

# Weekly System Status Report – 2022 Week 31 (01/08/2022 – 07/08/2022)

## Introduction

This document is intended to provide a general picture of the Adequacy of the National Electricity Supply System in the medium term. The Report will be updated weekly, on Tuesdays and circulated Wednesdays, thereafter, published on the Eskom website, updated on Wednesdays. The values contained in this report are unverified and not official yet and can change at any time.

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## Historic Daily Peak System Capacity/Demand

Date	Available Dispatchable Generation (MW)	Non-commercial Generation (MW)	Residual Load Forecast (MW)	Actual Residual Demand (MW) Incl IOS	Operating Reserve Margin (Excl Non- Commercial Units)	Operating Reserve Margin (Incl Non- Commercial Units)	Forecast vs. Actual (Residual Demand)
Mon 01/Aug/2022	32,367	0	30,999	31,506	2.7%	2.7%	-1.6%
Tue 02/Aug/2022	32,025	0	31,196	32,198	-0.5%	-0.5%	-3.1%
Wed 03/Aug/2022	31,680	0	31,584	32,558	-2.7%	-2.7%	-3.0%
Thu 04/Aug/2022	30,386	0	32,297	32,387	-6.2%	-6.2%	-0.3%
Fri 05/Aug/2022	30,695	0	30,313	29,774	3.1%	3.1%	1.8%
Sat 06/Aug/2022	31,093	0	28,576	28,542	8.9%	8.9%	0.1%
Sun 07/Aug/2022	32,731	0	28,131	26,636	22.9%	22.9%	5.6%

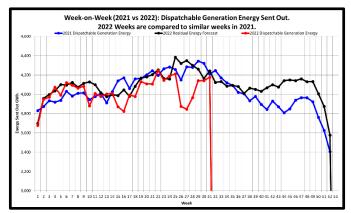
Date	Total Available Generation Incl Renewables (MW)	Non-commercial Generation (MW)	RSA Contracted Load Forecast (MW)	Actual RSA Contracted Demand (MW) Incl IOS	Operating Reserve Margin (Excl Non- Commercial Units)	Operating Reserve Margin (Incl Non- Commercial Units)	Forecast vs. Actual (RSA Contracted Demand)
Mon 01/Aug/2022	33,393	0	31,986	32,532	2.6%	2.6%	-1.7%
Tue 02/Aug/2022	32,454	0	31,808	32,627	-0.5%	-0.5%	-2.5%
Wed 03/Aug/2022	32,629	0	32,386	33,507	-2.6%	-2.6%	-3.3%
Thu 04/Aug/2022	31,250	0	32,923	33,250	-6.0%	-6.0%	-1.0%
Fri 05/Aug/2022	32,019	0	31,183	31,098	3.0%	3.0%	0.3%
Sat 06/Aug/2022	32,524	0	30,043	29,973	8.5%	8.5%	0.2%
Sun 07/Aug/2022	35,207	0	30,618	29,112	20.9%	20.9%	5.2%

## Notes:

- Available Dispatchable Generation means all generation resources that can be dispatched by Eskom and includes capacity available from all emergency generation resources.
- RSA Contracted Load Forecast is the total official day-ahead hourly forecast. Residual Load Forecast excludes the expected generation from renewables.
- 3. Actual Residual Demand is the aggregated metered hourly sent-out generation and imports from dispatchable resources and includes demand reductions. The Actual RSA Contracted Demand includes renewable generation.
- 4. Net Maximum Dispatchable Capacity (including imports and emergency generation resources) = 50 025 MW (Incl. non-comm. Kusile units).
- 5. These figures do not include any demand side products.
- 6. The peak hours for the residual demand can differ from that of the RSA contracted demand, depending on renewable generation.



## Week-on-Week Dispatchable Generation Energy Sent Out



## [2022 weeks compared to similar 2021 weeks]

Week 31 : Dispatchable Generation Energy Sent Out Statistics					
Energy Sent Out	4,176	GWh			
Week-on-Week Growth	-0.83	%			
Year-on-Year Growth (Year-to-Date) Annual	-1.80	%			

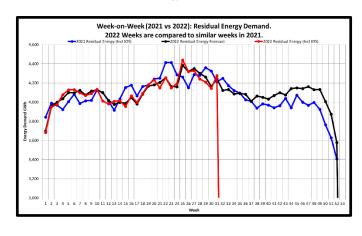
#### Note:

2022 Weeks are compared to similar weeks in 2021.

(2022 week 1 ~ 2021 week 1)

	Annual Dispatchable Generation Energy Sent Out Statistics					
Year	01 Jan to 07 Aug Energy	Annual Energy (01 Jan to 31 Dec)	Unit			
2017	136,189	225,203	GWh			
2018	135,655	224,202	GWh			
2019	133,361	219,563	GWh			
2020	123,598	206,725	GWh			
2021	128,078	210,022	GWh			
2022 (YTD)	125,805		GWh			

## Week-on-Week Residual Energy Demand



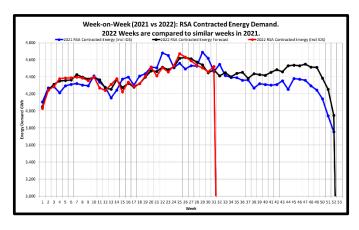
## [2022 weeks compared to similar 2021 weeks]

