Generation Connection Capacity Assessment (GCCA)

2025

Transmission Grid Planning and Development

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Generation Connection Capacity Assessment

2025 Connection Capacity for IPP Generators

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This guide and interactive maps can be found on our website:

https://www.eskom.co.za/eskom-divisions/tx/gcca/

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Executive summary

The term “generation connection capacity” refers to the amount of generation that can be accommodated on the transmission system at a given time and at a given location without adversely affecting grid reliability and without requiring significant infrastructure upgrades.

The GCCA aims to assist customers to make more informed decisions about where to pursue generation projects by providing information about the generation connection capacity that will be available on the transmission grid in a specific year, assuming that all planned projects are completed on time in accordance with the 2022 Transmission Development Plan (TDP).

The GCCA 2025 provides details of the generation connection capacity of the planned transmission network with all the projects that are expected to be commissioned by 2025. It is published in response to the announcement of Bid Window Round 7 (BW7), for which preferred bidders are expected to be connected in the year 2025. The results incorporate all the preferred bidders for the bid windows up to Round 6 (BW6) and all the budget quotations (BQs) that have been issued or are pending for private off-takers who wish to connect to the grid on a wheeling agreement.

The GCCA provides the generation connection capacity at four levels, namely:

i. substation level (which is the transformation capacity limit at the substation);
ii. substation area level (which is the limit due to the loss of any single line connecting the substation to the rest of the grid);
iii. local area level (which is the limit of the transmission network connecting transmission substations in a local area under the loss of any single line in the local area); and
iv. supply area level (which is the limit of the transmission network connecting all local areas within a supply area under the loss of any single line in the supply area).

A summary of the generation connection capacity for Levels ii to iv is shown in Figure 1. It is important to note that the stated generation connection capacity is limited by the lowest capacity at all the levels.

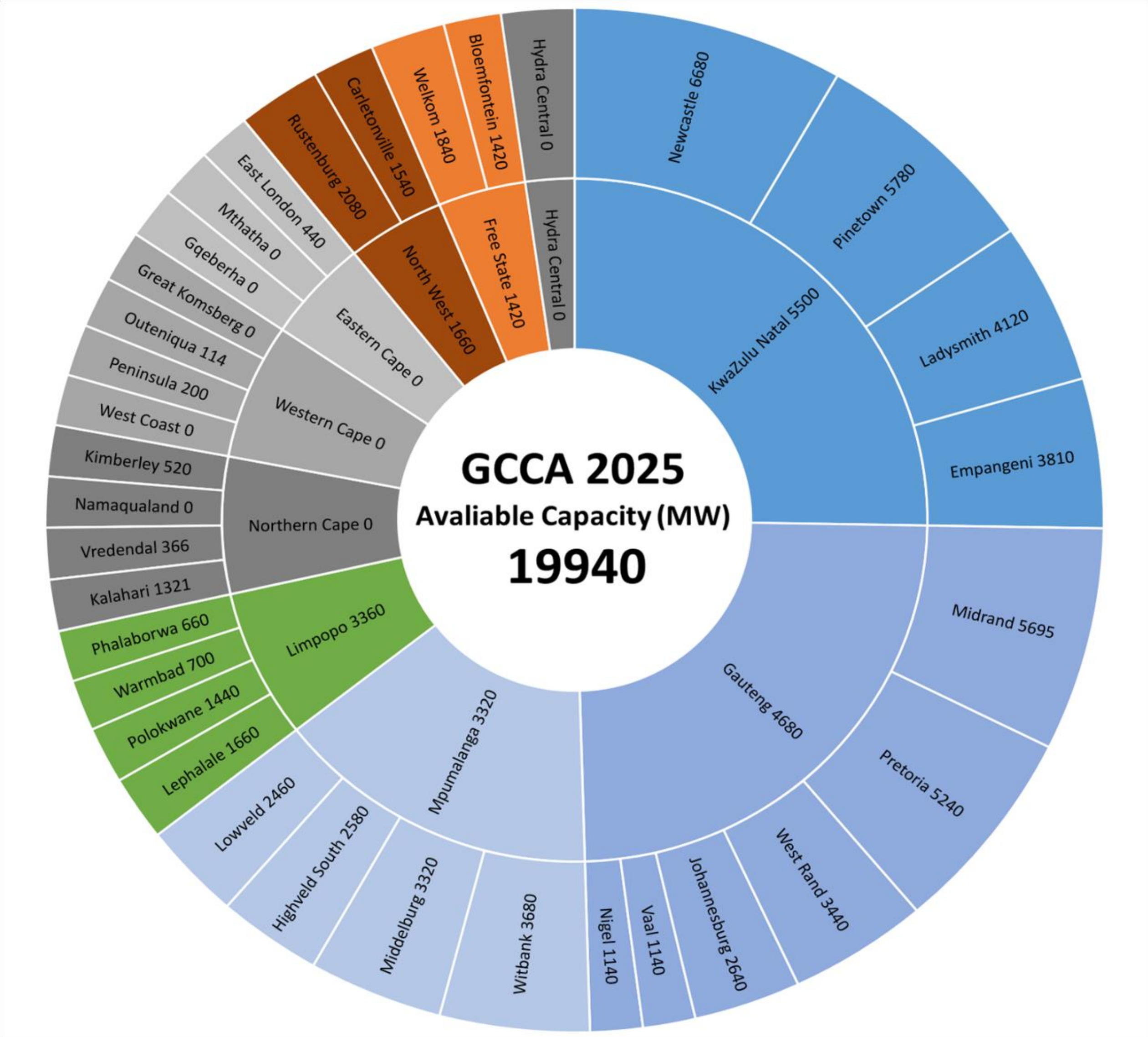


Figure 1: Summary of the GCCA 2025 results

The GCCA 2025 results show that the generation connection capacity in the Northern Cape, Western Cape, Eastern Cape, and Hydra Central supply areas has been depleted. Supply areas with remaining capacity totalling 19.94 GW are:

- KwaZulu-Natal (5 500 MW);
- Gauteng (4 680 MW);
- Limpopo (3 360 MW);

- Mpumalanga (3 320 MW);
- North West (1 660 MW); and
- the Free State (1 420 MW).

