

REGIONAL OPERATOR PRESENTATION

CEC SYSTEM UPDATE

April – June 2023



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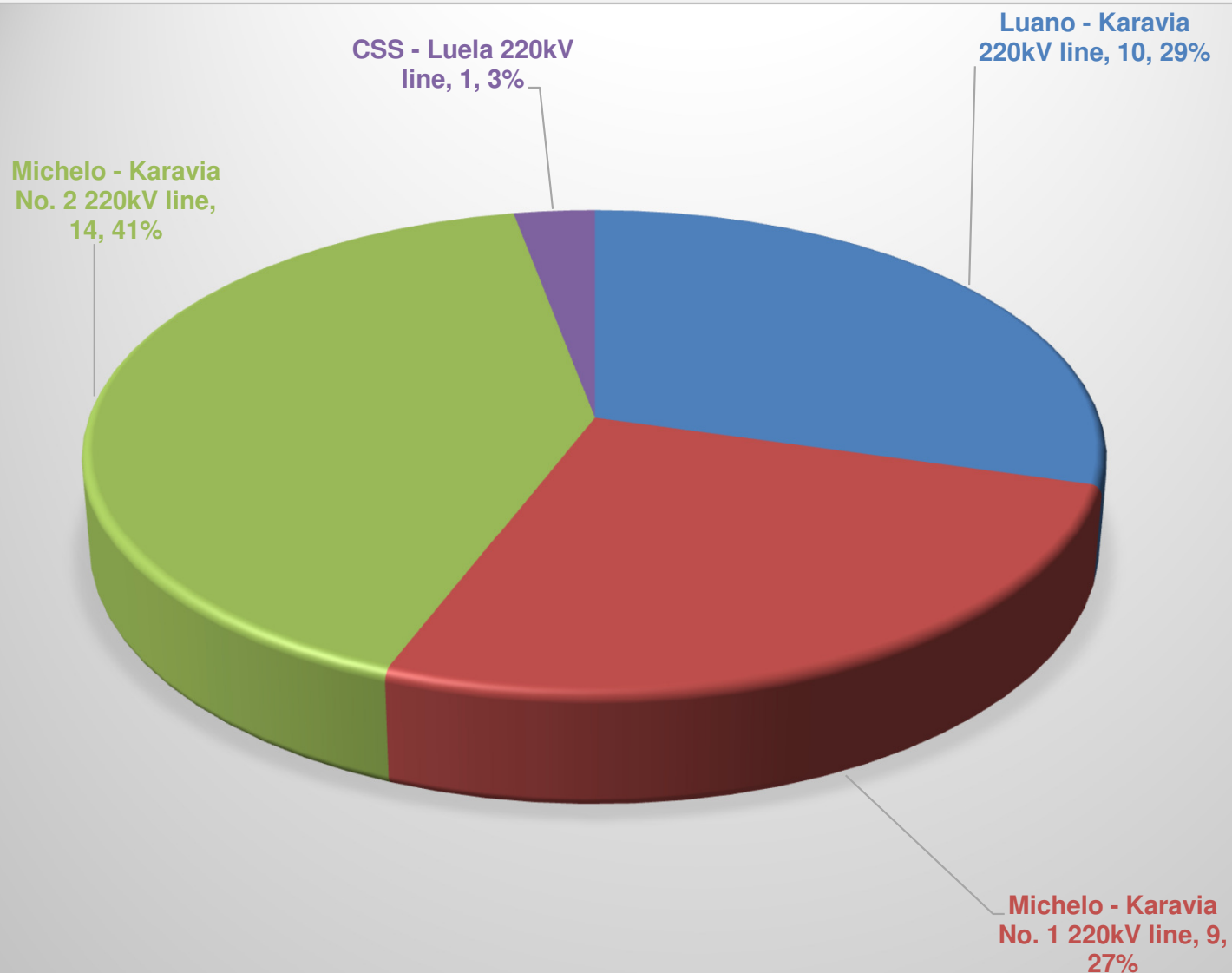


