

# Weekly System Status Report – 2021 Week 32 (09/08/2021 – 15/08/2021)

## 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<br>Dispatchable<br>Generation (MW) | Non-commercial<br>Generation (MW) | Residual Load<br>Forecast (MW) | Actual Residual<br>Demand (MW) Incl<br>IOS | Operating Reserve<br>Margin (Excl Non-<br>Commercial Units) | Operating Reserve<br>Margin (Incl Non-<br>Commercial Units) | Forecast vs. Actual<br>(Residual Demand) |
|-----------------|--|-----------------------------------|--------------------------------|--|---|---|--|
| Mon 09/Aug/2021 | 31,698                                       | 0                                 | 29,387                         | 29,485                                     | 7.5%  | 7.5%  | -0.3%                                    |
| Tue 10/Aug/2021 | 33,345                                       | 0                                 | 30,653                         | 32,078                                     | 3.9%  | 3.9%  | -4.4%                                    |
| Wed 11/Aug/2021 | 33,812                                       | 0                                 | 30,451                         | 30,977                                     | 9.2%  | 9.2%  | -1.7%                                    |
| Thu 12/Aug/2021 | 34,148                                       | 0                                 | 31,078                         | 30,918                                     | 10.4%   | 10.4%   | 0.5%                                     |
| Fri 13/Aug/2021 | 33,957                                       | 0                                 | 29,093                         | 30,214                                     | 12.4%   | 12.4%   | -3.7%                                    |
| Sat 14/Aug/2021 | 33,434                                       | 0                                 | 29,618                         | 30,530                                     | 9.5%  | 9.5%  | -3.0%                                    |
| Sun 15/Aug/2021 | 33,502                                       | 0                                 | 31,260                         | 30,523                                     | 9.8%  | 9.8%  | 2.4%                                     |

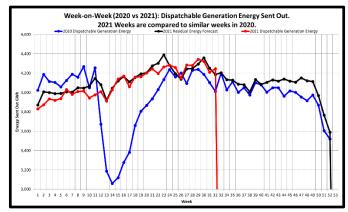
| Date            | Total Available<br>Generation Incl<br>Renewables (MW) | Non-commercial<br>Generation (MW) | RSA<br>Contracted<br>Load Forecast<br>(MW) | Actual RSA<br>Contracted Demand<br>(MW) Incl IOS | Operating Reserve<br>Margin (Excl Non-<br>Commercial Units) | Operating Reserve<br>Margin (Incl Non-<br>Commercial Units) | Forecast vs. Actual<br>(RSA Contracted<br>Demand) |
|-----------------|---|-----------------------------------|--|--|---|---|---|
| Mon 09/Aug/2021 | 33,087  | 0                                 | 31,334                                     | 30,874   | 7.2%  | 7.2%  | 1.5%  |
| Tue 10/Aug/2021 | 34,391  | 0                                 | 31,701                                     | 33,124   | 3.8%  | 3.8%  | -4.3%   |
| Wed 11/Aug/2021 | 35,501  | 0                                 | 32,255                                     | 32,665   | 8.7%  | 8.7%  | -1.3%   |
| Thu 12/Aug/2021 | 35,645  | 0                                 | 32,782                                     | 32,415   | 10.0%   | 10.0%   | 1.1%  |
| Fri 13/Aug/2021 | 35,956  | 0                                 | 31,121                                     | 32,214   | 11.6%   | 11.6%   | -3.4%   |
| Sat 14/Aug/2021 | 34,660  | 0                                 | 31,344                                     | 31,756   | 9.1%  | 9.1%  | -1.3%   |
| Sun 15/Aug/2021 | 34,658  | 0                                 | 32,443                                     | 31,678   | 9.4%  | 9.4%  | 2.4%  |

## **Notes:**

- 1. 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.
- 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) = 49 590 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



## [2021 weeks compared to similar 2020 weeks]

| Week 32 : Dispatchable Generation Energy Sent Out Statistics |               |  |  |  |
|--|---------------|--|--|--|
| 4,247  | GWh           |  |  |  |
| 5.87   | %             |  |  |  |
| 4.16   | %             |  |  |  |
|  | 4,247<br>5.87 |  |  |  |