Parts of the transmission network located within the most favourable areas for wind and photovoltaic (PV) generation such as the Northern Cape, Eastern Cape, Western Cape, and Hydra Central have no capacity, as all of the capacity has been depleted from previous bid window rounds and private off-takers.

The depletion of generation connection capacity in these areas has resulted in many generation projects being denied connection. These areas remain in high demand due to their abundant energy resources for renewable generation. Unlocking capacity in these areas will require a significant amount of transmission network investment, which often takes several years to develop and construct.

Curtailment studies were, therefore, conducted to provide generations developers with an alternative option if they were still keen to connect in these constrained areas. The approval of the curtailment framework is currently in the governance process. Governance within Eskom has been approved to a large extent; it will now follow a regulatory approval process before any of the curtailment results and opportunities can be shared, most likely in the next release of the GCCA or possibly sooner in an addendum, pending the outcome from the regulator.

Generation developers are, therefore, strongly encouraged to consider developing their projects in those areas with remaining capacity.

Preamble

The untold story of the Northern Cape

The Northern Cape, which covers nearly one-third of the land area of the country, operated as a radially fed grid for many years due to it having the lowest load. There was no need to strengthen the network beyond what was already there, and an interconnection to North West was non-existent. The main supply hinged off a single 400 kV line from Hydra substation near De Aar to Aries substation near Kenhardt.

Since the first release of the GCCA in 2012, IPP developers' interest in pursuing solar PV and concentrated solar power (CSP) projects in the Northern Cape area has been highly apparent, as shown in Figure 2.

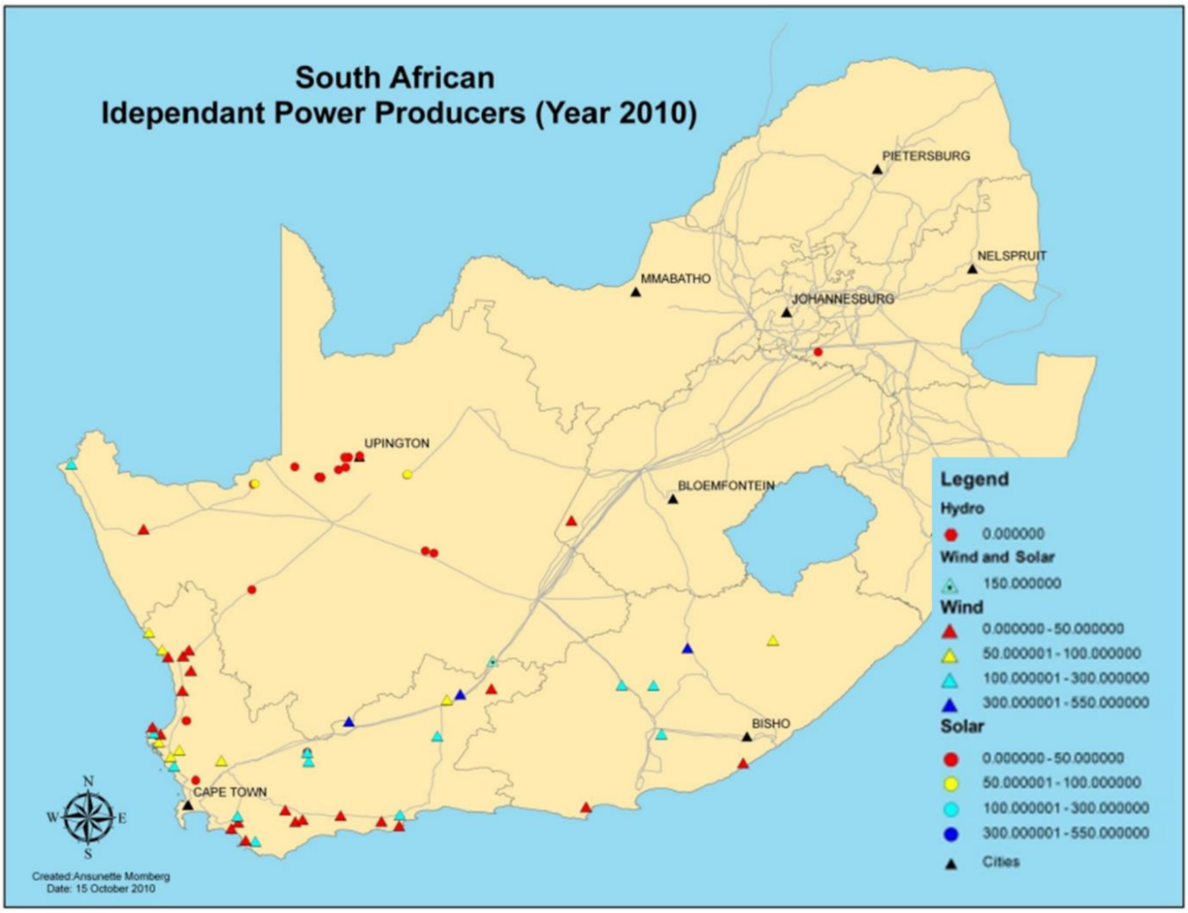


Figure 2: South African IPPs' interest in 2010

However, the “weak” transmission network would not cater for the full interest of renewable energy generation in the area. In fact, only 129 MW of generation connection capacity was available within what was previously referred to as Zone North in the GCCA 2012.