1. SYSTEM PERFORMANCE

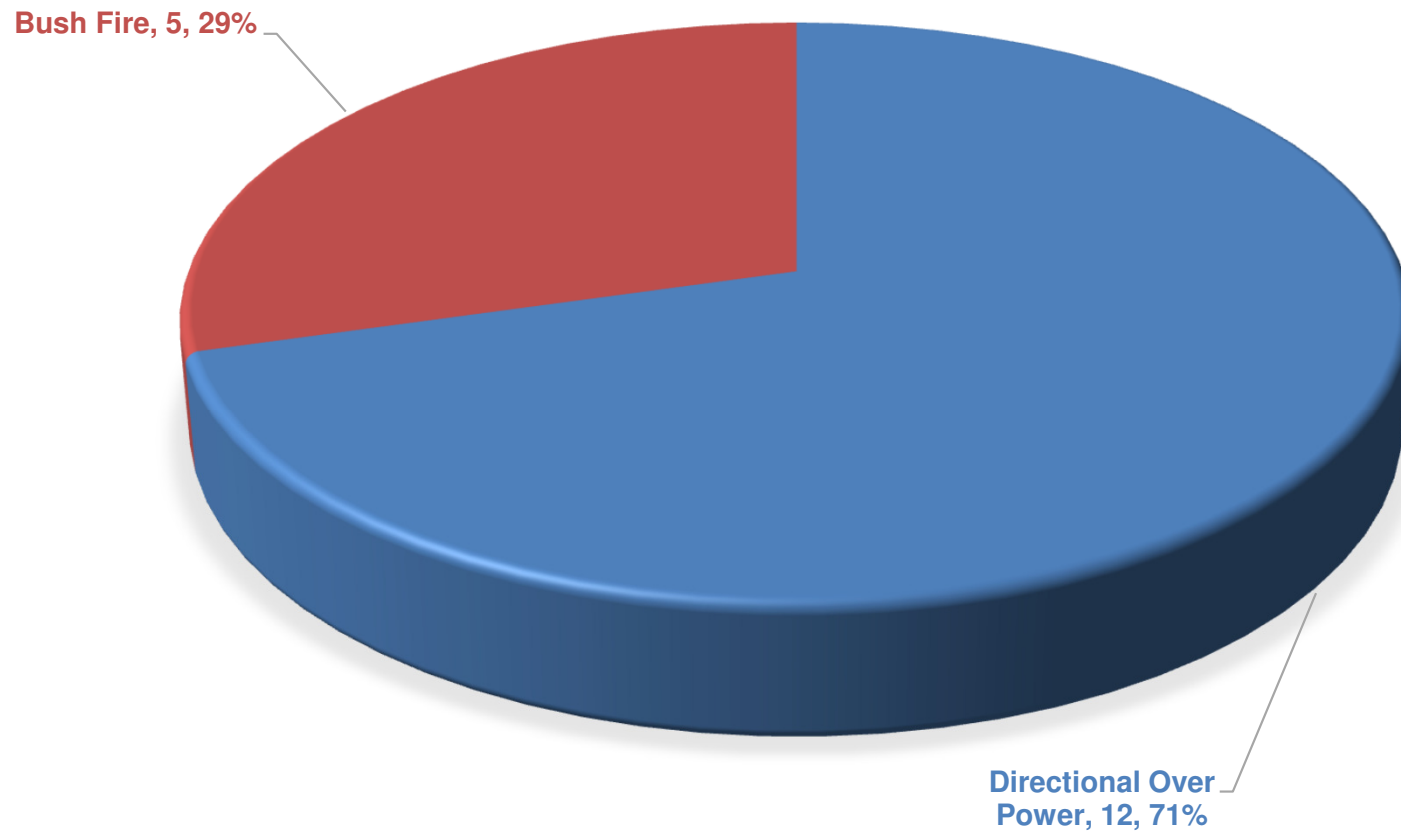


- Security of power supply was satisfactory in the review period.
- 6 incidents of vandalism involving overhead copper conductors occurred. 2,176m of copper conductor was stolen.
- Thefts of tower steel members and substation earthing conductors continued to be a great source of concern.
- During the period, 5 suspects were apprehended and another 5 are attending court sessions. Convictions: Nil.
- 7 localised power supply interruptions were experienced due to mainly customer through-faults.
- 33 trip outs of the Zambia – DRC interconnector lines and 1 local 220kV line were recorded in the review period.