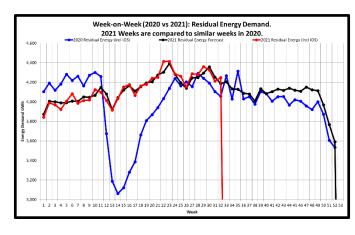
## Note:

2021 Weeks are compared to similar weeks in 2020.

(2021 week 1 ~ 2020 week 1)

| Annual Dispatchable Generation Energy Sent Out Statistics |                         |                                  |      |  |
|---|-------------------------|----------------------------------|------|--|
| Year  | 01 Jan to 15 Aug Energy | Annual Energy (01 Jan to 31 Dec) | Unit |  |
| 2016  | 142,990                 | 226,721                          | GWh  |  |
| 2017  | 141,137                 | 225,203                          | GWh  |  |
| 2018  | 140,684                 | 224,202                          | GWh  |  |
| 2019  | 138,132                 | 219,563                          | GWh  |  |
| 2020  | 128,154                 | 206,725                          | GWh  |  |
| 2021 (YTD)  | 132,864                 |                                  | GWh  |  |

## Week-on-Week Residual Energy Demand



## [2021 weeks compared to similar 2020 weeks]

| Week 32 : Residual Energy Demand Statistics (Incl IOS) |       |     |  |  |
|--|-------|-----|--|--|
| Energy Demand  | 4,249 | GWh |  |  |
| Week-on-Week Growth                                    | 4.78  | %   |  |  |
| Year-on-Year Growth (Year-to-Date) Annual              | 4.18  | %   |  |  |

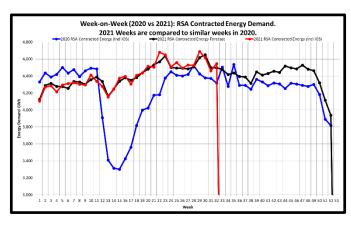
## Note:

2021 Weeks are compared to similar weeks in 2020.

(2021 week 1 ~ 2020 week 1)

|            | Annual Residual Energy Demand Statistics (Incl IOS) |                                  |      |  |  |
|------------|---|----------------------------------|------|--|--|
| Year       | 01 Jan to 15 Aug Energy                             | Annual Energy (01 Jan to 31 Dec) | Unit |  |  |
| 2016       | 143,051   | 226,808                          | GWh  |  |  |
| 2017       | 141,149   | 225,248                          | GWh  |  |  |
| 2018       | 140,796   | 224,594                          | GWh  |  |  |
| 2019       | 138,848   | 220,924                          | GWh  |  |  |
| 2020       | 129,201   | 208,151                          | GWh  |  |  |
| 2021 (YTD) | 133,952   |                                  | GWh  |  |  |

# Week-on-Week RSA Contracted Energy Demand



## [2021 weeks compared to similar 2020 weeks]

| Week 32 : RSA Contracted Energy Demand Statistics (Incl IOS) |       |     |  |  |
|--|-------|-----|--|--|
| Energy Demand  | 4,548 | GWh |  |  |
| Week-on-Week Growth  | 5.29  | %   |  |  |
| Year-on-Year Growth (Year-to-Date) Annual                    | 5.24  | %   |  |  |

2021 Weeks are compared to similar weeks in 2020. (2021 week 1  $\sim$  2020 week 1)

| 2021 WCC   | Annual RSA Contracted Energy Demand Statistics (Incl IOS) |                                  |      |  |  |  |
|------------|---|----------------------------------|------|--|--|--|
| Year       | 01 Jan to 15 Aug Energy                                   | Annual Energy (01 Jan to 31 Dec) | Unit |  |  |  |
| 2016       | 149,153   | 238,069                          | GWh  |  |  |  |
| 2017       | 147,231   | 235,426                          | GWh  |  |  |  |
| 2018       | 147,210   | 235,482                          | GWh  |  |  |  |
| 2019       | 145,734   | 232,511                          | GWh  |  |  |  |
| 2020       | 136,225   | 220,630                          | GWh  |  |  |  |
| 2021 (YTD) | 142,663   |                                  | GWh  |  |  |  |