Week 31 : Residual Energy Demand Statistics (Incl IOS)						
Energy Demand 4,277 GWh						
Week-on-Week Growth 1.54						
Year-on-Year Growth (Year-to-Date) Annual	Year-on-Year Growth (Year-to-Date) Annual -0.52 %					

2022 Weeks are compared to similar weeks in 2021. (2022 week 1  $\sim$  2021 week 1)

	Annual Residual Energy Demand Statistics (Incl IOS)					
Year	01 Jan to 07 Aug Energy	Annual Energy (01 Jan to 31 Dec)	Unit			
2017	136,199	225,248	GWh			
2018	135,763	224,594	GWh			
2019	134,075	220,924	GWh			
2020	124,601	208,151	GWh			
2021	129,164	211,958	GWh			
2022 (YTD)	128,510		GWh			

## Week-on-Week RSA Contracted Energy Demand



## [2022 weeks compared to similar 2021 weeks]

Week 31 : RSA Contracted Energy Demand Statistics (Incl IOS)					
Energy Demand	4,523	GWh			
Week-on-Week Growth	1.35	%			
Year-on-Year Growth (Year-to-Date) Annual	-0.09	%			

Note:

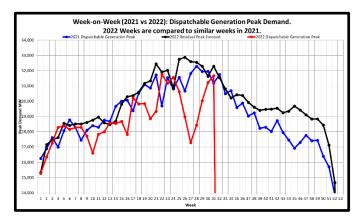
2022 Weeks are compared to similar weeks in 2021.

(2022 week 1 ~ 2021 week 1)

Annual RSA Contracted Energy Demand Statistics (Incl IOS)					
Year	01 Jan to 07 Aug Energy	Annual Energy (01 Jan to 31 Dec)	Unit		
2017	142,084	235,426	GWh		
2018	141,971	235,482	GWh		
2019	140,752	232,511	GWh		
2020	131,303	220,630	GWh		
2021	137,520	227,166	GWh		
2022 (YTD)	137,441		GWh		



## Week-on-Week Dispatchable Generation Peak Demand



## [2022 weeks compared to similar 2021 weeks]

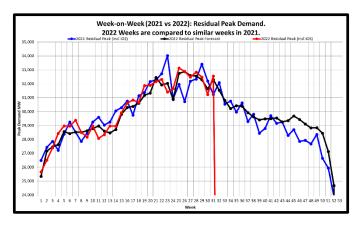
Week 31 : Dispatchable Generation Peak Demand Statistics					
Peak Demand 31,666 MW					
Week-on-Week Growth	1.56	%			
Year-on-Year Growth (Year-to-Date) Annual -1.66 %					

Note:

2022 Weeks are compared to similar weeks in 2021. (2022 week 1 ~ 2021 week 1)

Annual Dispatchable Generation Peak Demand Statistics					
Year	Peak Date	Annual Peak	Unit		
2017	Tue 30-May-2017	35,457	MW		
2018	Mon 16-Jul-2018	34,256	MW		
2019	Thu 30-May-2019	33,066	MW		
2020	Wed 17-Jun-2020	32,384	MW		
2021	Thu 15-Jul-2021	32,292	MW		
2022 (YTD)	Thu 02-Jun-2022	31,756	MW		

## Week-on-Week Residual Peak Demand



## [2022 weeks compared to similar 2021 weeks]

Week 31 : Residual Peak Demand Statistics (Incl IOS)					
Peak Demand 32,558 MW					
Week-on-Week Growth	4.27	%			
Year-on-Year Growth (Year-to-Date) Annual	-2.62	%			

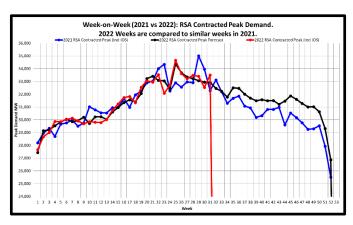
Note:

2022 Weeks are compared to similar weeks in 2021.

(2022 week 1 ~ 2021 week 1)

	Annual Residual Peak Demand Statistics (Incl IOS)						
Year	Peak Date	Annual Peak	Unit				
2017	Tue 30-May-2017	35,517	MW				
2018	Tue 29-May-2018	34,907	MW				
2019	Thu 30-May-2019	33,746	MW				
2020	Wed 15-Jul-2020	32,756	MW				
2021	Tue 08-Jun-2021	34,029	MW				
2022 (YTD)	Thu 23-Jun-2022	33,136	MW				

## Week-on-Week RSA Contracted Peak Demand



## [2022 weeks compared to similar 2021 weeks]

Week 31 : RSA Contracted Peak Demand Statistics (Incl IOS)						
Peak Demand	33,507	MW				
Week-on-Week Growth	3.80	%				
Year-on-Year Growth (Year-to-Date) Annual -0.97 %						

2022 Weeks are compared to similar weeks in 2021.

(2022 week 1 ~ 2021 week 1)

