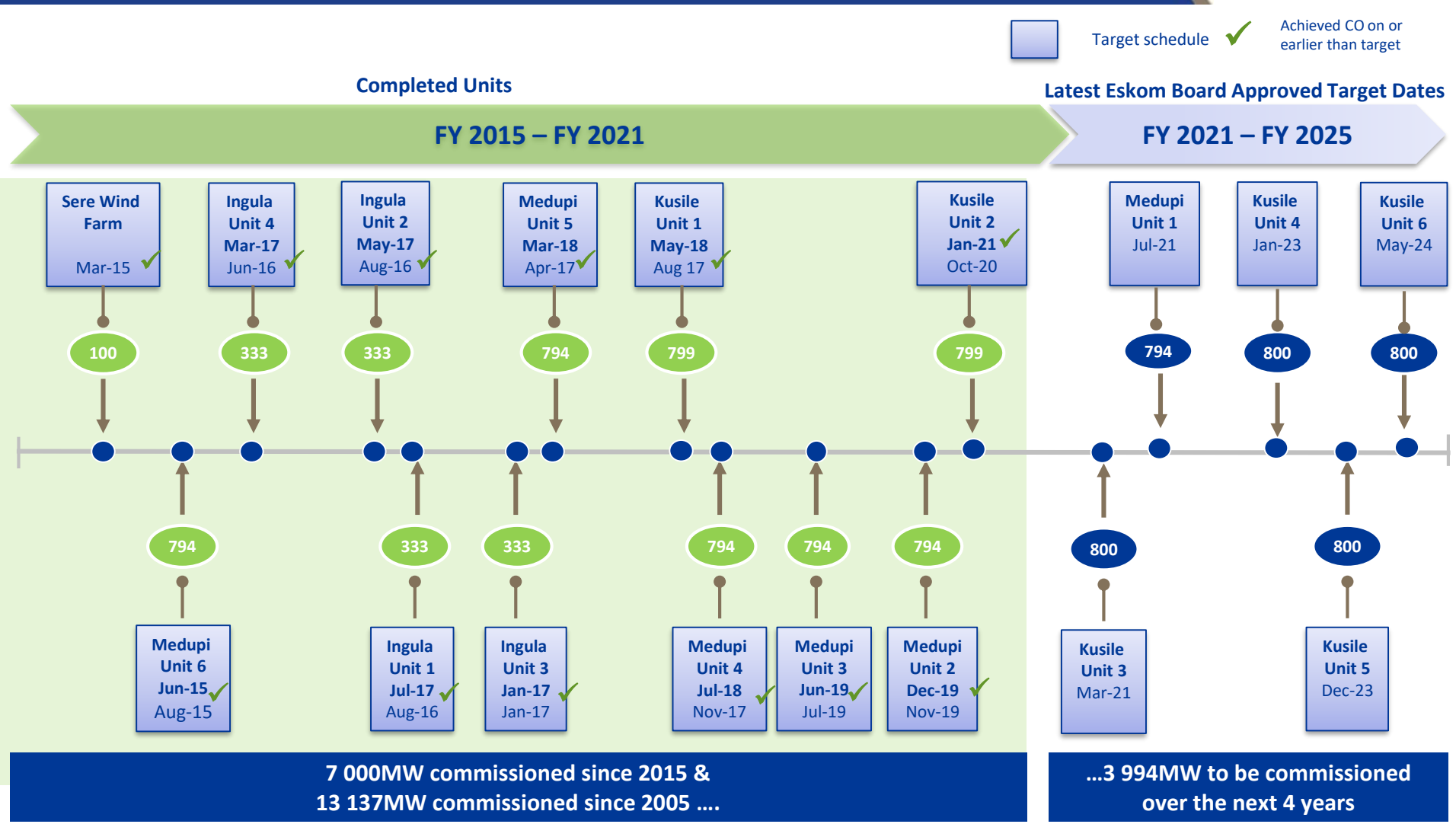
- **Evaluation tests** and **inspections**:
  - ✓ Completed on Medupi Unit 3. Roll-out of successful modifications is progressing and further improvements are being developed.
- **Design modifications** roll-out include:
  - ✓ **June 2020:** Unit 6 - Gas Air Heater and Fabric Filter Plant
  - ✓ **September 2020:** Unit 1 - Gas Air Heater, Fabric Filter Plant, Erosion Protection, Short Lead Items on Milling Plant
  - ✓ **October 2020:** Unit 4 - Gas Air Heater, Fabric Filter Plant, Erosion Protection, Short Lead Items on Milling Plant
  - ✓ **January 2021:** Unit 2 Gas Air Heater, Fabric Filter Plant, Erosion Protection, Short Lead Items on Milling Plant
    - **March 2021:** Unit 5 – 75 day outage start
    - Mill long lead items approved and installation to be done during mill outages

Kusile Power Station

- Boiler plant modification outages to start mid 2021 for running units (1, 2 and 3)
- Boiler plant modifications on construction units (4, 5 and 6) to be done before Commercial Operation of each respective unit
- Unit 3 is currently in its testing and optimisation phase
- June 2021: Unit 1 – 75 day outage start
- September 2021: Unit 2 – 75 day outage start
- January 2022: Unit 3 – 75 day outage start
  - Mill long lead items approved and installation to be done during upcoming unit and mill rebuild outages

Interim Results: The availability and reliability of the new units at Medupi are steadily improving

Status of GCD New Build Programme (inception to date):
Focus is on bringing new capacity online and driving plant defect corrections



Transmission Performance – 28/02/2021

SM<1 of 2.88

vs YTD target of 3.24

97.1% Maintenance Completion

vs YTD target of 97%

2 Major Incidents

vs YTD target of 2

- **System reliability performance improvement** attained with reduced SM<1 losses and Major Incidents relative to previous year *(FY21 YE performance: SM<1 of 4.36 and 3 Major Incidents)*
- **High levels of maintenance completion** has been sustained notwithstanding initial challenges due to COVID-19 lockdown
- Asset condition risks require **increased asset renewal investment** going forward for future operational sustainability
- **Ongoing theft** and **vandalism** has **impacted operations** creating risks for interruption incidents

Distribution Performance: 28 February 2021

Eskom

Electrification

92 468

vs.

YTD Target of 73 190

SAIDI

36.06

vs.

38.00 Tolerance

SAIFI

13.50

vs.

19.60 Tolerance

Planned Maintenance Completed

90.8%

vs.

YTD Target of 93%

Refurbishment Spent

R265m

vs.

YTD Target of R354m

Restoration Time

92.7%

vs.

90% Target

- **Network performance**, measured by SAIDI and SAIFI, is **exhibiting** a **trend of improvement**.
- **Planned** M**aintenance** activities have **ramped up to 90.8%** of the scheduled maintenance programme.
- **Refurbishment spend** to improve network reliability is at **75%** of target although on an upward trend.
- **Theft** and **vandalism** of network equipment impacts operations and the reliability of supply to customers. Eskom has embarked on several security enhancement projects to manage the security risk.
- **Electricity theft** continues to manifest as an operational, financial and public safety risk.

Generation performance for YTD Feb FY2021

64.6%

Availability vs. 70.0% internal target for FY21

479

UAGS Trips vs. YTD 518 in FY20

19.8%

Unplanned load losses vs. 18.5% target for FY21 (down from 23%)