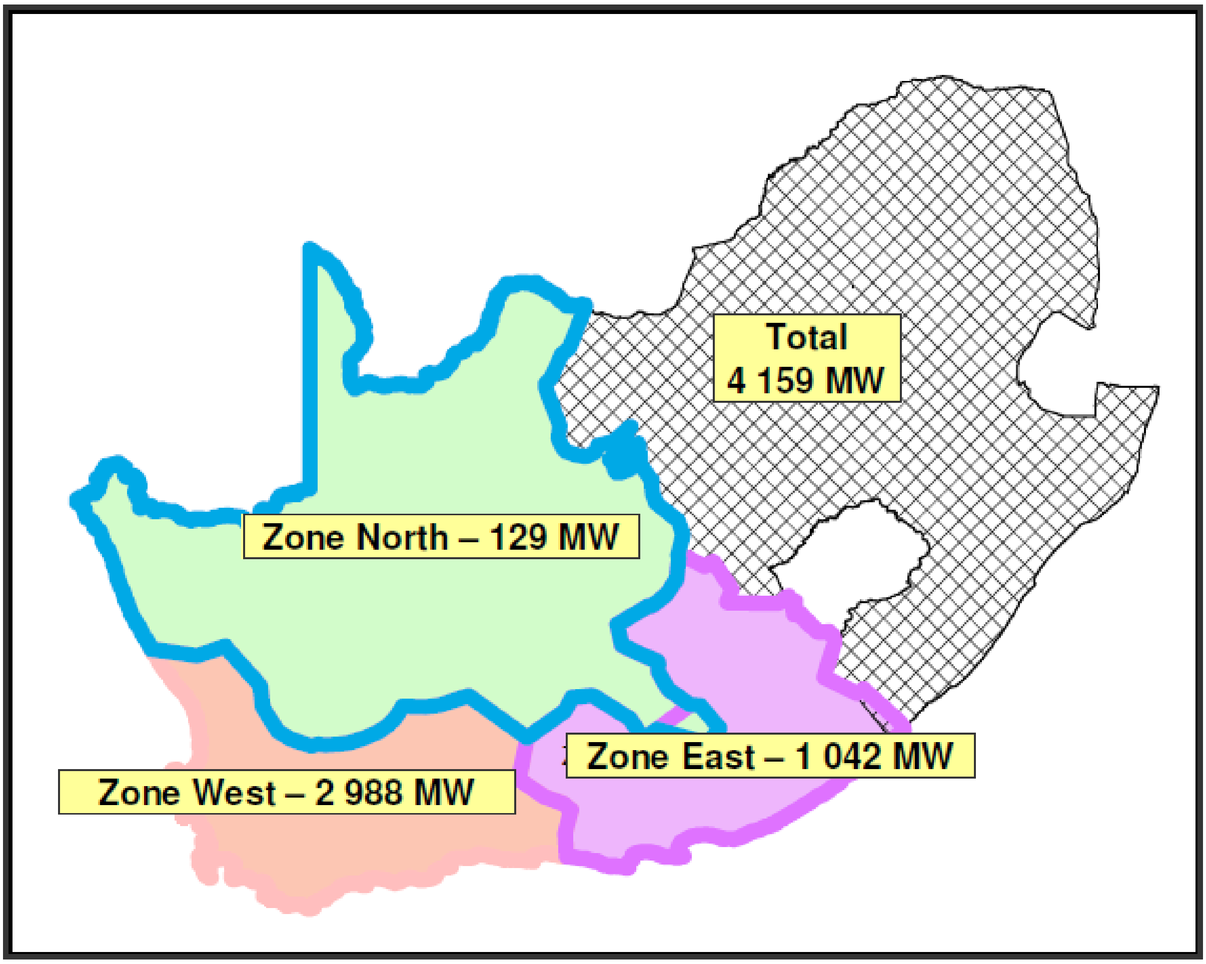


Figure 3: Available generation connection capacity in 2012 (GCCA 2012)

The release of the GCCA 2024 (see ***Figure 4***) in March 2022 indicated that the Northern Cape transmission network was congested, and the generation connection capacity was reduced to 0 MW. The concept of a “constrained transmission grid” had emerged, and the realisation of the importance of transmission had just begun.