Annual RSA Contracted Peak Demand Statistics (Incl IOS)						
Year	Peak Date	Annual Peak	Unit			
2017	Tue 30-May-2017	35,769	MW			
2018	Tue 29-May-2018	35,345	MW			
2019	Thu 30-May-2019	34,510	MW			
2020	Tue 01-Sep-2020	34,155	MW			
2021	Thu 22-Jul-2021	35,005	MW			
2022 (YTD)	Thu 23-Jun-2022	34,666	MW			



## Weekly Generation Availability

							We	ek							Annual (	lan - Dec)
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2022	2021
Energy Availability Factor (Eskom EAF)	59.71	60.31	59.59	60.86	62.45	62.97	60.73	59.66	57.20	56.72	59.96	62.21	63.86	62.04	59.57	61.79
Planned Outage Factor	8.74	5.19	5.70	6.94	6.43	5.73	8.51	8.05	6.77	8.44	9.00	6.14	5.05	7.05	9.86	10.81
Unplanned Outage Factor	30.44	33.54	33.93	31.35	30.17	30.09	29.62	27.56	28.50	32.45	29.50	30.78	29.34	30.33	28.90	24.53
Other Outage Factor	1.11	0.96	0.78	0.85	0.95	1.21	1.14	4.73	7.53	2.39	1.54	0.87	1.75	0.58	1.67	2.87

EAF: Ratio of the available energy generation over a given time period to the maximum amount of energy which could be produced over the same time period.

Outage Factors: Ratio of energy losses over a given time period to the maximum amount of energy which could be produced over the same time period.

YTD: Year-to-Date (01 January of current year to current week)

## 52 Week Outlook

This is the forecast demand vs. available generating capacity for each week for 52 weeks ahead. Colour codes ranging from Green (no shortage) to Red