4041 MW

Partial load Losses vs. 3150 MW target for FY21

12.1%

Planned maintenance vs. 9.0% target FY21

R3.2bn*

Open Cycle gas turbines cost vs YTD provision of R789m

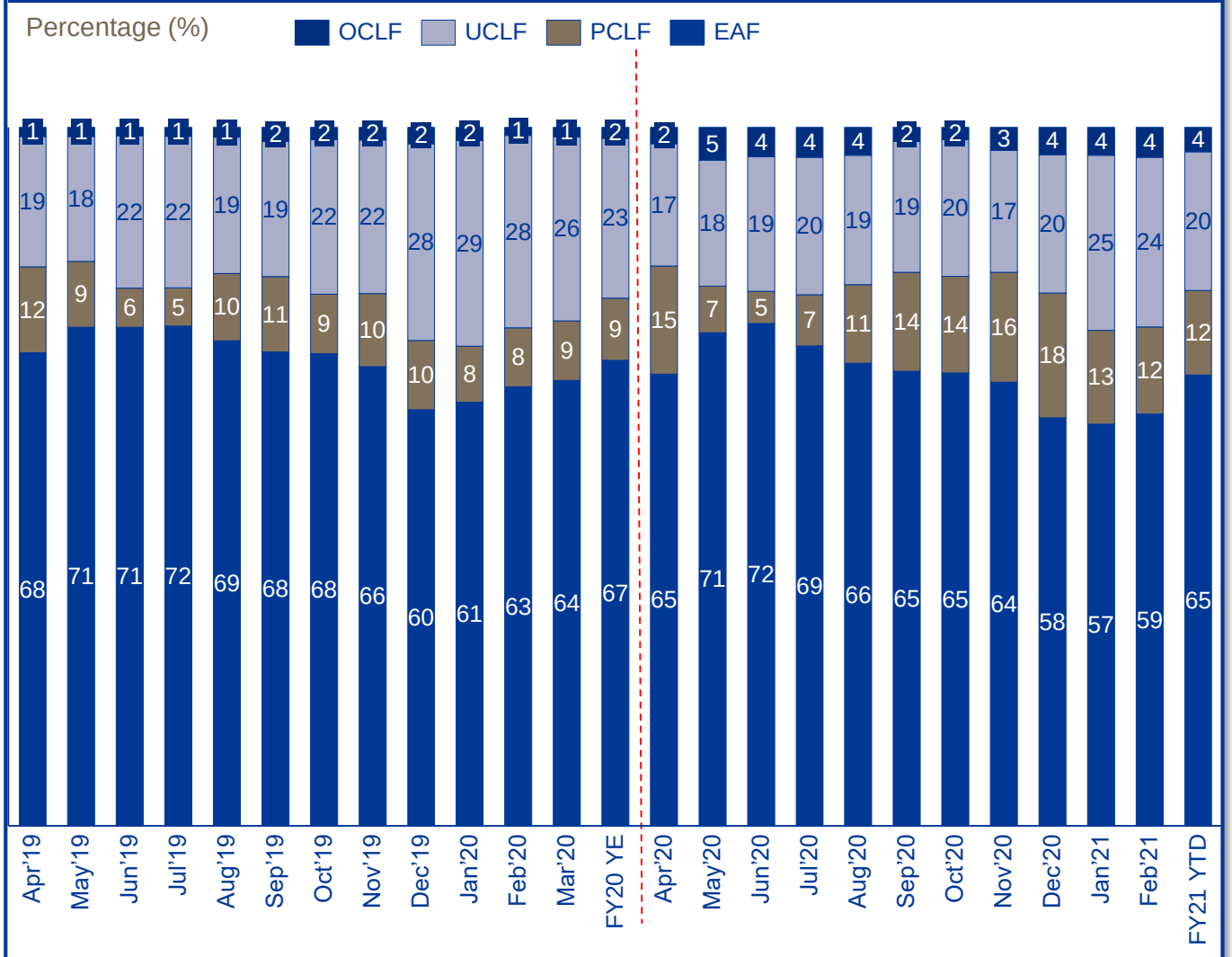
* Eskom OCGT end Feb data as at 2 March 2021

Technical Targets are awaiting approval and are therefore subject to change.

Figures as at end Feb 2021

The FY2021 EAF performance is lower overall compared to the FY2020 performance

Generation monthly and YTD performance

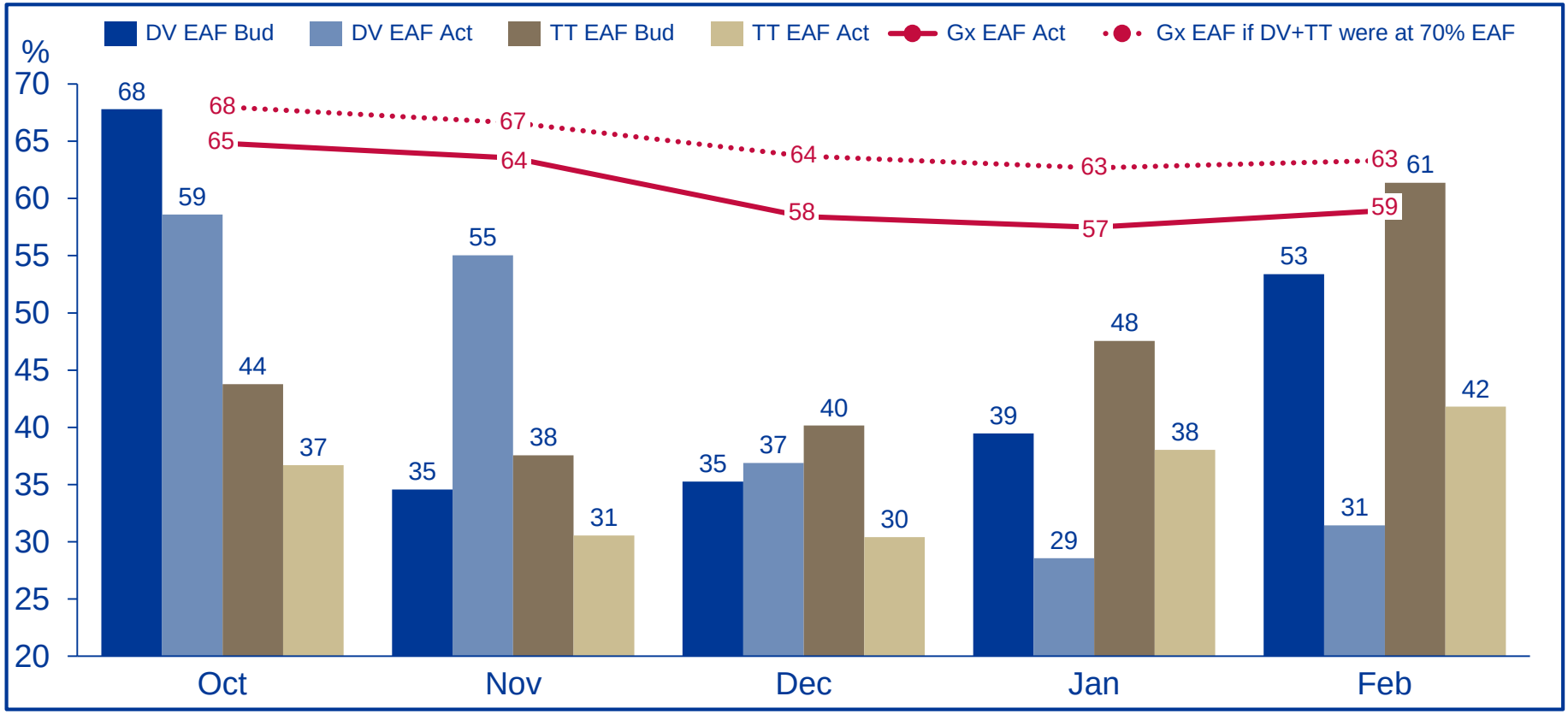


Contributing factors

- EAF improved in May and June 2020; however it has been below 70% since July due to a combination high Planned and Unplanned Losses.
- Camden's ash constraint continues to contribute about 2% to total OCLF.
- Slips, boiler tube failures, trips, partial and full load losses all contributed to the high UCLF through Dec-20, Jan-21 and Feb-21.
- Generation fleet YTD EAF at 64.6% has dropped below the January YE projection of 64.63%.
- During the year, a delicate balance was required to giving the plants opportunity for planned maintenance and the having the plants available to support the system. The ratio of short-term to long-term is about1:2