# Week-on-Week Dispatchable Generation Peak Demand

# Week-on-Week (2020 vs 2021): Dispatchable Generation Peak Demand. 2021 Weeks are compared to similar weeks in 2020. 34,000 33,000 31,000 31,000 31,000 32,000 32,000 27,000 28,000 21,000 22,000 24,000 22,000 24,000 24,000 25,000 26,000 27,000 28,000 28,000 28,000 29,000 20,000 2

## [2021 weeks compared to similar 2020 weeks]

| Week 32 : Dispatchable Generation Peak Demand Statistics |        |    |  |  |
|--|--------|----|--|--|
| Peak Demand  | 31,746 | MW |  |  |
| Week-on-Week Growth                                      | 4.79   | %  |  |  |
| Year-on-Year Growth (Year-to-Date) Annual                | -0.28  | %  |  |  |
|  |        |    |  |  |

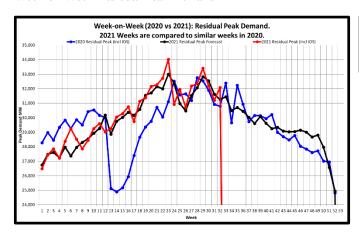
## Note:

2021 Weeks are compared to similar weeks in 2020.

(2021 week 1 ~ 2020 week 1)

| Annual Dispatchable Generation Peak Demand Statistics |                 |             |      |  |  |
|---|-----------------|-------------|------|--|--|
| Year  | Peak Date       | Annual Peak | Unit |  |  |
| 2016  | Thu 04-Aug-2016 | 34,181      | MW   |  |  |
| 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 (YTD)  | Thu 15-Jul-2021 | 32,292      | MW   |  |  |

## Week-on-Week Residual Peak Demand



## [2021 weeks compared to similar 2020 weeks]

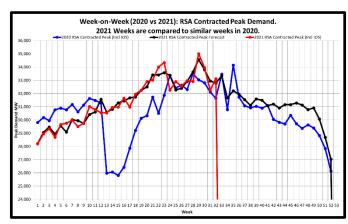
| Week 32 : Residual Peak Demand Statistics (Incl IOS) |        |    |  |  |
|--|--------|----|--|--|
| Peak Demand  | 32,078 | MW |  |  |
| Week-on-Week Growth                                  | 4.16   | %  |  |  |
| Year-on-Year Growth (Year-to-Date) Annual            | 3.89   | %  |  |  |

Note: 2021 Weeks are compared to similar weeks in 2020.

(2021 week 1 ~ 2020 week 1)

| Annual Residual Peak Demand Statistics (Incl IOS) |                 |             |      |  |  |  |
|---|-----------------|-------------|------|--|--|--|
| Year  | Peak Date       | Annual Peak | Unit |  |  |  |
| 2016  | Thu 07-Jul-2016 | 34,488      | MW   |  |  |  |
| 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 (YTD)  | Tue 08-Jun-2021 | 34,029      | MW   |  |  |  |

## Week-on-Week RSA Contracted Peak Demand



## [2021 weeks compared to similar 2020 weeks]

| Week 32 : RSA Contracted Peak Demand Statistics (Incl IOS) |      |   |  |  |  |  |  |  |
|--|------|---|--|--|--|--|--|--|
| Peak Demand 33,124 M                                       |      |   |  |  |  |  |  |  |
| Week-on-Week Growth  | 4.68 | % |  |  |  |  |  |  |
| Year-on-Year Growth (Year-to-Date) Annual                  | 4.56 | % |  |  |  |  |  |  |

## Note:

2021 Weeks are compared to similar weeks in 2020.

(2021 week 1 ~ 2020 week 1)

| Annual RSA Contracted Peak Demand Statistics (Incl IOS) |                 |             |      |  |  |  |  |
|---|-----------------|-------------|------|--|--|--|--|
| Year  | Peak Date       | Annual Peak | Unit |  |  |  |  |
| 2016  | Mon 30-May-2016 | 34,913      | MW   |  |  |  |  |
| 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 (YTD)  | Thu 22-Jul-2021 | 35,005      | MW   |  |  |  |  |