Contracted   Forecast   Dispatchable   Capacity (Less   Maintenance   Outage   Risk Level	vorst ca	ase)	are used	to indi	cate the a	bsence or p	presence o	of a capacity	constrain	ıt.
Contracted   Forecast   Capacity   Capacit										MW
Forecast	eek Start \	Week								Likely Risk
				Forecast			Maintenance			Senario
15-Aug-22   33   32236   30813   44825   30625   5200   12000   22-Aug-22   34   31782   30217   44916   30716   5109   12000   29-Aug-22   35   32514   30427   44946   30716   5109   12000   29-Aug-22   35   32499   30982   44394   29164   5661   13000   12-80-22   37   32016   29929   44394   29164   5661   13000   19-Sep-22   38   31704   29616   43681   28481   6344   13000   26-Sep-22   39   31491   29403   43681   28481   6344   13000   26-Sep-22   39   31491   29403   43681   28481   6344   13000   26-Sep-22   39   31491   29403   43681   28481   6344   13000   10-0ct-22   40   31590   29486   44279   29079   5746   13000   10-0ct-22   41   31500   29486   44279   29079   5746   13000   17-Oct-22   42   31511   29546   44188   29588   5637   13000   17-Oct-22   43   31222   29258   43819   28619   6206   13000   31-Oct-22   44   31472   29346   43821   28621   6204   13000   31-Oct-22   44   31472   29346   43821   28621   6204   13000   31-Oct-22   44   31472   29346   43821   28621   6204   13000   31-Oct-22   45   31672   29369   44682   28482   6343   13000   41-Nov-22   45   31673   29430   44199   28999   5826   13000   31-Nov-22   47   31292   29109   43527   28327   6498   13000   21-Nov-22   49   31023   28837   42494   27234   7531   13000   21-Nov-22   49   31023   28837   42494   27234   7531   13000   21-Nov-22   49   31023   28837   42494   27234   7531   13000   21-Nov-22   50   30633   28446   42210   27010   7815   13000   30-Doc-22   50   30633   28446   42210   27010   7815   13000   30-Doc-22   51   29318   27132   40835   25635   9190   13000   30-Doc-22   51   29318   27132   40835   277370   7455   13000   30-Doc-22   50   30633   28466   42210   27010   7815   1300									(-14200 MW)	(-16200 MW)
10-5ep-22   36   32469   30382   44364   29164   5661   13000   12-Sep-22   38   33704   29616   44364   29164   5661   13000   19-Sep-22   38   33704   29616   44364   29481   5344   13000   13-Sep-22   38   33704   29616   44364   29481   5344   13000   13-Sep-22   40   31580   29475   43751   28551   5274   13000   10-Oct-22   40   31580   29475   43751   28551   5274   13000   10-Oct-22   41   31500   29486   44279   29079   5746   13000   17-Oct-22   42   31511   29546   44188   28988   5837   13000   17-Oct-22   43   31222   29258   43819   28619   5206   13000   17-Oct-24   44   31472   29346   44188   28988   5837   13000   17-Oct-24   45   31472   29346   448821   28621   6204   13000   14-Nov-22   45   31472   29349   44199   28999   5826   13000   21-Nov-22   47   31222   29109   43527   23327   6498   13000   21-Nov-22   48   31015   28832   42667   27467   7358   13000   21-Doc-22   50   30633   28446   42210   27010   7815   13000   12-Doc-22   50   30633   28446   42210   27010   7815   13000   12-Doc-22   51   29318   27132   40835   25635   9190   13000   12-Doc-22   51   29318   27132   40835   25635   9190   13000   20-Jan-23   1 26588   26666   40380   25180   9445   13000   00-Jan-23   1 26588   26666   40380   25180   9445   13000   00-Jan-23   1 26588   26666   40380   25180   9445   13000   00-Jan-23   1 26588   26666   40380   25180   9455   13000   00-Jan-23   1 28588   28686   28686   28686   28686   28686   28686   28686   2868										
12-Sep-22   37   32016   29929   44394   29164   5661   13000     19-Sep-22   38   31704   29616   43681   28481   6344   13000     32-Sesp-22   39   31491   29403   43681   28481   6344   13000     33-Oct-22   40   31580   29475   43751   28551   6274   13000     10-Oct-22   41   31500   29486   44279   29079   5746   13000     17-Oct-22   42   31511   29546   44188   28988   5837   13000     24-Oct-22   43   31222   29258   43819   286619   6206   13000     31-Oct-22   44   31472   29346   43821   28621   6204   13000     07-Nov-22   45   31872   29869   43862   28482   6343   13000     07-Nov-22   45   31872   29689   43682   28482   6343   13000     07-Nov-22   46   31613   29430   44199   28999   5826   13000     21-Nov-22   47   31292   29109   43527   28327   6498   13000     21-Nov-22   49   31023   28837   42494   27294   7531   13000     05-Dec-22   49   31023   28837   42494   27294   7531   13000     05-Dec-22   49   31023   28837   42494   27294   7581   13000     05-Dec-22   50   30633   28446   42210   27010   7615   13000     12-Dec-22   52   28687   24680   38805   24605   10220   13000     09-Jan-23   2 29704   27670   41603   28403   8422   13000     09-Jan-23   2 29704   27670   41603   28403   8422   13000     09-Jan-23   3 30496   28461   41966   26766   8059   13000     09-Jan-23   5 30383   28349   41980   26780   8045   13000     09-Jan-23   1 30805   29208   42570   27370   7455   13000     06-Feb-23   8 30909   29119   42427   27277   7598   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29045   43370   27170   7655   13000     07-Jan-23   1 3 30853   29056   43260   28060   6765   13000     07-Jan-23   1 3 30853   33773   44888   30688   5137   12000     07-Jan-23   14 332219										
19-56-pc-22   38   31704   29616   43681   28481   6344   13000   130-6122   40   31580   29475   43751   28551   6274   13000   10-0122   40   31580   29475   43751   28551   6274   13000   17-0122   41   31500   29466   44279   29079   5746   13000   17-0122   42   31511   29546   44188   28988   5837   13000   17-0122   42   31511   29546   44188   28988   5837   13000   131-0122   43   31222   29288   43819   28619   6206   13000   31-0122   45   31872   29589   43821   28619   6206   13000   07-Nov-22   45   31872   29589   43882   28482   6343   13000   07-Nov-22   45   31872   29589   43882   28482   6343   13000   07-Nov-22   45   31613   29430   44199   28699   5826   13000   21-0122   47   31292   29109   43527   28327   6498   13000   21-0122   28-00-22   49   31023   28-024   27467   7358   13000   07-012-0122   49   31023   28436   42210   27010   7815   13000   07-012-012   28-02-22   50   30633   28446   42210   27010   7815   13000   07-012-012   27010   7815   13000   07-012-012   27010   7815   13000   07-012-012   27010   7815   13000   07-012-012   27010										
16-5ep-22   39   31491   29403   43681   28481   6344   13000   13-0ct-22   40   31590   29475   43751   28551   6274   13000   10-0ct-22   41   31500   29486   44279   299079   5746   13000   17-0ct-22   42   31511   29546   44188   28988   5837   13000   24-40-ct-22   43   31222   29258   43819   28619   6206   13000   27-0ct-22   44   31472   29346   43821   28621   6204   13000   27-0ct-22   45   31672   29589   43882   28621   6204   13000   27-0ct-22   45   31672   29589   43882   28621   6204   13000   27-0ct-22   45   31673   29430   44199   28999   5826   13000   21-Nov-22   45   31673   29430   44199   28999   5826   13000   21-Nov-22   48   31015   28832   42667   27467   7358   13000   21-Nov-22   50   30633   28446   42210   27010   7815   13000   21-0c-22   50   30633   28446   42210   27010   7815   13000   21-0c-22   50   30633   28446   42210   27010   7815   13000   21-0c-22   50   30633   28446   42210   27010   7815   13000   20-24n-23   1 28588   26066   40380   254605   10220   13000   20-24n-23   1 28588   26066   40380   25180   9645   13000   20-24n-23   1 28588   26066   40380   25180   9645   13000   20-24n-23   4 30174   28139   41980   26786   8045   13000   20-24n-23   4 30174   28139   41980   26780   8045   13000   20-26-0c-23   3 30393   28349   41980   26780   8045   13000   20-26-0c-23   3 30393   28349   41980   26780   8045   13000   20-26-0c-23   3 30900   29119   42427   27277   7595   13000   27-Feb-23   9 30721   29153   43105   27905   6920   13000   27-0c-23   9 30721   29153   43105   27905   6920   13000   27-0c-23   13-6c-23   3 30905   29465   42370   27170   7655   13000   27-40-23   15 3000   29474   27575   27570   41603   28699   13000   20-26-0c-23   3 30000   20-26-0c-23   3										