YTD Figures as at end Feb 2021

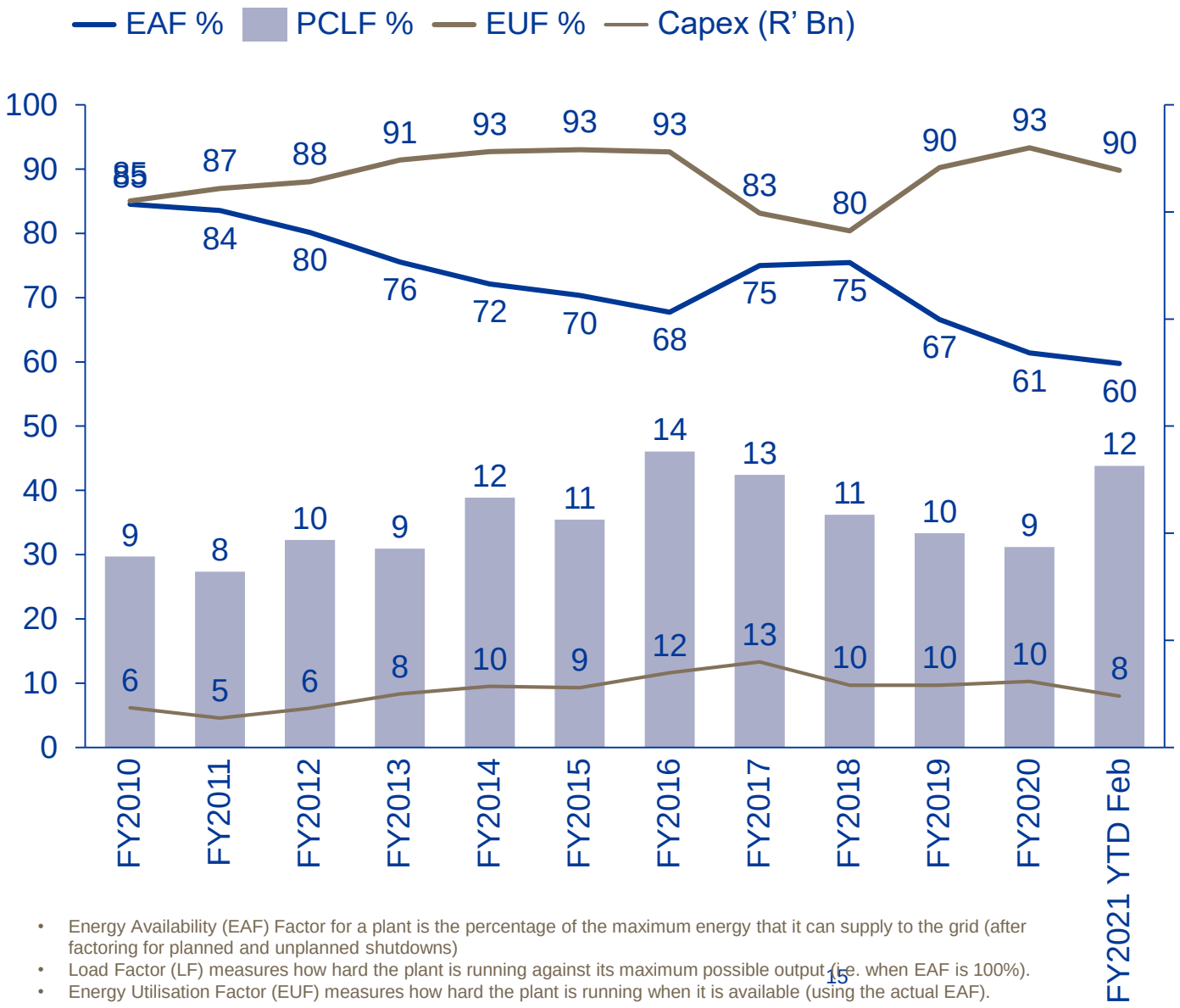
The impact of performance at Duvha and Tutuka on Generation EAF (%)



Key Insights

- Tutuka's performance has been constantly below the budget for this financial year, with the gap increasing further towards the end of the year
- Duvha had a better performance vs the budget in November and December, however the EAF performance turned for the worse in January and February 2021
- In the last 5 months, the lower than expected availability of Tutuka and Duvha, reduced Generation's EAF by between 3% and 6% assuming they could perform at an average EAF of 70%

Coal Fleet Yearly EAF Performance shows that the performance has continually been declining with year

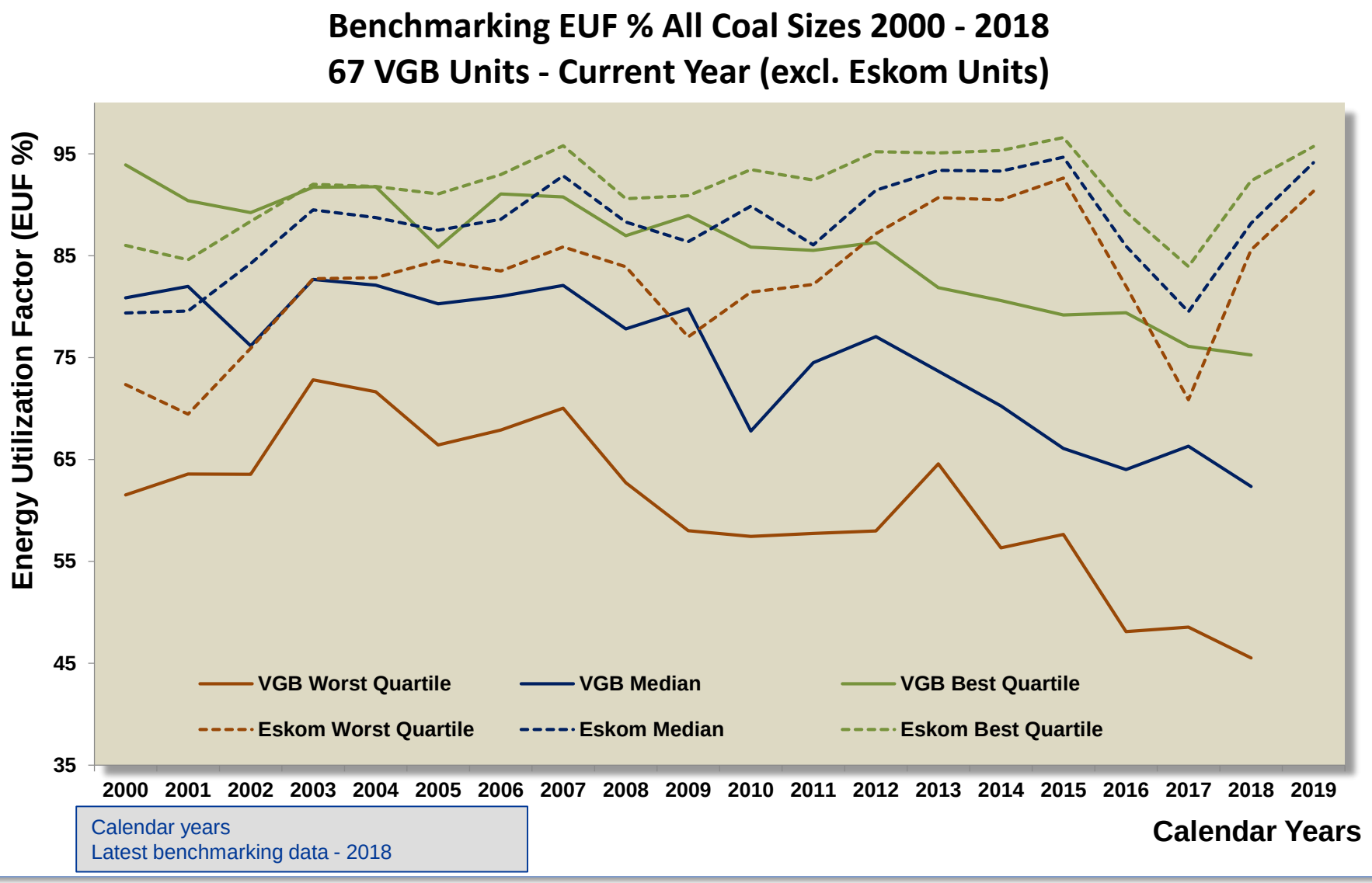


- Energy Availability (EAF) Factor for a plant is the percentage of the maximum energy that it can supply to the grid (after factoring for planned and unplanned shutdowns)
- Load Factor (LF) measures how hard the plant is running against its maximum possible output (i.e. when EAF is 100%).
- Energy Utilisation Factor (EUF) measures how hard the plant is running when it is available (using the actual EAF).