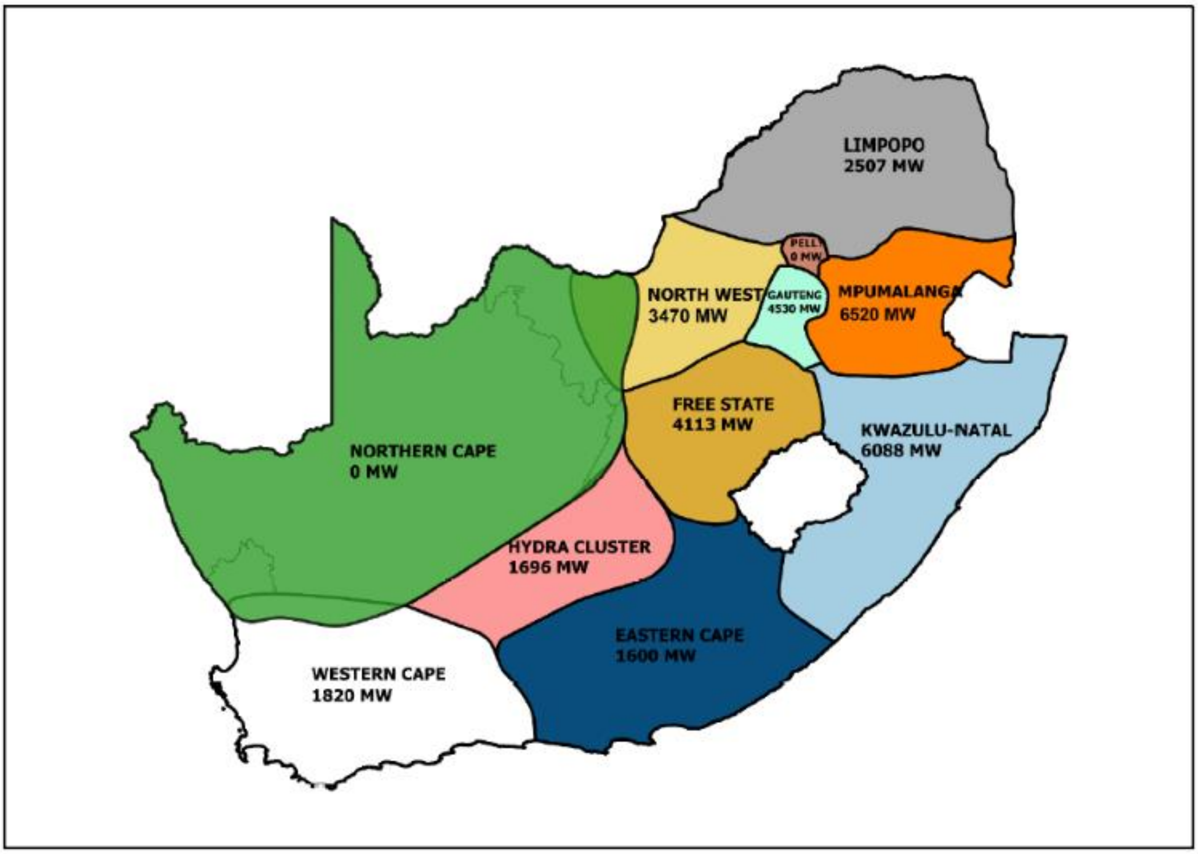
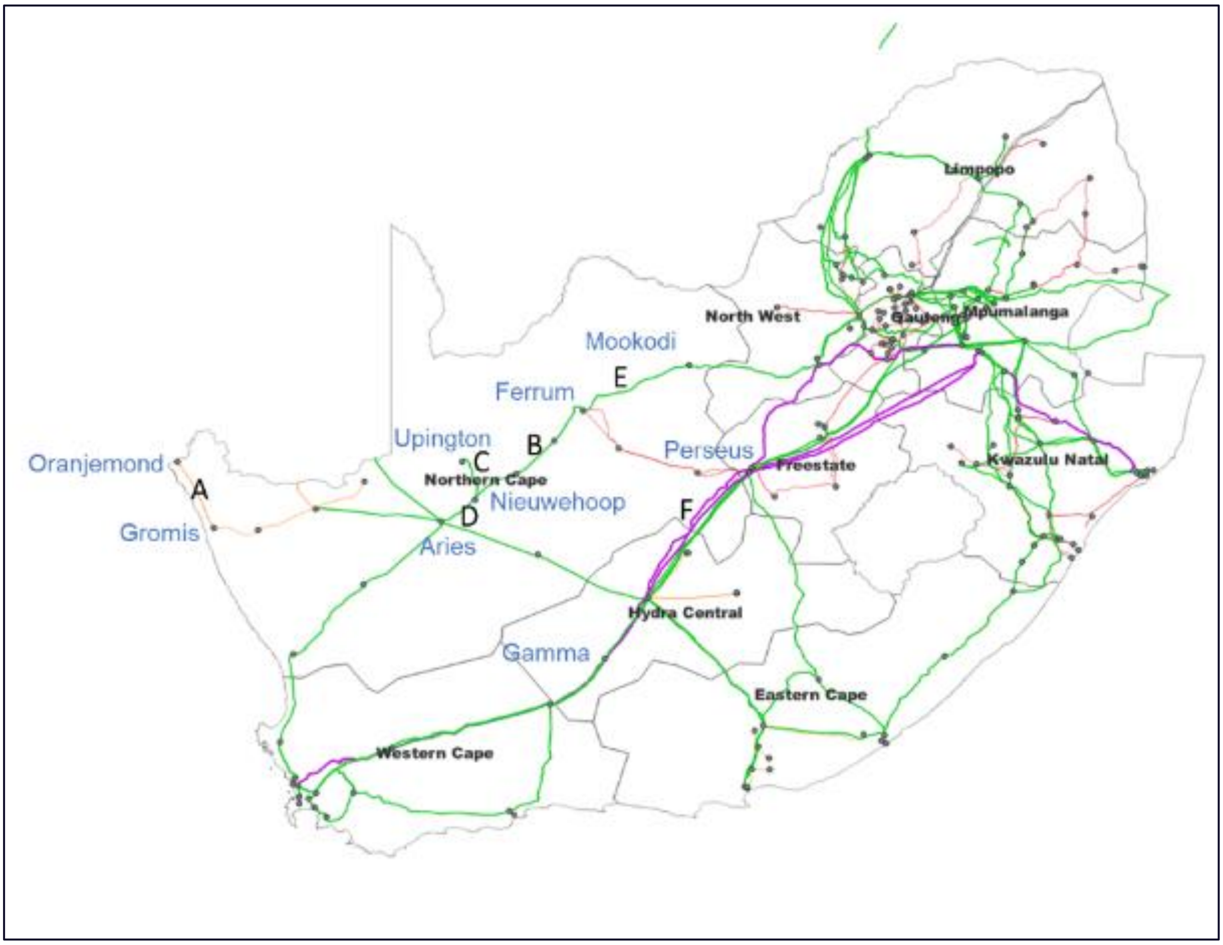