## Weekly Generation Availability

|  |       | Week  |       |       |       |       |       |       | Annual (J | Jan - Dec) |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-----------|------------|-------|-------|-------|-------|-------|-------|
|  | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27        | 28         | 29    | 30    | 31    | 32    | YTD   | 2020  |
| Energy Availability Factor (Eskom EAF) | 63.92 | 64.95 | 63.53 | 64.37 | 65.09 | 66.65 | 67.89 | 68.53 | 67.17     | 68.25      | 66.90 | 68.18 | 70.70 | 66.30 | 63.06 | 65.04 |
| Planned Outage Factor                  | 7.95  | 6.04  | 5.72  | 5.39  | 3.72  | 6.66  | 7.54  | 8.76  | 8.94      | 7.53       | 5.95  | 7.59  | 9.50  | 11.79 | 10.20 | 11.24 |
| Unplanned Outage Factor                | 25.06 | 25.72 | 27.04 | 28.04 | 28.84 | 24.74 | 22.79 | 20.40 | 21.30     | 21.74      | 24.85 | 21.87 | 17.71 | 19.57 | 23.70 | 20.88 |
| Other Outage Factor                    | 3.07  | 3.29  | 3.71  | 2.20  | 2.35  | 1.95  | 1.78  | 2.31  | 2.59      | 2.48       | 2.30  | 2.36  | 2.09  | 2.34  | 3.04  | 2.84  |

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)

## **Three Month Outlook**

This is the forecast demand vs. available generating capacity for each week for 3 months ahead. Colour codes ranging from Green (no shortage) to Red (worst case) are used to indicate the absence or presence of a capacity constraint.