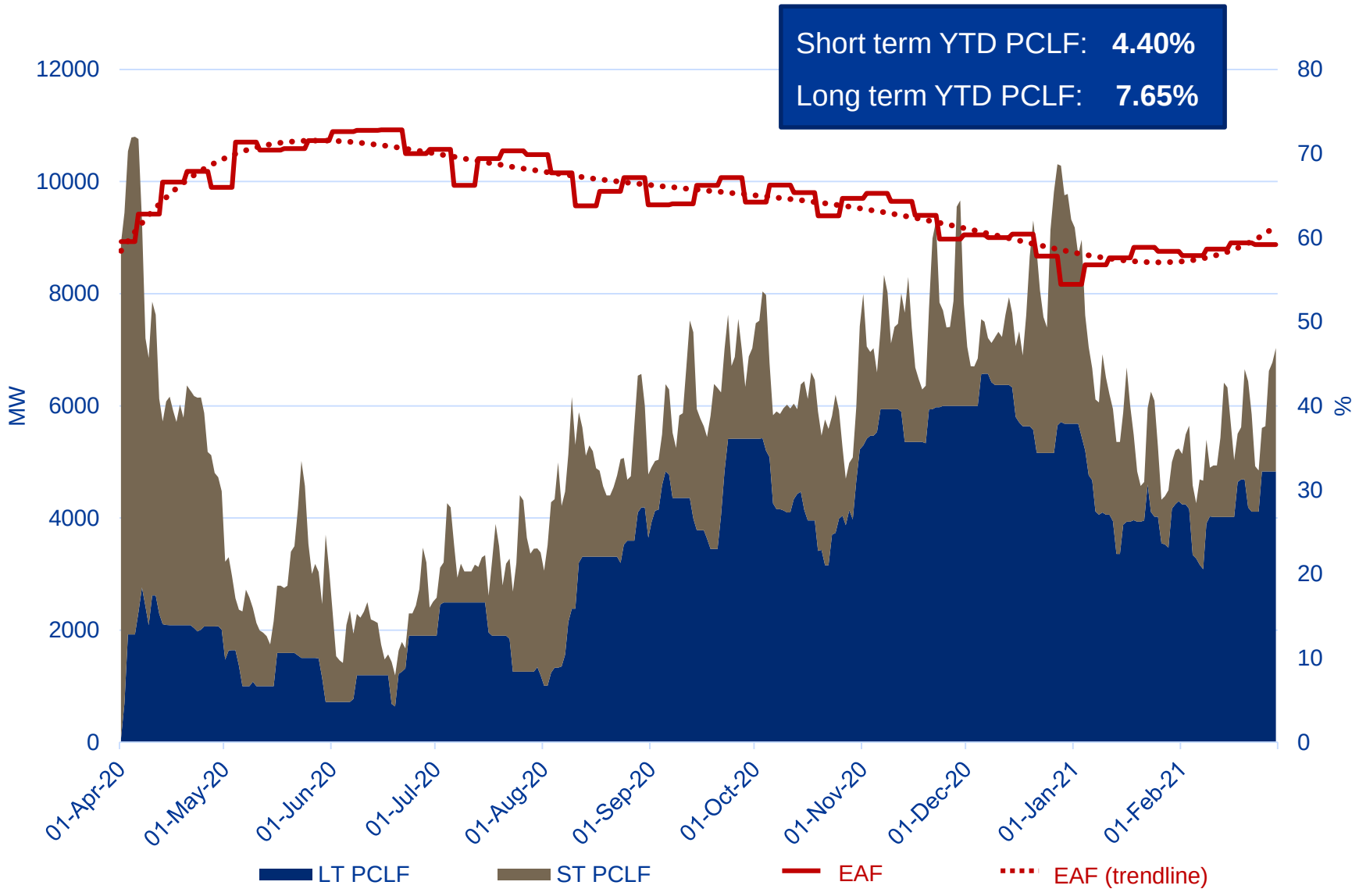
Key Insights

- Yearly Coal EAF has been steadily declining since FY2010 with an improvement in FY2017 and FY2018.
- The improvement could partly be related to increased maintenance in FY2016 and FY2017.
- Performance shows a direct relation between EAF and EUF, i.e. the drop in availability, results in higher utilisation of the available plants capacity.
- In recent availability has significantly reduced resulting in the need to run the available coal plant hard to meet the system demand.
- The load factor has been declining over the years

Benchmarking EUF % - Eskom units typically run much harder than benchmark units



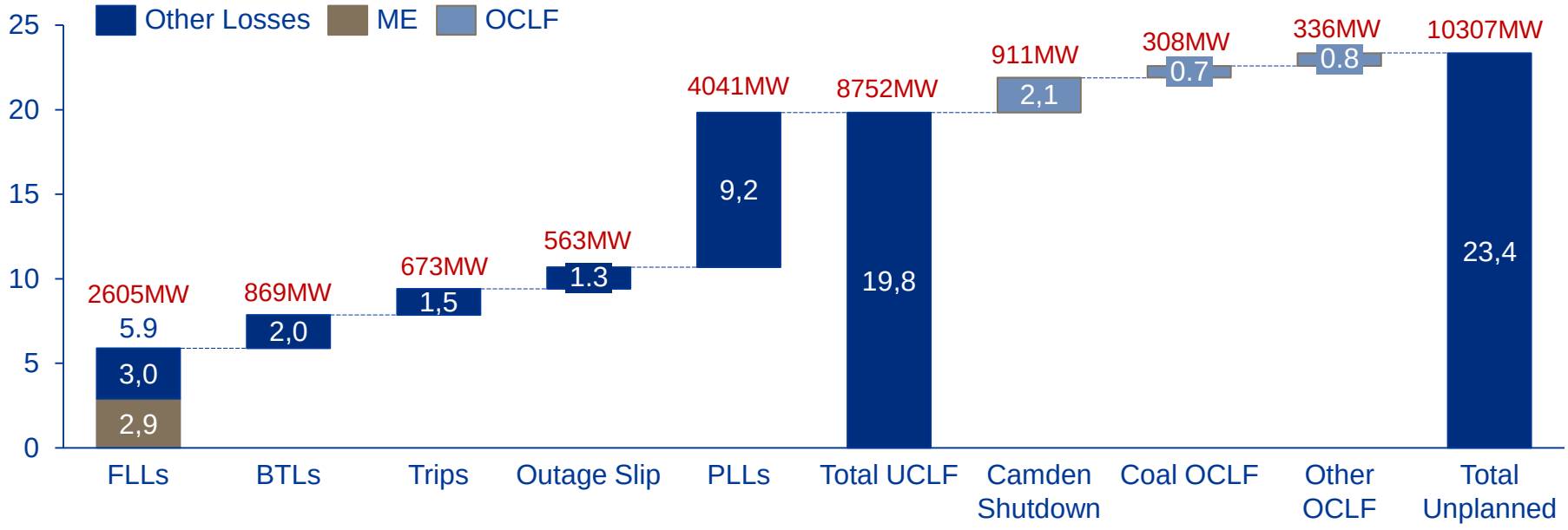
The beginning of the FY saw an increase in short term maintenance in April with the long term maintenance increasing over the summer months this contributed to the decreasing EAF



Updated as at 11 March 2021 for Commercial Units

Partial Load Losses, Full Load Losses, the Camden Ash Dam constraints, slips and major incidents have been the major contributors to the increase in total unplanned losses

Build-up of Unplanned Losses for FY2021 Feb YTD from major contributors



Key insights

- Partial Load Losses (PLLs) continues to be the biggest contributor to UCLF for FY2021 YTD
- 16 Events (**DV2, DV4, KR3*2, KR4, ML2, MJ2, HN7, KD5, TT2, TT3, TT5, TT6, KB1, KB2 & MT3**) contributed more than 300GWh each towards Major Events (300GWh is equivalent to a 600MW unit being off for approximately 3 weeks).
- 436 Full load loss events account for 3.0% UCLF and 150 BTL events account for 2.0% UCLF
- 532 UCLF related trip events account for 1.5% UCLF
- 80 Outage Slips account for 1.3% UCLF
- The Camden Shutdown accounts for 2.1% OCLF
- Coal related OCLF accounts for 0.7% OCLF

YTD Figures as at end February 2021

Something Important to Note

Impact of COVID-19 and the Eskom Response

Impact:

- Outages and maintenance (Generation/Transmission/Distribution) have been delayed or extended, primarily due to the unavailability of contractors – this also include delays on new build projects.
- Additional requirements for protection against COVID increase the cost of operations and require resources to be diverted from other functions.
- Experience other challenges such as ensuring adequate coal, fuel oil, diesel and oxygen where supply lines have become disrupted or supplies had to be prioritised.