Figure 4: Available generation connection capacity in 2024 (GCCA 2024)

However, the untold story of the Northern Cape is key to understanding the reason for the current 0 MW of connection capacity and, more importantly, what was achieved between 2012 and 2022.

During this period, Eskom constructed six major transmission lines spanning just over 1 170 km, which contributed significantly to the generation connection capacity from the previous 129 MW. By this time, the Northern Cape was also interconnected to North West (see ***Figure 5***).



A	*Gromis-Oranjemond No. 1 220 kV*	*130 km*
B	*Ferrum-Nieuwehoop No. 1 400 kV*	*258 km*
C	*Nieuwehoop-Upington No. 1 400 kV*	*88 km*
D	*Aries-Nieuwehoop No. 1 400 kV*	*67 km*
E	*Ferrum-Mookodi No. 1 400 kV*	*199 km*
F	*Gamma-Perseus No. 1 765 kV*	*430 km*

Figure 5: Transmission line projects constructed in the Northern Cape

With all these projects completed in just over 10 years, the Northern Cape now hosts 2 172 MW of renewable energy (RE) generation, comprising 500 MW of CSP, 1 022 MW of PV, and 650 MW of wind generation. The build-up to this is shown in Figure 6 where, as the generation connection capacity increased, the bid windows rapidly consumed the capacity. The generation connection capacity of 0 MW was only applied after an additional 1 661 MW of generation had been allowed, that is, from 129 MW in 2012 to 3 534 MW by 2024.

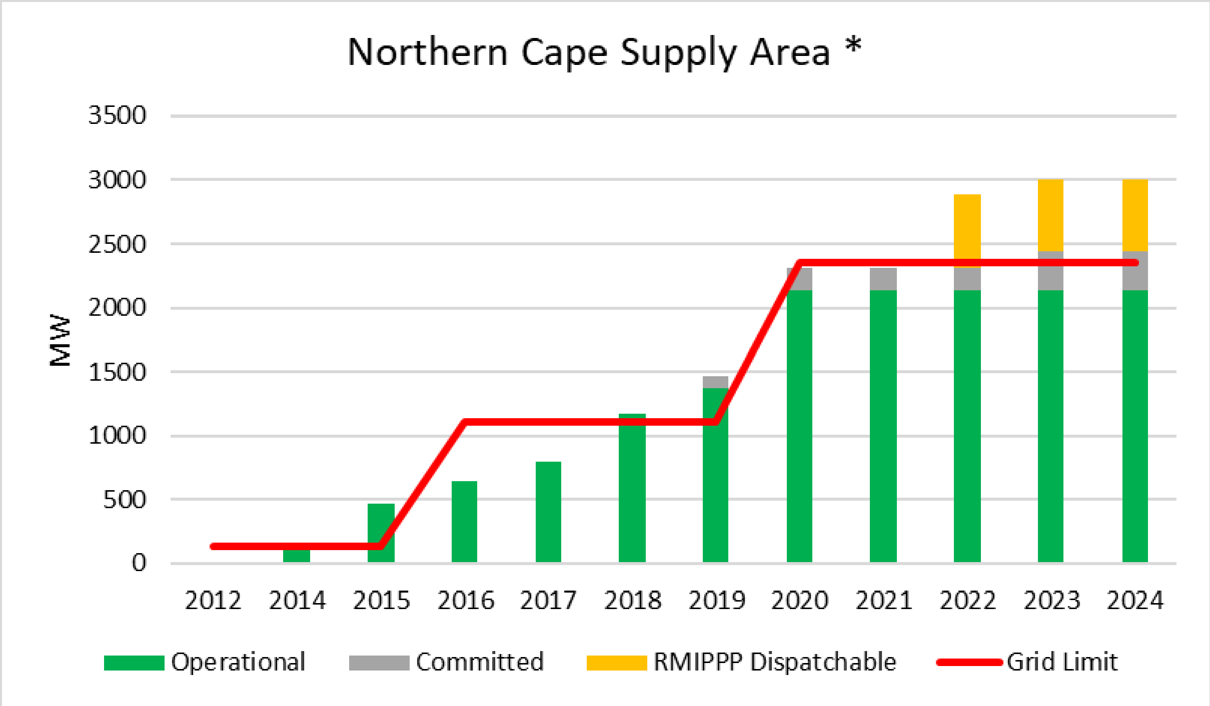


Figure 6: Northern Cape grid expansion in response to IPP generation connection requirements

Figure *7* shows the monthly RE penetration levels for 2022 for the Northern Cape, where the penetration level is the total amount of renewable energy produced divided by the local load energy requirements.