|                        |          | MW             | MW             | MW             | MW             | MW           | MW              | MW          | MW          |
|------------------------|----------|----------------|----------------|----------------|----------------|--------------|-----------------|-------------|-------------|
| Week Start             | Week     | RSA            | Residual       | Available      | Available      | Planned      | Unplanned       | Planned     | Likely Risk |
|                        |          | Contracted     | Forecast       | Dispatchable   | Capacity (Less | Maintenance  | Outage          | Risk Level  | Senario     |
|                        |          | Forecast       |                | Capacity       | OR and UA)     |              | Assumption (UA) | (-13200 MW) | (-15200 MW) |
| 16-Aug-21              | 33       | 33343          | 31450          | 44940          | 31740          | 4650         | 11000           |             |             |
| 23-Aug-21              | 34       | 31673          | 30499          | 43743          | 30543          | 5847         | 11000           |             |             |
| 30-Aug-21              | 35       | 32207          | 30703          | 44357          | 31157          | 5233         | 11000           |             |             |
| 06-Sep-21              | 36       | 31960          | 30455          | 43138          | 29938          | 6452         | 11000           |             |             |
| 13-Sep-21              | 37       | 31535          | 30031          | 43021          | 29821          | 6569         | 11000           |             |             |
| 20-Sep-21              | 38       | 31114          | 29609          | 43086          | 29886          | 6504         | 11000           |             |             |
| 27-Sep-21              | 39       | 31587          | 30083          | 43121          | 29921          | 6469         | 11000           |             |             |
| 04-Oct-21              | 40       | 31490          | 29615          | 42896          | 29696          | 6694         | 11000           |             |             |
| 11-Oct-21              | 41       | 31084          | 29243          | 42766          | 29566          | 6824         | 11000           |             |             |
| 18-Oct-21<br>25-Oct-21 | 42       | 31210          | 29335          | 42674          | 29474          | 6916         | 11000           |             |             |
| 01-Nov-21              | 43       | 30909<br>31158 | 29084<br>29030 | 42653<br>43016 | 29453<br>29816 | 6937<br>6574 | 11000<br>11000  |             |             |
| 08-Nov-21              | 45       | 31167          | 29030          | 43016          | 29618          | 6772         | 11000           |             |             |
| 15-Nov-21              | 45       | 31167          | 29038          | 42818<br>43416 | 30216          | 6174         | 11000           |             |             |
| 22-Nov-21              | 47       | 31139          | 29010          | 42949          | 29749          | 6641         | 11000           |             |             |
| 29-Nov-21              | 48       | 30786          | 28674          | 43622          | 30422          | 5968         | 11000           |             |             |
| 06-Dec-21              | 49       | 30908          | 28807          | 42942          | 29742          | 6648         | 11000           |             |             |
| 13-Dec-21              | 50       | 30078          | 27977          | 41999          | 28799          | 7591         | 11000           |             |             |
| 20-Dec-21              | 51       | 28684          | 26583          | 42194          | 28994          | 7396         | 11000           |             |             |
| 27-Dec-21              | 52       | 27041          | 24940          | 43164          | 29964          | 6426         | 11000           |             |             |
| 03-Jan-22              | 1        | 29054          | 26537          | 42637          | 29437          | 6953         | 11000           |             |             |
| 10-Jan-22              | 2        | 29675          | 27479          | 41252          | 28052          | 8338         | 11000           |             |             |
| 17-Jan-22              | 3        | 30014          | 27818          | 41171          | 27971          | 8419         | 11000           |             |             |
| 24-Jan-22              | 4        | 30149          | 27953          | 41023          | 27823          | 8567         | 11000           |             |             |
| 31-Jan-22              | 5        | 30660          | 28504          | 42287          | 29087          | 7303         | 11000           |             |             |
| 07-Feb-22              | 6        | 31070          | 28914          | 42510          | 29310          | 7080         | 11000           |             |             |
| 14-Feb-22              | 7        | 31222          | 29066          | 42831          | 29631          | 6759         | 11000           |             |             |
| 21-Feb-22              | 8        | 31028          | 28872          | 42367          | 29167          | 7223         | 11000           |             |             |
| 28-Feb-22              | 9        | 31137          | 29264          | 42272          | 29072          | 7318         | 11000           |             |             |
| 07-Mar-22              | 10       | 31398          | 29525          | 43477          | 30277          | 6113         | 11000           |             |             |
| 14-Mar-22              | 11       | 31249          | 29375          | 43317          | 30117          | 6273         | 11000           |             |             |
| 21-Mar-22              | 12       | 31216          | 29161          | 43648          | 30448          | 5942         | 11000           |             |             |
| 28-Mar-22              | 13       | 31470          | 29415          | 43901          | 30701          | 5689         | 11000           |             |             |
| 04-Apr-22              | 14       | 31552          | 30175          | 43860          | 30660          | 5730         | 11000           |             |             |
| 11-Apr-22              | 15       | 31814          | 30437          | 43647          | 30447          | 5943         | 11000           |             |             |
| 18-Apr-22              | 16       | 32020          | 30642          | 43782          | 30582          | 5808         | 11000           |             |             |
| 25-Apr-22              | 17       | 32052          | 30674          | 43782          | 30582          | 5808         | 11000           |             |             |
| 02-May-22              | 18       | 32553          | 31122          | 44167          | 30967          | 5423         | 11000           |             |             |
| 09-May-22              | 19<br>20 | 33309          | 31878          | 45026          | 31826          | 4564         | 11000           |             |             |
| 16-May-22<br>23-May-22 | 20       | 33997<br>33899 | 32566<br>32468 | 45956<br>45956 | 32756<br>32756 | 3634<br>3634 | 11000<br>11000  |             |             |
| 30-May-22              | 22       | 35359          | 32468          | 45956<br>46424 | 32756          | 3166         | 11000           |             |             |
| 06-Jun-22              | 23       | 35359          | 33928          | 46424<br>45109 | 31909          | 4481         | 11000           |             |             |
| 13-Jun-22              | 24       | 34186          | 32620          | 45109          | 32040          | 4350         | 11000           |             |             |
| 20-Jun-22              | 25       | 34427          | 32861          | 45153          | 31953          | 4437         | 11000           |             |             |
| 27-Jun-22              | 26       | 34450          | 32884          | 45133          | 32248          | 4142         | 11000           |             |             |
| 04-Jul-22              | 27       | 34574          | 33000          | 46171          | 32971          | 3419         | 11000           |             |             |
| 11-Jul-22              | 28       | 34644          | 33071          | 45463          | 32263          | 4127         | 11000           |             |             |
| 18-Jul-22              | 29       | 35023          | 33450          | 45463          | 32263          | 4127         | 11000           |             |             |
| 25-Jul-22              | 30       | 34323          | 32750          | 44988          | 31788          | 4602         | 11000           |             |             |
| 01-Aug-22              | 31       | 33659          | 31924          | 44566          | 31366          | 5024         | 11000           |             |             |
| 08-Aug-22              | 32       | 33208          | 31474          | 43882          | 30682          | 5708         | 11000           |             |             |
| 15-Aug-22              | 33       | 33381          | 31647          | 44619          | 31419          | 4971         | 11000           |             |             |
| 22-Aug-22              | 34       | 33048          | 31323          | 44619          | 31419          | 4971         | 11000           |             |             |