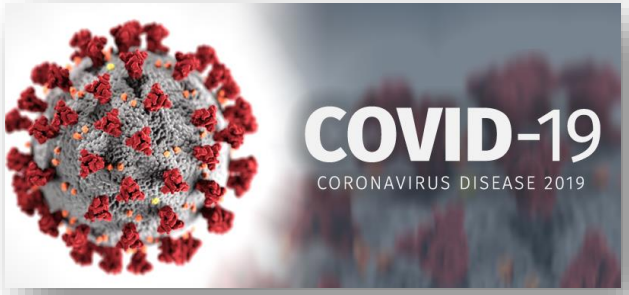
Response:

- Since the beginning of the pandemic, Eskom has been operating under Alert.
  - ✓ This means that the Exco Emergency Response Command Centre (ERCC) has been activated, as have the divisional Tactical Command Centres (TCCs)
  - ✓ These centres monitor the situation and provide direction for the business to mitigate any impacts
- For Generation, the Generation TCC has been meeting at least weekly and provides guidance to the sites in terms of actions required.
- Each site has and continually reviews its COVID risk assessments and Business Continuity Plans.
- Exco, since the start of Covid-19, meet every Tuesday at 17h00 in order to discuss related matters

Eskom dashboard for Corona Virus

Dash-board for CORONAVIRUS (SARS-CoV-2) COVID-19 as at 03 March 2021

		Cumulative Cases	Total
Number of people who have tested positive for COVID-19	Employees	3 467	4 190
	Contractors	723	
Number of people who have recovered from COVID-19 and are back at work	Employees	3 380	4 088
	Contractors	708	
Number of people who have died due to COVID-19 related illnesses	Employees	89	104
	Contractors	15	



Contents

The plan covers load losses, coal stock, people issues and preparation for adverse circumstances and is aligned to the Maintenance Recovery project

Eskom

1. New Build
2. Unit Trips
3. Units on long-term forced outages
4. Partial losses, Boiler tube leaks
5. Outage duration and slips
6. Human Capital
7. OCTG Usage
8. Reduce emissions
9. Coal Management

New Plant Major Design Defects: Medupi and Kusile Power Station

1 Medupi Power Station

- **December 2020: Evaluation tests and inspections completed on Medupi Unit 3.** After implementing design defect modifications, in April 2020 Medupi Unit 3 reached full generation capacity (793MW). **The Unit has achieved seven consecutive months of improved performance on since**
- **Design modifications** roll-out include:
  - ✓ **June 2020:** Unit 6 - Gas Air Heater and Fabric Filter Plant
  - ✓ **September 2020:** Unit 1 - Gas Air Heater, Fabric Filter Plant, Erosion Protection, Short Lead Items on Milling Plant
  - ✓ **October 2020:** Unit 4 - Gas Air Heater, Fabric Filter Plant, Erosion Protection, Short Lead Items on Milling Plant
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    - **March 2021:** Unit 5 – 75 day outage start

Interim Results: The availability and reliability of the new units at Medupi are steadily improving

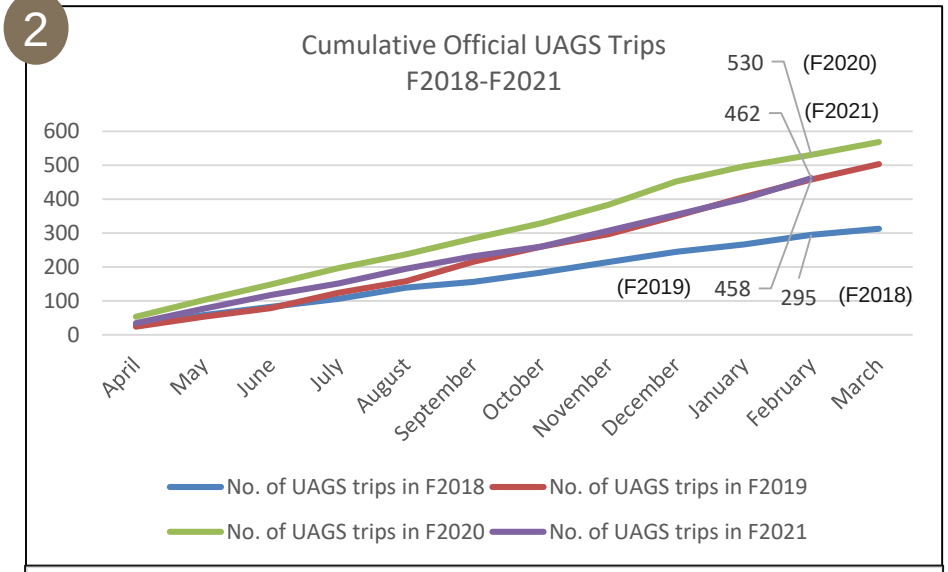
Kusile Power Station

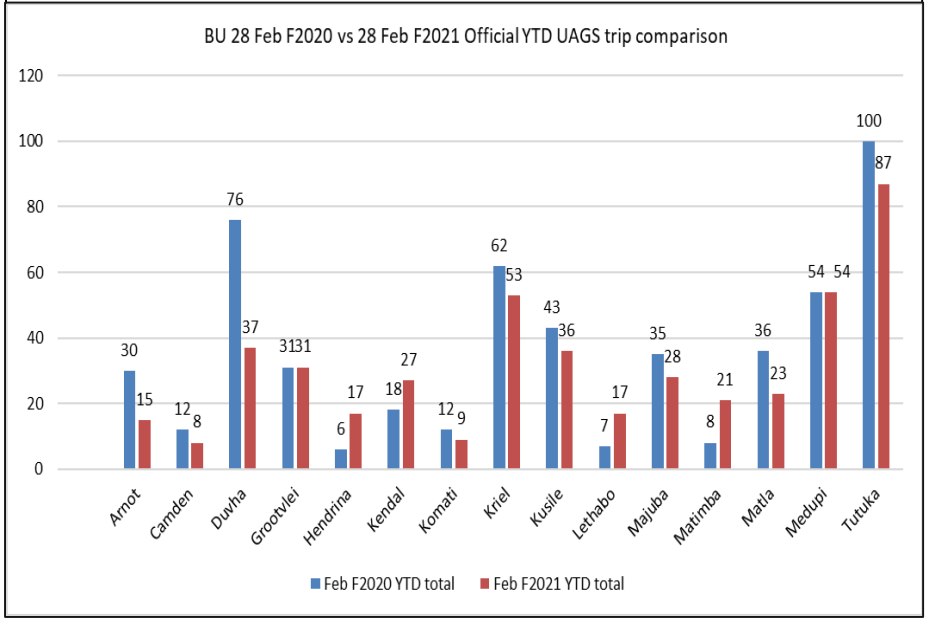
- Boiler plant modification outages to **start mid 2021 for running units (1, 2 and 3)**
- Boiler plant modifications **on construction units (4, 5 and 6) to be done before** Commercial Operation of each respective unit
- Unit 3 is currently in its **testing and optimisation phase**
- June 2021: Unit 1 – 75 **day outage start,** September 2021: Unit 2 – 75 **day outage start**
- January 2022: Unit 3 – 75 **day outage start**
- Mill long lead items approved and installation **to be done during upcoming unit and mill rebuild outages**

Note: The current estimation for completing the correction of the major boiler plant defects at Kusile is 2023, depending on the outage availability of the units as per the Generation outage plan

Unit Trips

2





Progress overview:

- Coal stations account for 97% of all trips in Generation.
- Cumulative monthly trips for F2021 Feb YTD were below F2020.
- The total Gx coal fleet unit UAGS trips is 63 UAGS trips fewer in Feb '21 compared to the same period last year.
- Lethabo had no UAGS trips in Feb ’21.
- Arnot has the lowest UAGS/7000 operating hours in Gx with 2,69.
- The number of commercial units for Medupi increased when U3 became official on 1 Aug ’20 and U2 became official on 1 Dec ‘20.
- Resolution of latent defects is being leveraged to reduce unit trips at Medupi and Kusile.
- High impact focus areas at Tutuka and Kriel to reduce trips are the cooling tower refurbishments and attention to coal qualities. Current project timelines to address these 2 areas is 2 to 3 years (i.e. F2023 to F2024).
- Monthly meetings are held to provide technical support to stations with high trips.