13-0ct-22   40   31500   29475   43751   28551   6274   13000   10-0ct-22   41   31500   29486   44279   29079   5746   13000   17-0ct-22   42   31511   29546   44188   29588   5837   13000   10-0ct-22   42   31511   29546   44188   29588   5837   13000   13-0ct-22   44   31472   29346   43821   28621   6206   13000   31-0ct-22   44   31472   29346   43821   28621   6204   13000   17-Nov-22   45   31673   29689   43682   28482   6343   13000   14-Nov-22   46   31613   29430   44199   28999   5826   13000   241-Nov-22   47   31292   29109   43527   28327   6498   13000   228-Nov-22   48   31015   28832   42667   27467   7358   13000   00-05-0c-22   49   31023   28837   42494   27294   7531   13000   00-05-0c-22   49   31023   28837   42494   27294   7531   13000   00-05-0c-22   49   31023   28837   42494   27294   7531   13000   00-05-0c-22   52   28687   24680   39805   256555   9190   13000   00-05-0c-22   52   28687   24680   39805   24605   10220   13000   00-05-0c-22   52   28687   24680   40380   25180   9645   13000   00-05-0c-23   52   26867   24680   40380   25180   9645   13000   00-05-0c-23   20-0c-22   52   26867   24680   40380   25180   9645   13000   00-05-0c-23   20-0c-23										
17-Oct-22										
24-Oct-22										
31-Oct-22										
14-Nov-22										
12-Dec-22   50   30633   28446   42210   27010   7815   13000   19-Dec-22   51   29318   27132   40835   25635   9190   13000   26-Dec-22   52   26867   24800   39805   24605   10220   13000   20-Jan-23   1   28588   26066   40380   25180   9645   13000   20-Jan-23   2   29704   27670   41603   26403   8422   13000   20-Jan-23   2   29704   27670   41603   26403   8422   13000   23-Jan-23   3   30466   28461   41966   26766   8059   13000   23-Jan-23   4   30174   28139   41948   26748   8077   13000   30-Jan-23   5   30383   28349   41980   26780   8045   13000   06-Fab-23   6   30997   29208   42570   27370   7455   13000   13-Fab-23   7   30835   29045   42570   27370   7455   13000   277-Fab-23   8   30909   29119   42427   27227   7598   13000   277-Fab-23   8   30909   29119   42427   27227   7598   13000   277-Fab-23   13   3103   28685   43924   28724   6101   13000   20-Mar-23   12   31014   29237   43355   28155   6670   13000   20-Mar-23   12   31014   29236   43260   28060   6765   13000   20-Mar-23   13   30853   29206   43260   28060   6765   13000   20-Mar-23   13   33833   45999   31799   4026   12000   24-Apr-23   15   33493   30846   45238   31038   4787   12000   24-Apr-23   15   33493   33494   47566   33356   2469   12000   24-Apr-23   15   33493   47566   33356   2469   12000   24-Apr-23   23   36053   33774   48093   33893   1932   12000   29-Mar-23   23   36053   33774   48093   33893   1932   12000   29-Mar-23   23   36053   33774   48093   33893   1932   12000   29-Mar-23   23   36053   33774   48093   33897   1932   12000   29-Mar-23   23   36		_								
26-Dec-22         52         26867         24860         39805         24805         10220         13000           02-Jan-23         1         2688         26066         40380         25180         9645         13000           09-Jan-23         2         29704         27670         41603         26403         8422         13000           16-Jan-23         3         30496         28461         41966         26766         8059         13000           23-Jan-23         4         30174         28139         41948         26748         8077         13000           30-Jan-23         5         30383         28349         41980         26780         8045         13000           30-Jan-23         6         30997         29208         42570         27370         7455         13000           31-Feb-23         7         30835         29045         42370         27170         7655         13000           20-Feb-23         8         30909         29119         42427         27227         7598         13000           27-Feb-23         9         30721         29153         43105         277905         6920         13000           2										
12-Jan-23	9-Dec-22	51	29318	27132	40835	25635	9190	13000		
	6-Dec-22	52	26867	24680	39805	24605	10220	13000		
	2-Jan-23	1	28588	26066	40380	25180	9645	13000		
23-Jan-23	9-Jan-23	2	29704	27670	41603	26403	8422	13000		
30-Jan-23	6-Jan-23	3	30496	28461	41966	26766	8059	13000		
	3-Jan-23	4	30174	28139	41948	26748	8077	13000		
13-Feb-23         7         30835         29045         42370         27170         7655         13000           26-Feb-23         8         30909         29119         42427         27227         7598         13000           27-Feb-23         9         30721         29153         43105         27905         6920         13000           06-Mar-23         10         31153         29585         43924         28724         6101         13000           20-Mar-23         11         30805         29237         43355         28155         6670         13000           20-Mar-23         12         31014         29366         43900         28700         6125         13000           27-Mar-23         13         30853         29206         43260         28060         6765         13000           27-Mar-23         13         30853         29206         43260         28060         6765         13000           17-Apr-23         14         32219         30573         44888         30688         5137         12000           10-Apr-23         15         32493         303646         45288         31038         4787         12000	0-Jan-23	5	30383	28349	41980	26780	8045	13000		
20-Feb-23	6-Feb-23	6	30997	29208	42570	27370	7455	13000		
27-Feb-23   9   30721   29163   43105   27905   6620   13000	3-Feb-23	7	30835	29045	42370	27170	7655	13000		
06-Mar-23         10         31153         29585         43924         28724         6101         13000           13-Mar-23         11         30605         29237         43355         28155         6670         13000           27-Mar-23         12         31014         29366         43900         28700         6125         13000           27-Mar-23         13         30853         29206         43260         28060         6765         13000           33-Apr-23         14         32219         30573         44888         30688         5137         12000           10-Apr-23         15         32493         30846         45238         31038         4787         12000           11-Apr-23         16         32984         31338         45999         31799         4026         12000           24-Apr-23         17         3368         32021         45999         31799         4026         12000           08-May-23         19         34531         33494         46716         32516         3309         12000           08-May-23         20         34704         33522         47356         33156         2669         12000	0-Feb-23	8	30909	29119	42427	27227	7598	13000		
13-Mar-23	7-Feb-23	9	30721	29153	43105	27905	6920	13000		
20-Mar-23   12   31014   22386   43900   28700   6125   13000	6-Mar-23	10	31153	29585	43924	28724	6101	13000		
27-Mar-23   13   30853   29206   43260   28060   6765   13000   130-40-23   14   32219   30573   44888   30688   51137   12000   10-Apr-23   15   32493   30846   45238   31038   4787   12000   17-Apr-23   16   32994   31338   45999   31799   4026   12000   24-Apr-23   17   33668   32021   45999   31799   4026   12000   24-Apr-23   18   33601   32419   46716   32516   3309   12000   01-May-23   18   33601   32419   46716   32516   3309   12000   08-May-23   19   34531   33349   47356   33156   2669   12000   01-May-23   20   34704   33522   47356   33156   2669   12000   01-May-23   22   33531   33494   47566   33356   2469   12000   22-May-23   22   33593   33613   33494   47556   33356   2469   12000   29-May-23   22   35649   34667   48074   33522   4477   12000   05-Jun-23   23   33653   33773   47578   33374   1951   12000   12-Jun-23   23   33655   33774   48093   33893   1932   12000   12-Jun-23   25   34886   33605   48073   33801   2024   12000   23-Jul-23   28   33517   33662   48001   33801   2024   12000   12-Jun-23   28   33517   33662   48001   33801   2024   12000   12000   12-Jun-23   28   33517   33662   48001   33801   2024   120000   120000   120000   120000   120000   120000   120000   120000   120000   120000   120000	3-Mar-23	11	30805	29237	43355	28155	6670	13000		