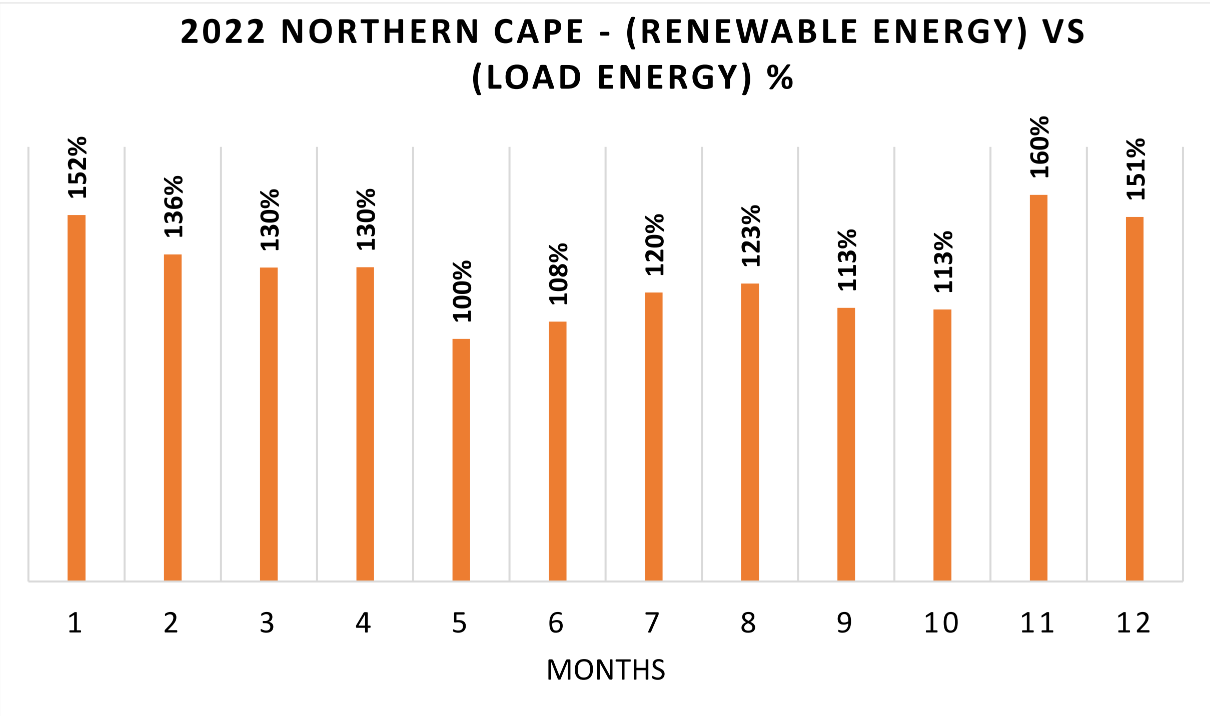


Figure 7: 2022 Northern Cape RE penetration levels

It is evident that renewable energy met or exceeded the local load energy requirement every month for 2022. When in excess, mainly during the day, the additional amount of renewable energy produced is exported to other load areas that are more than ~900 km from the Northern Cape supply area. At night, when there is little or no RE generation to meet the demand, the load is supplied by the external grid via the same transmission lines used to export excess RE generation.

To put the above into context, many consider South Australia as a benchmark when it comes to progress on renewable energy for large grids in remote areas. According to the media reports published on reneweconomy.co.au, South Australia achieved 64% net (average) energy penetration over the last 12 months [1] and a record of 80% net (average) energy penetration for the months of December and January [2].

Remarkably so, the Northern Cape, which is a remote and weak grid with no conventional coal, gas, hydro, or pumped-storage generation, has averaged more than 125% energy penetration over the last 12 months.

The constrained grid

The grid is constrained, admittedly so, initially in the Northern Cape supply area and now extended to the Western Cape, Eastern Cape, and Hydra Central supply areas, with reduced capacity in the remaining parts of the country. Unfortunately, the required transmission corridor strengthening to unlock grid capacity and alleviate these constraints will only be commissioned from 2027 onwards, despite being expedited and prioritised at the level of the presidency.

Be this as it may, the constraints need to be seen in the context of the generation required over the next 25 years. Figure 8 below is used to illustrate the concept using a storage vessel. The vessel is required to store resources. If the vessel is filled up to the level of the resource requirements, the vessel remains unconstrained, and the requirements are met. However, if the vessel is filled beyond the resource requirement and to the brim, the vessel becomes constrained. In this case, the resource requirements are not only met, but are actually exceeded. In fact, the constrained vessel now provides a margin filled with additional resources beyond what was required. The constrained vessel needs to be expanded for future resource requirements, but still meets and exceeds the current needs. Constraints, therefore, need to be measured in the context of the requirement.