Units on long term forced outages

3 Stream: Units on long term forced outages

Assessment phase | Progress in line with plan | Progress at risk | Returned

	Description	Status/progress
Lethabo Unit 5 (600MW)	• High Pressure steam pipe failure on 10 October 2018 • The High Pressure pipework completed , busying with extensive commissioning	**Returned**
Duvha Unit 4 (600MW)	• On 23 August 2017, turbine tripped on generator stator earth fault – returned on 06 Nov 2018 but was shut down again to address a Generator H_2 leak	**Returned**
Grootvlei Unit 2 (200 MW)	• Auxiliary steam range pipe burst on 26 January 2018 • Also experienced generator issues • Initial delay due to fundingconstraints	**Returned**
Kriel Unit 2 (600MW)	• Stator earth fault on 03 May 2018	**Returned**
Matla Unit 5 (575MW)	• Cold reheat non return valve leak experienced on 05 February 2019	**Returned**
Duvha Unit 1 (600MW)	• Generator Stator fault on 17 Jul 2019 • Stator rewind completed, busy with commissioning activities	**Returned**
Duvha Unit 3 (600MW)	• Board Investment & Finance Committee cancelled project	**Project Cancelled**
Kendal Unit 5 (640MW)	• Emission plant refurbishment outage that will include a major General Overhaul	**RTS April 2021**

Partial load losses and Boiler tube leaks

Stream

Partial losses (PLLs) and Boiler tube leaks

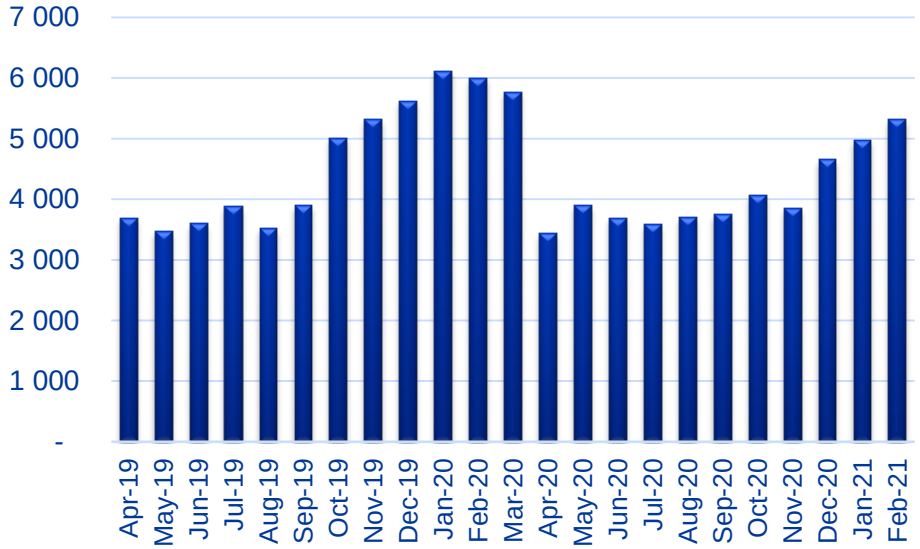
Current Status

- February 2021 YTD partial load losses were 4041 MW
- Boiler tube failure reviews in progress

Progress to date

- Several PLL improvements contracts with long supply lead times are either finalized or in the procurement phase, this includes plant areas such as cooling towers and feedwater heaters
- The Boiler Tube Leak Reduction Programme detailed reviews for FY 21 has commenced and will be completed by in the next 3 months
- To reduce boiler tube leaks adequate funding and maintenance space is required to ensure the correct extent of repairs during outages.

12 Month Actual Partial Load Loss Performance



Although it was expected that the **partial load loss performance** would **deteriorate** during the summer months, the performance is improved over last year.

PLL gains made during **the earlier part of the year** have decreased due to **seasonal effects** arising in the summer period from December 2020 to March 2021**.**

The continued implementation of the **maintenance recovery** is key to **improving and sustaining** partial load losses

Outage duration and slips

Stream	Current Status	Progress to date
5 **Outage duration and slips**	• Engineers **identified to be** redeployed to power stations • Developed plan to focus on **ERI performance** – enabling contracts, skills, spares and quality & **Maintenance Recovery**	• 11 Station RMR Implementation Committees activated and operating effectively with focus on Outage readiness, execution and Governance Controls • Teams assigned to ensure outage scope assurance & outage planning as per documented Process Control Manual • Nine particular Outages targeted as KPI's for the RMR Programme, the first of which started on 12 January 2021 • Outages in execution oversight and involvement of Subject-matter experts • RMR Team now integrated with all the outages in execution focusing on critical paths and other challenges

Upfront planning

Outage readiness

Execution quality

Human Capital

Stream	Status in February 2021	Progress to date
6 Human Capital	• Identified critical vacancies and skills gaps at power station management, operations and maintenance areas. Resourcing of Maintenance and Recovery Programme Pipeline – Learner Intake for FY2021	• Group Executive (Generation) appointment in the recruitment process and the new acting GE appointed effective 1 February 2021 • Three Cluster General Managers positions all filled. • Six Power Station General Managers appointed to fill positions at various Power Stations effective 1 February 2021 • One Power Station General Manager vacancy due to death in service and recruitment process started. • Recruitment approved for other critical positions at various power stations and process commenced. • Learner pipeline recruitment process for 125 learners for plant operators and artisans has commenced for placement before FY end. • Maintenance recovery recruitment programme has resulted in the secondment of 21 resources onto the project and appointment of 12 Fixed term contractors

NOTE: Generation Division total headcount for January 2021 is 12 122, eleven (11) above the financial year headcount target of 12 111.

OCGT usage is below YE forecast by approx. R730m

7 Preparing for additional OCGT Usage

R3.2bn

Open Cycle Gas Turbines cost vs YE forecast **of R3.96bn**

- OCGTs YTD usage is **1 152 GWh (5.6% Load Factor)**
- **Average tank levels** are currently healthy and being maintained

There has been significant progress in the reduction of emissions

Stream	Status end February 2021	Progress to date
8 **Reduce Emissions**	• Eskom delays to implementing emission retrofit projects within committed timelines could lead to **medium term risk of 9 000 MW** • Non-compliance with Atmospheric Emission License limits could lead to a **short term risk of 5 587 MW** • All Eskom's MES applications have been submitted and are presently being evaluated by DEFF. A decision is possible by September 2021, discussions with DEFF on issues and risks are ongoing. • Approval to operate plant under pre 1 April 2020 emission limits has been obtained	• **Construction is in progress** at Kendal Electrostatic Precipitators (ESP) and High Frequency Power Supply (HFPS) • **Lethabo and Tutuka HFPS installation is in progress.** • **Tutuka Dual Flue Gas Conditioning pilot plant** equipment has been installed. • Procurement process is in progress for ESP at Kriel, Lethabo, Matla and Tutuka. HFPS procurement at Kriel, Matla and Duvha. • Performance YTD **is 0.38 kg/MWhSO**, a significant improvement from last years performance at this time of **0,47 kg/MWhSO**. • The improved performance can be attributed to improving performance at Kendal and the decision to take non-complaint Kendal units off for outage.

Continuous engagement with Dept of Environment, Forestry and Fisheries (DEFF)

Kendal Power Station as a key contributor to the poor emissions performance (2/2)

Stream	Progress to date

8 **Reduce Emissions**	• We have done the following:
	  • In addition to outages taken in the first half of the calendar year, outages are provided for repairs and optimisation of plant to ensure improved performance.
	  • The integrated emission reduction plan was completed and approved by DEFF and monthly updates are provided as required. There has been general compliance to the plan and delays experienced will not materially impact on the overall project outcomes and timelines.
	• Currently doing the following:
	  • Units 5 & 6 are on long duration outages for ESP field replacement and HFPS, return to service date is April and May 2021 respectively.
	• The following is on the plan:
	  • Resolving coal quality issues
	  • Increased focus on the repair and operation of the dust handling plant
	  • In November 2020 Eskom received notice of criminal charges in respect of AEL non-noncompliance at Kendal. The matter has been postponed for discussions with the prosecuting authorities until June 2021.

Coal Management

Stream: Fix coal stockpiles

Objective	• No power station below the Grid Code requirement or below the Eskom prescribed minimum level. • All coal delivered **should meet** the Power Station coal quality requirements
Stockpile levels *Excl. Medupi & Kusile	• All Power Stations except Kusile are within their Eskom prescribed Levels • Kusile is below the Eskom prescribed minimum level however above the Grid Code requirement. There is sufficient contracted coal for the power station. • **51.7 days** as at 10 March 2021 • The plan is to manage the Total System average stock to not less than **31 days**
Risks	• In the light of the COVID-19 pandemic, mines, transporters and other suppliers in the coal supply value chain are operational. Should the suppliers' employees be infected, supply from the respective mines would be at risk, however the risk is being managed
Coal Quality	• Good progress regarding initiatives to reduce coal quality related OCLF was made over the latter part of FY20 at most power stations. Kriel and Matla combined accounted for 88% of total coal related OCLF which will remain the focus of the team. The FY21 **coal related OCLF as of February 2021 is 0.7%**
Rain Readiness	• Investments in **wet coal handling (Rain Readiness plan), focusing on drainage improvements has paid dividends**. Stations survived almost two weeks of Eloise storms in Mpumalanga/Limpopo/KZN areas without wet coal-induced load shedding. • Rainfall for month of January & February 2021 was **150-200% above the yearly average** for Power Stations footprint.