	0-Mar-23	12	31014	29366	43900	28700	6125	13000		
10-Apr-23	7-Mar-23	13	30853	29206	43260	28060	6765	13000		
17-Apr-23	3-Apr-23	14	32219	30573	44888	30688	5137	12000		
24-Apr-23         17         33668         32021         45999         31799         4026         12000           01-May-23         18         33619         32419         46716         32516         3309         12000           08-May-23         19         34531         33349         47356         33156         2669         12000           15-May-23         20         34704         33522         47356         33156         2689         12000           22-May-23         21         35031         33849         47556         33366         2469         12000           29-May-23         22         35849         34667         48074         33874         1951         12000           05-Jun-23         23         35053         33773         47578         33378         2447         12000           12-Jun-23         24         35055         33774         48093         33893         1932         12000           19-Jun-23         25         34886         33605         48073         33873         1952         12000           26-Jun-23         26         35391         34110         48408         34208         1617         12000	0-Apr-23	15	32493	30846	45238	31038	4787	12000		
01-May-23         18         33601         32419         46716         32516         3309         12000           08-May-23         19         34531         33349         47356         33156         26669         12000           15-May-23         20         34704         33522         47356         33156         2669         12000           22-May-23         21         35031         33849         47556         33356         2469         12000           29-May-23         22         35849         34667         48074         1951         12000           05-Jun-23         23         35053         33773         47578         33374         1951         12000           12-Jun-23         24         35055         33774         46093         33893         1932         12000           19-Jun-23         25         34886         33605         48073         33873         1952         12000           26-Jun-23         26         35391         34110         48408         34208         1617         1200           03-Jul-23         27         35153         33662         48001         33801         2024         12000           10-Jul-23	7-Apr-23	16	32984	31338	45999	31799	4026	12000		
08-May-23         19         34531         33349         47356         33166         2686         12000           15-May-23         20         34704         33522         47356         33156         2689         12000           22-May-23         21         35031         33849         47556         33356         2469         12000           29-May-23         22         35849         34667         48074         33874         1951         12000           05-Jun-23         23         35053         33773         47578         33378         2447         12000           12-Jun-23         24         35055         33774         48093         33893         1932         12000           19-Jun-23         25         34868         3805         48073         3157         35862         48001         33801         2024         12000           26-Jun-23         26         35391         34110         48408         34208         1617         12000           03-Jul-23         27         33636         48001         33801         2024         12000           10-Jul-23         28         35127         33664         48001         33801         2024	4-Apr-23									
15-May-23         20         34704         33522         47356         33156         26869         12000           22-May-23         21         35031         3849         47556         33356         2469         12000           29-May-23         22         35849         34667         48074         33874         1951         12000           05-Jun-23         23         35053         33773         47578         33378         2447         12000           12-Jun-23         24         35055         33774         48093         33893         1932         12000           19-Jun-23         25         34886         33605         48073         33873         1952         12000           26-Jun-23         26         35391         34110         48408         34208         1617         12000           3-Jul-23         27         35153         33662         48001         33801         2024         12000           10-Jul-23         28         35127         33636         48001         33801         2024         12000	1-May-23	18	33601	32419	46716	32516	3309	12000		
22-May-23         21         35031         33849         47556         33356         2489         12000           29-May-23         22         35849         34667         48074         33874         1951         12000           06-Jun-23         23         35053         33774         48078         33878         2447         12000           12-Jun-23         24         35055         33774         48093         33893         1992         12000           19-Jun-23         25         34886         33605         48073         33873         1952         12000           26-Jun-23         26         35331         34110         48408         34208         1617         12000           03-Jul-23         27         35153         33662         48001         33801         2024         12000           10-Jul-23         28         35127         33636         48001         33801         2024         12000		19				33156				
29-May-23   22   35849   34667   48074   33874   1951   12000										
05-Jun-23         23         35053         33773         47578         33378         2447         12000           12-Jun-23         24         35055         33774         48093         33893         1952         12000           19-Jun-23         25         34886         33605         48073         33873         1952         12000           26-Jun-23         26         35391         34110         48408         34208         1617         12000           03-Jul-23         27         35153         33662         48001         33801         2024         12000           10-Jul-23         28         35127         33636         48001         33801         2024         12000										
12-Jun-23   24   35055   33774   48093   33893   1932   12000       19-Jun-23   25   34886   33605   48073   33873   1952   12000     26-Jun-23   26   35391   34110   48408   34208   1617   12000     33-Jul-23   27   35153   33662   48001   33801   2024   12000     10-Jul-23   28   35127   33636   48001   33801   2024   12000										
19-Jun-23   25   34886   33605   48073   33873   1952   12000										
26-Jun-23 26 35391 34110 48408 34208 1617 12000 03-Jul-23 27 35153 33662 48001 33801 2024 12000 10-Jul-23 28 35127 33636 48001 33801 2024 12000										
03-Jul-23         27         35153         33662         48001         33801         2024         12000           10-Jul-23         28         35127         33636         48001         33801         2024         12000										
10-Jul-23 28 35127 33636 48001 33801 2024 12000										
17-Jul-23   29   35242   33751   47921   33721   2104   12000										
<b>24-Jul-23 30</b> 35288 33797 47978 33778 2047 12000										
31-Jul-23 31 34476 32985 47442 33242 2583 12000										
<b>07-Aug-23 32</b> 34026 32460 46945 32745 3080 12000										
<b>14-Aug-23 33</b> 33679 32114 46364 32164 3661 12000	4-Aug-23	33	33679	32114	46364	32164	3661	12000		