220kV Faults by Circuit



220kV Faults by Category



2. MAJOR PLANT AVAILABILITY



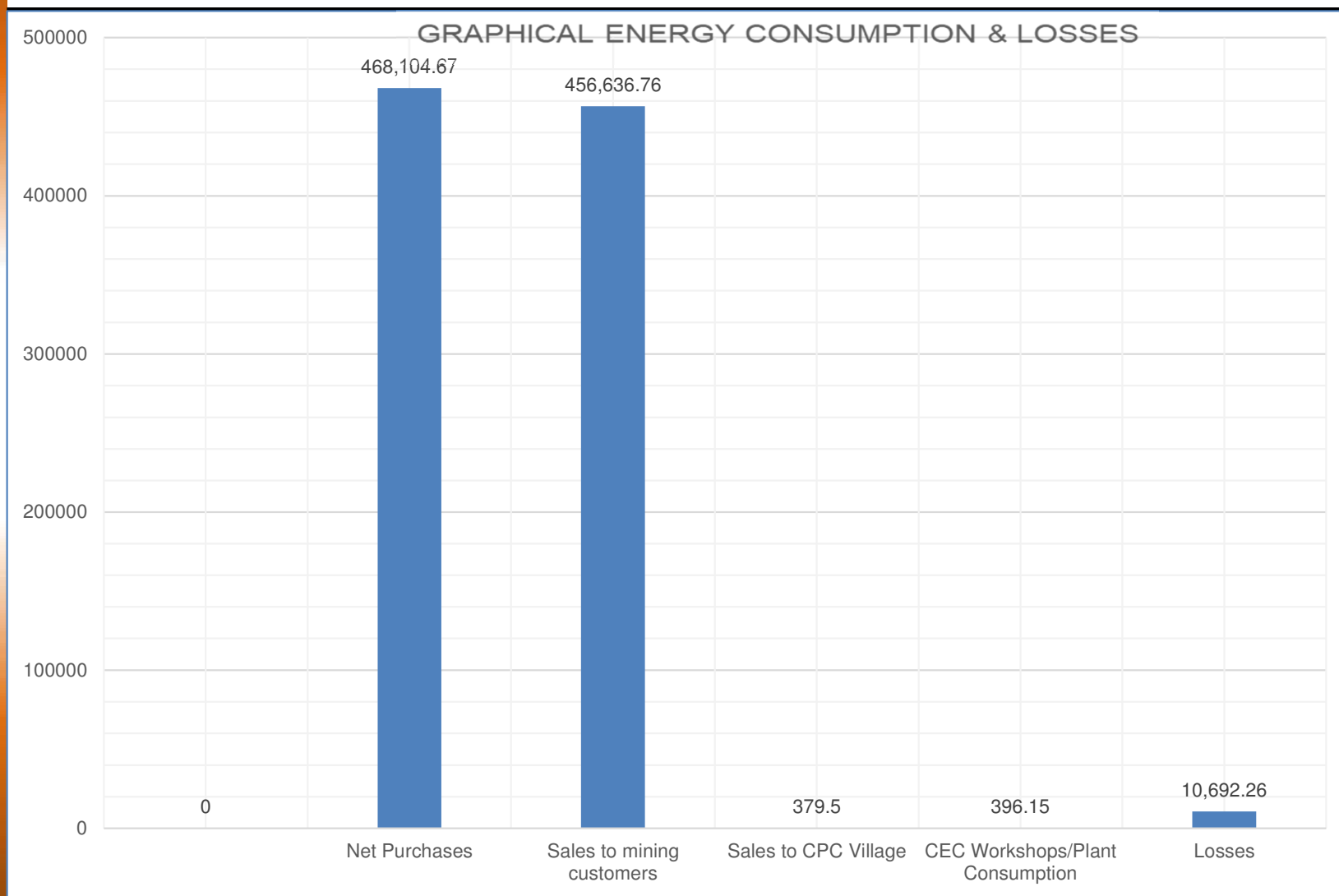
- All major system plants except Luano Gas Turbine Alternator No. 1 were available during the review period
- The machine developed a fault on 04.07.2022. The power turbine thrust pad, and thrust pad housing were found worn.
- An external contractor has since been engaged to undertake repairs.
- Further, the power turbine rotor and thrust pad housing have been taken for repairs overseas.
- Expected completion date is October 2023.

3. ENERGY CONSUMPTION & LOSSES (April – June 2023)



| | MWh |
|---------------------------------|------------|
| Net Purchases | 468,104.67 |
| Sales to mining customers | 456,636.76 |
| Sales to CPC Village | 379.50 |
| CEC Workshops/Plant Consumption | 396.15 |
| Losses | 10,692.26 |
| Percent Loss | 2.3% |

GRAPHICAL ENERGY CONSUMPTION & LOSSES [MWh] – April to June 2023



4. RIVERSIDE SOLAR EXPANSION PROJECT



Riverside Expansion Solar Project (RSEP) – CEC constructed a utility scale 33.1MW_p solar plant under RSEP upscaling total installed capacity at Riverside Solar Park to 34.1MW_p . Project was commissioned on 15th Feb 2023. An 11kV evacuation line was also constructed to provide two points of grid-connection (PoC's), namely:

- Kitwe (Parklands) PoC was commissioned on 9th Feb 2023.
- Ravens (Annex) Substation PoC was commissioned on 12th May 2023.
- To have total evacuation in all contingent situations, Kitwe Substation Interconnector is being upgraded to transfer 31MW from current 10MW, this scope will be completed in September

5. ITIMPI SOLAR DEVELOPMENT PROJECT

- **Itimpi Solar Project (Phase-1)** – In Jan 2023 CEC commenced construction of a 60MW_p (50MW_{ac}) solar PV plant in Garneton, Kitwe.
- Project was at 50% progress as at end of June 2023.
- Commissioning is expected to be in Dec 2023.
- Grid connection will be at proposed Garneton 220/33kV substation where existing CSS-Kansuswa 220kV transmission line will be looped in and out to provide grid-integration.
- Construction of grid-connection substation commenced in June 2023 and expected to be completed in Dec 2023.





Thank You