Reliability Maintenance Recovery Programme

Risk Reviews conducted at 11 Power Stations. Inputs analyzed and Top 6 Risks recorded. Formal risk mitigation projects kicked-off in response to identified risks

RMR Programme Set-up

a) Direction & Governance:

- RMR Steerco established chaired by Gx GE
- Station Implementation Committees activated with specific focus on Outage Readiness, Outage Execution and Governance Controls
- Gx GE drilling into specific focus areas pertaining to Leadership, Outage Readiness and Outages in Execution
- Outage Scoping getting particular attention
- Nine particular Outages have been targeted as the KPI's for RMR Programme. The first of these Outages started on 12 January 2021

b) Resourcing

- Station RMR Team established and resourced. On boarded on Roles & Responsibilities
- 8 Construction Managers & 5 Senior Advisor Planners appointed and deployed to Stations to support Outage Departments
- Lean Central RMR Team deployed to stations to assist in empowering stations to achieve Outage Excellence (pre-during and post)

c) Empowerment

- Training needs analysis conducted per role on RMR structure
- Immediate Opportunities for training identified and being rolled out e.g. Primavera; SAP PM etc.
- Gx Maintenance and Outage Knowledge Hub developed and rolled-out

Funding allocated for 2021 and additional funding being secured for outages till end of FY2022.
Long Lead Spares planning and funding being prioritized up to FY 2023.

Contents

System Outlook - context

- The **majority of the coal power stations** are **operating past** the **midway** of their **operational life**, resulting in high levels of breakdowns.

- The **drive** to **implement** the **reliability maintenance** and **refurbishment projects** in order to **address** the **unreliability** is under way to get the plant performance back to **acceptable levels** by **late 2021.**

- The **public** is therefore **cautioned** to **expect** an **increased risk** of **loadshedding** during this period.

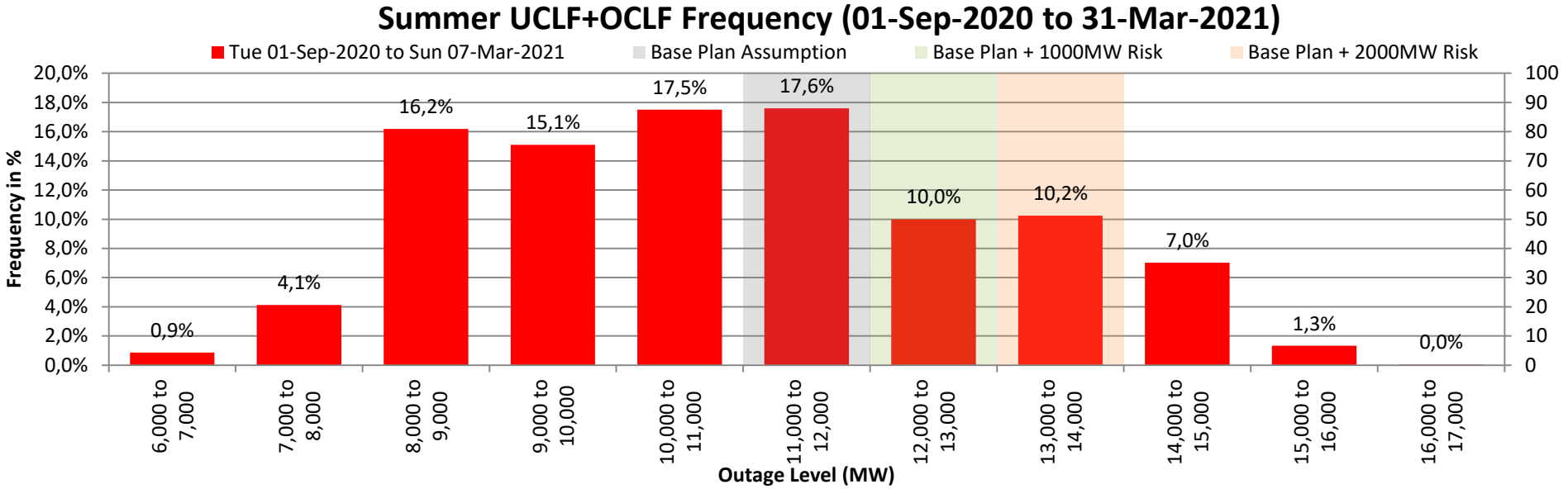
Load shedding summary: 1 April 2020 – 14 March 2021

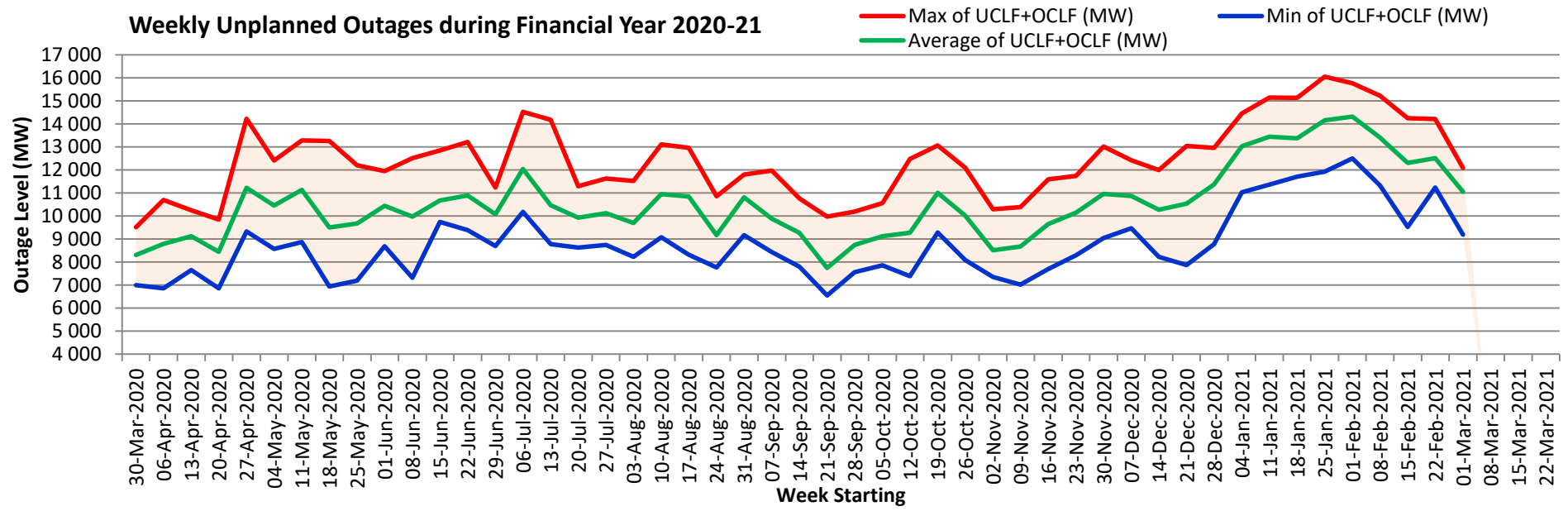
- For the financial year-to-date:
  - There were a total of 42 days of load shedding,
    - 37 days were at Stage 2
    - 3 days was at Stage 3
    - 2 days were at Stage 4

- Since 1 January 2021:
  - There have been 19 days of load shedding,
    - 17 days were at Stage 2
    - 2 days were at Stage 3

- In general, some of the following conditions led to the above load shedding:
  - Shortage of generation capacity;
  - Increased unplanned unavailability;
  - Increased planned maintenance;
  - The need to conserve and replenish depleted emergency resources;
  - Poor coal and compromised emissions performance.