## 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): 11 000 MW Reserves: OR + UA = 13 200 MW

Eskom Installed Capacity: 48 585 MW (Incl. non-comm. Kusile

Installed Dispatchable Capacity: 49 590 MW (Incl. Avon and Dedisa).

## 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 - 2021 to 2025. (Published 30 October 2020).

https://www.eskom.co.za/Whatweredoing/SupplyStatus/Documents/Medium%20Term%20System%20Adequacy%20Outlook%202020.pdf



# **Renewable Energy Statistics**

Note: Times are expressed as hour beginning

| Maximum Contribution (MW) - based on System Operator data (subject to metering verification) |           |                   |                   |                   |                        |  |  |
|--|-----------|-------------------|-------------------|-------------------|------------------------|--|--|
| Cal Year   | Indicator | CSP               | PV                | Wind (Eskom+IPP)  | Total (Incl other REs) |  |  |
| All Time   | Maximum   | 504.5             | 1,961.3           | 2,284.0           | 4,064.8                |  |  |
| All Time   | Max Date  | 25-Nov-2020 12:00 | 20-Feb-2021 12:00 | 21-Jun-2021 13:00 | 10-Mar-2021 14:00      |  |  |
| 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      |  |  |
| 2047   | 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                |  |  |
| 2018   | Max Date  | 04-Dec-2018 16:00 | 03-Oct-2018 12:00 | 02-Oct-2018 16:00 | 28-Sep-2018 11:00      |  |  |
| 2010   | 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   | 502.2             | 1,961.3           | 2,284.0           | 4,064.8                |  |  |
| 2021   | Max Date  | 11-Mar-2021 15:00 | 20-Feb-2021 12:00 | 21-Jun-2021 13:00 | 10-Mar-2021 14:00      |  |  |

| 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<br>Maximum   | Annual<br>Energy | 1,626,049 | 4,140,212 | 6,625,830        | 12,478,704             |  |  |  |
| 2016  | Total<br>Energy  | 529,522   | 2,630,141 | 3,730,771        | 6,951,261              |  |  |  |
| 2017  | Total<br>Energy  | 687,703   | 3,324,857 | 5,081,023        | 9,198,632              |  |  |  |
| 2018  | Total<br>Energy  | 1,031,288 | 3,282,124 | 6,467,095        | 10,887,902             |  |  |  |
| 2019  | Total<br>Energy  | 1,557,151 | 3,324,989 | 6,624,642        | 11,586,945             |  |  |  |
| 2020  | Total<br>Energy  | 1,626,049 | 4,140,212 | 6,625,830        | 12,478,704             |  |  |  |
| 2021  | Total<br>Energy  | 930,375   | 3,012,496 | 5,026,728        | 9,049,981              |  |  |  |

| 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   | 1,743                      |  |  |  |  |
| 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                      |  |  |  |  |
| 2010   | 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   | 1,743                      |  |  |  |  |
| 2021   | Max Date  | 07-Aug-2021 to 08-Aug-2021 |  |  |  |  |

| Current Installed Capacity (MW) |         |  |  |  |  |  |
|---------------------------------|---------|--|--|--|--|--|
| CSP                             | 500.0   |  |  |  |  |  |
| PV                              | 2,212.1 |  |  |  |  |  |
| Wind (Eskom+IPP)                | 2,752.7 |  |  |  |  |  |
| Total (Incl other REs)          | 5,490.4 |  |  |  |  |  |