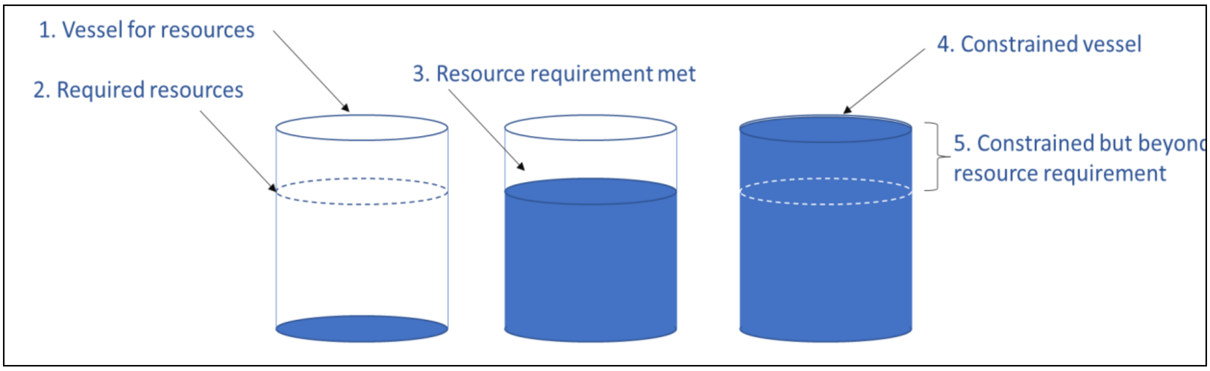


Figure 8: Illustration of the concept of a constrained grid

Three studies are compared to provide a perspective on the optimal generation mix required over the next 25 years:

1. Integrated Resource Plan (IRP) 2019 [3]
2. Least-cost energy mix by the Council for Scientific and Industrial Research (CSIR) [4]
3. TDP 2022 [5]

All three studies indicate that wind and PV are the dominant resources to meet the generation requirements in the near term.

The IRP 2019, which is the current policy of the country, indicates 26.2 GW of RE generation by 2030, while the least-cost energy mix study by the CSIR indicates 25.2 GW. The TDP indicates 36.8 GW of RE generation mainly as a result of a higher requirement of PV generation due to the just energy transition (JET).

Table 1: Studies comparing the RE generation requirement (in GW) by 2030

Study	Wind	PV	Total
IRP 2019	18.0	8.2	26.2
Least-cost (CSIR)	19.2	6.0	25.2
TDP 2022	19.8	17.0	36.8

In the TDP 2022, which has a breakdown of the RE generation required for each year, 15 GW is required by the IRP in 2025, while 13.8 GW is anticipated by the TDP. However, the generation in the GCCA 2025 is 19.4 GW, as shown in Figure 9, which consists operational, awarded (IPPO Bid windows), and budget quotations (Private sector BQs).

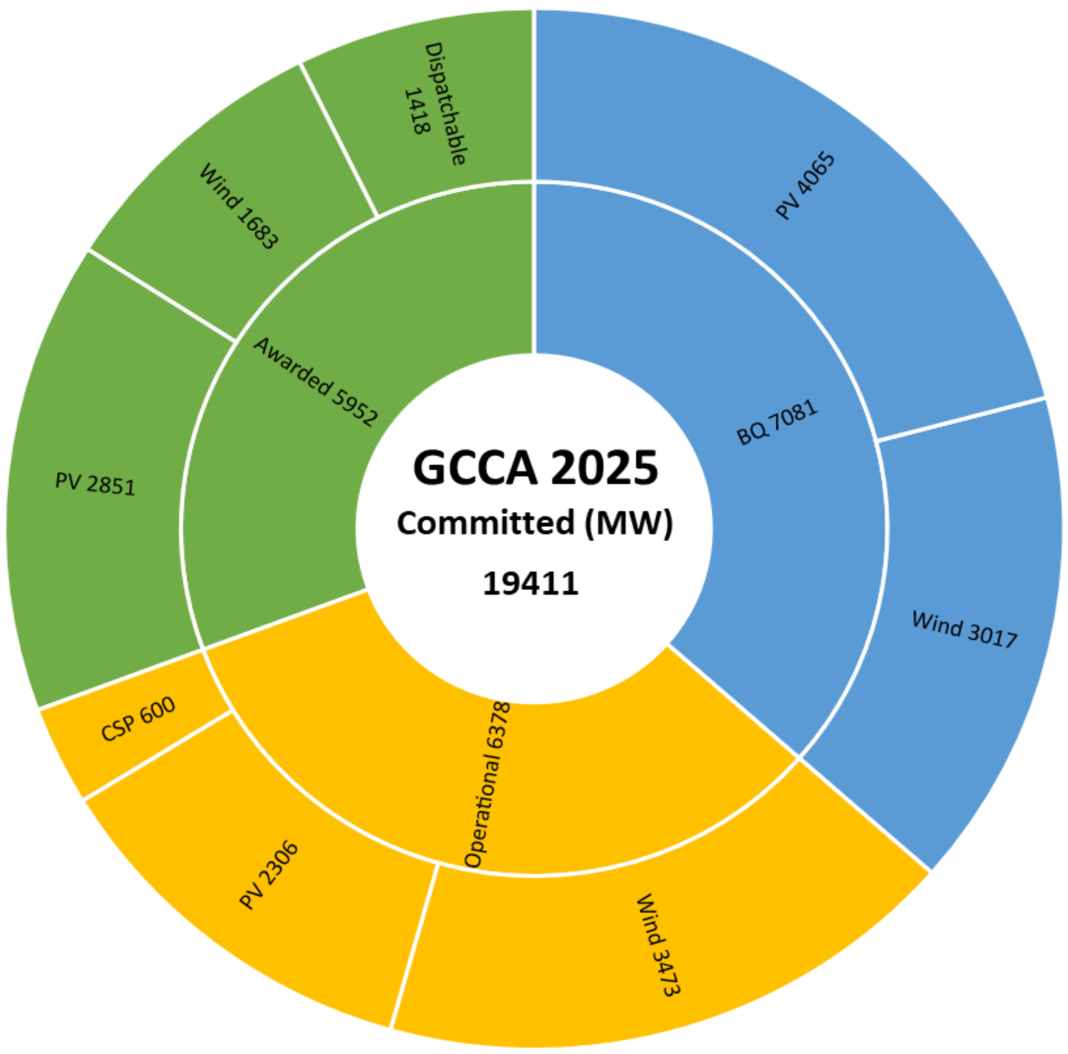


Figure 9: GCCA 2025 committed generation

A comparison of committed wind and PV versus what is anticipated in the TDP 2022 is shown in Table 2***:***.