Unplanned Outage Performance Sept 2020- March 2021





Updated Plan – March 2021 to March 2022

The unplanned shutdown of Koeberg Unit 1 as well as the delayed return to service of some units after the December maintenance period necessitated the maintenance schedule to be revised in February 2021 for the 18 month maintenance window ahead

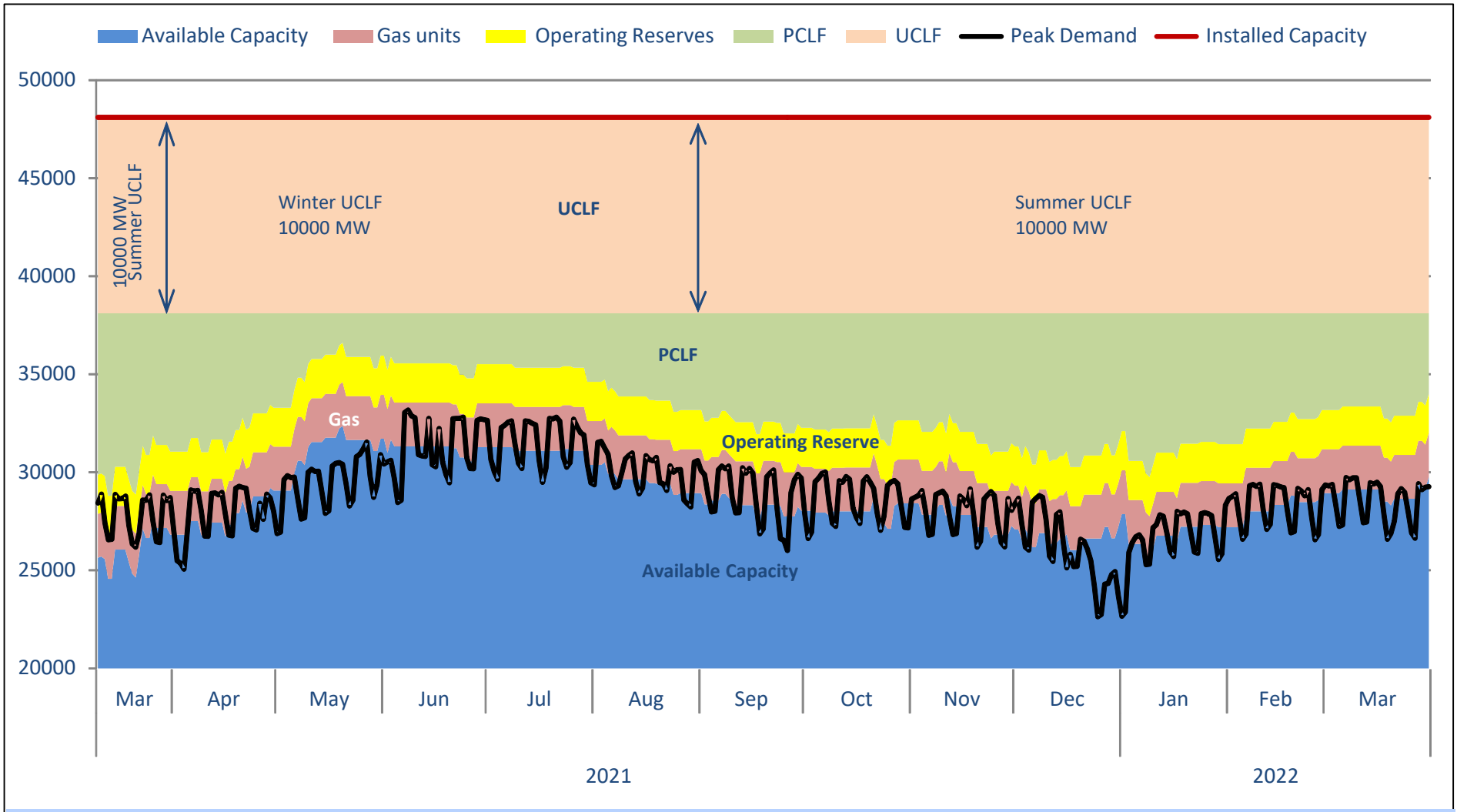
All reliability maintenance required in the 18 month planning period has been accommodated in the plan. This has resulted in a “full” plan with little room to move, extend or add outages.

This outage plan was stress tested with 3 scenarios by the System Operator to estimate the OCGT usage and level of load shedding.

For the most part the System Operator will need to source operating reserves from Demand Response (DR) products as well as from emergency reserve sources such as Interruptible Load Shedding (ILS) and OCGTs.

The Plan requires OCGT usage over weekdays, and low diesel usage on some weekends.

Capacity Outlook Summary: Mar 2021 – Mar 2022



To execute this plan OCGT usage is anticipated. The unplanned allowance is projected at 10000 MW from March 2021 – March 2022

Summary of System Outlook FY2022

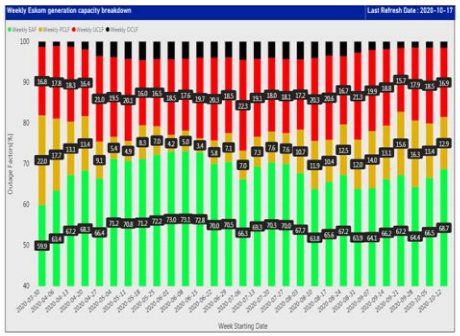
Seasonal Plan	Basecase Winter 2021: 11 000 MW Summer 2021/22: 11 000 MW	Basecase + 1000 MW Winter 2021: 12 000 MW Summer 2021/22: 12 000 MW	Basecase + 2000 MW Winter 2021: 13 000 MW Summer 2021/22: 13 000 MW
Winter: 1 (April – 31 August 2021) Highest stage of LS OCGT costs	Loadshedding days 0 days N/A R 0.5bn	Loadshedding days 2 days Stage 1 R 1.2bn	Loadshedding days 26 days Stage 2 R 2.7bn
Summer (September 2021 – 31 March 2022) Number of LS days Highest stage of LS OCGT costs	0 days N/A R 0.6bn	1 days Stage 1 R 2.0bn	38 days Stage 2 R 5.6bn

Dramatic increase in load shedding days and OCGT cost for only 1 000 MW change in UCLF

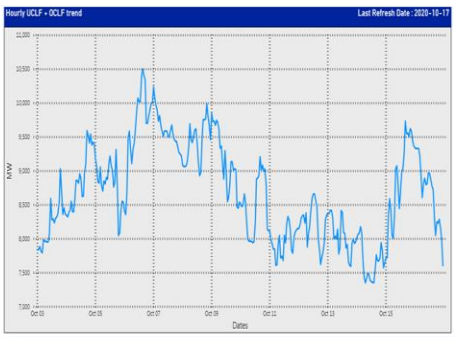
Eskom Data Portal: a step toward greater transparency

- **Made public** on the Eskom website on **4 Sept 2020**
- **Hourly data**, 24 hours after the fact, is available
- The data published includes:
  - Demand forecasts, weekly energy & peak demand
  - Generation performance (EAF, PCLF, UCLF)
  - Station build up (different technologies), Particulate and CO2 emission data
  - Pumped storage & OCGT usage
  - Renewable output and statistics
- In October 2020 introduced facility that **allows downloads of raw data** for the past financial year and YTD
- **"We have not finished,"** we continue to enhance the site

Weekly EAF, PCLF, UCLF, OCLF

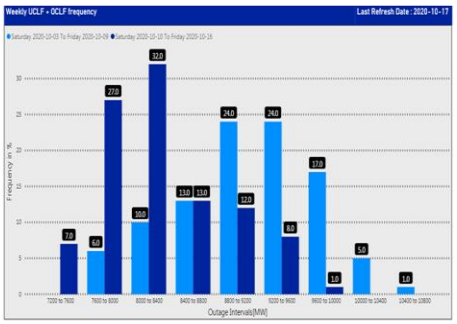


Hourly unplanned unavailability



Weekly minimum, maximum and average unplanned unavailability

14 day rolling histogram of unplanned unavailability



Conclusion - COO

- Eskom is **committed** to recovering its **operational performance** and will **not compromise** on **reliability maintenance** and **mid-life refurbishment**

- **Nine units totaling 5 192 MW** are currently being prioritized under the **Reliability Maintenance Recovery Programme,** with the first unit in execution since 12 January 2021. The programme was first resourced in September and a tremendous effort has been put into the preparation for Outages in the last six months. **NOTE: Planning for this intensified work, including placing equipment orders, is supposed to start 24 months before breaker open**

- This is in order to ensure South Africa has a **reliable and sustainable generation plant** fleet going forward

- There will be heightened focus on **sustained transmission and distribution network performance** in order to manage other potential threats to the reliability of electricity supply

- Eskom **commits to keeping South Africa informed** early in the event that loadshedding is necessary – a detailed schedule is being developed and will be synchronised with the national calendar

- We appeal to customers to **continue to use electricity sparingly**

Thank you