#### Notes - Assumptions critical:

The maintenance plan included in these assumptions includes a base scenario of outages (planned risk level). As there is opportunity for further outages, these will be included. This "likely risk scenario" includes an additional 2000 MW of outages on the base plan.

The expected imports at Apollo is included.

Avon and Dedisa is also included.

The forecast used is the latest operational weekly residual peak forecast, which excludes the expected renewable generation.

Operating Reserve (OR) from Generation: 2 200 MW Unplanned Outage Assumption (UA): 12 000 MW (13000 MW from September 2022)

Reserves: OR + UA = 14200 MW

Eskom Installed Capacity: 49 020 MW (Incl. non-comm. Kusile units).

Installed Dispatchable Capacity: 50 025 MW (Incl. Avon and Dedisa).

Medupi Unit 4 capacity of 720MW has been removed from the capacity planning models by including it in the committed PCLF (although it is UCLF).

Key:

Risk Level	Description
Green	Adequate Generation to meet Demand and Reserves.
Yellow	< 1 000MW Possibly short to meet Reserves
Orange	1 001MW - 2 000MW Definitively short to meet Reserves and possibly Demand
Red	> 2 001MW Short to meet Demand and Reserves

## Medium Term Peak Demand/Capacity Forecast

Please go to the link below for the Medium-term System Adequacy Outlook - 2022 to 2026. (Published 30 October 2021).

 $\underline{https://www.eskom.co.za/wp-content/uploads/2021/11/MediumTermSystemAdequacyOutlook2022-2026.pdf}$ 

or

https://www.eskom.co.za/eskom-divisions/tx/system-adequacy-reports/



# **Renewable Energy Statistics**

Note: Times are expressed as hour beginning

Current Installed Capacity (MW)				
CSP	500.0			
PV	2,212.1			
Wind (Eskom+IPP)	3,442.6			
Total (Incl other REs)	6,205.2			

Maxir	num Contril	oution (MW) - based	on System Operator (	data (subject to mete	ring verification)	
Cal Year	Indicator	CSP	PV	Wind (Eskom+IPP)	Total (Incl other REs)	
All Time	Maximum	506.2	2,099.5	2,921.0	4,784.7	
All lime	<b>Max Date</b>	15-Mar-2022 15:00	24-Oct-2021 12:00	01-Jul-2022 13:00	01-Nov-2021 13:00	
2016	Maximum	200.9	1,350.5	1,229.8	2,576.3	
2016	Max Date	11-Aug-2016 14:00	16-Dec-2016 12:00	23-Dec-2016 13:00	23-Dec-2016 13:00	
2017	Maximum	302.0	1,432.5	1,708.2	3,142.7	
2017	Max Date	07-Nov-2017 10:00	27-Oct-2017 12:00	25-Dec-2017 18:00	13-Dec-2017 13:00	
2018	Maximum	399.7	1,392.1	1,902.3	3,298.9	
2010	Max Date	04-Dec-2018 16:00	03-Oct-2018 12:00	02-Oct-2018 16:00	28-Sep-2018 11:00	
2019	Maximum	502.1	1,375.6	1,872.0	3,530.6	
2019	Max Date	24-Sep-2019 11:00	19-Jan-2019 12:00	14-Dec-2019 15:00	27-Oct-2019 13:00	
2020	Maximum	504.5	1,929.2	2,113.9	4,050.0	
2020	Max Date	25-Nov-2020 12:00	25-Nov-2020 12:00	01-Dec-2020 19:00	24-Nov-2020 13:00	
2021	Maximum	504.9	2,099.5	2,639.3	4,784.7	
2021	Max Date	30-Nov-2021 16:00	24-Oct-2021 12:00	15-Dec-2021 17:00	01-Nov-2021 13:00	
2022	Maximum	506.2	2,025.1	2,921.0	4,422.5	
2022	Max Date	15-Mar-2022 15:00	05-Jan-2022 11:00	01-Jul-2022 13:00	01-Jul-2022 13:00	

Annual E	Annual Energy Contribution (MWh) - based on System Operator data (subject to metering verification)							
Cal Year	Indicator	CSP	PV	Wind (Eskom+IPP)	Total (Incl other REs)			
All Time Maximum	Annual Energy	1,656,017	5,069,146	8,359,224	15,208,327			
2016	Total Energy	529,522	2,630,141	3,730,771	6,951,261			
2017	Total Energy	687,703	3,324,857	5,081,023	9,198,632			
2018	Total Energy	1,031,288	3,282,124	6,467,095	10,887,902			
2019	Total Energy	1,557,151	3,324,989	6,624,642	11,586,945			
2020	Total Energy	1,626,049	4,140,212	6,625,830	12,478,704			
2021	Total Energy	1,656,017	5,069,146	8,359,224	15,208,327			
2022	Total Energy	782,874	2,849,780	5,618,817	9,364,424			

	Maximum Difference between Consecutive Evening Peaks (MW) - based on System Operator data (subject to metering verification)					
Cal Year	Indicator	Total (Incl other REs)				
All Time	Maximum	1,744				
All Time	Max Date	07-Aug-2021 to 08-Aug-2021				
2016	Maximum	828				
2016	Max Date	30-Aug-2016 to 31-Aug-2016				
2017	Maximum	1,038				
2017	Max Date	19-Jun-2017 to 20-Jun-2017				
2018	Maximum	1,336				
2016	Max Date	01-Sep-2018 to 02-Sep-2018				
2019	Maximum	1,464				
2019	Max Date	05-Jul-2019 to 06-Jul-2019				
2020	Maximum	1,488				
2020	Max Date	31-Aug-2020 to 01-Sep-2020				
2021	Maximum	1,744				
2021	Max Date	07-Aug-2021 to 08-Aug-2021				
2022	Maximum	1,659				
2022	Max Date	13-Aug-2022 to 14-Aug-2022				

		at Renewables contributed towards actual hourly energy System Operator data (subject to metering verification)
Cal Year	Indicator	Total (Incl other REs)
All Time	Maximum	19.1%
All Time	Max Date	01-Nov-2021 13:00
2016	Maximum	9.8%
2016	Max Date	23-Dec-2016 13:00
2017	Maximum	12.7%
Max	Max Date	25-Dec-2017 15:00
2018	Maximum	13.1%
2018	Max Date	01-Jan-2018 14:00
2019	Maximum	13.9%
2019	Max Date	14-Dec-2019 14:00
2020	Maximum	16.1%
2020	Max Date	27-Dec-2020 15:00
2021	Maximum	19.1%
2021	Max Date	01-Nov-2021 13:00
2022	Maximum	18.0%
2022	Max Date	01-Jan-2022 15:00