Table 2: Committed versus anticipated wind and PV generation (in GW)

	Wind	PV	Total
Anticipated	8.3	5.5	13.8
Committed	8.1	9.8	17.9

It can be seen that the anticipated amount of 13.8 GW of wind and PV by 2025 is, therefore, exceeded by 4.1 GW.

This is further illustrated in Figure 10, which considers the IRP 2019 requirement of 15 GW by 2025, where:

A. 15 GW of RE is required by 2025 according to the IRP 2019;

B. RE in the GCCA 2025 totals 18 GW, that is, 19.4 GW less the dispatchable risk mitigation independent power producer (RMIPP) generation of 1.4 GW;

C. in addition to this, the System Operator has observed behind-the-meter embedded generation of 4.7 GW (predominantly from residential rooftop PV, Commercial and Industrial (C&I) small scale and large-scale PV).

D. the GCCA 2025, without embedded generation, is closer to the year 2027 requirement in the IRP 2019; and

E. the GCCA 2025, with embedded generation, is closer to the 2029 requirement with an RE total of 22.7 GW (made up of 18 GW + 4.7 GW).

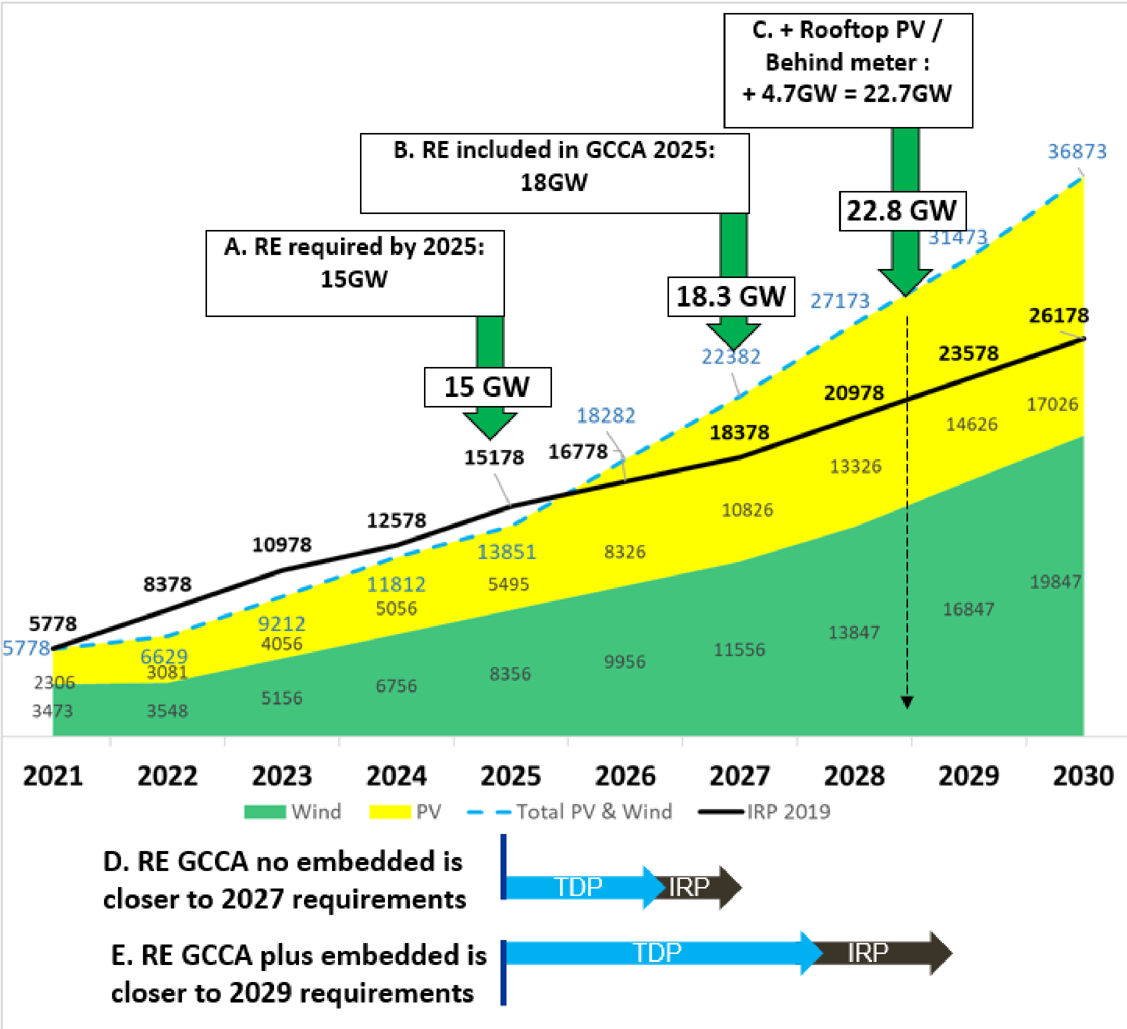


Figure 10: Required wind and PV generation (in GW)

It is clear that the aggressive uptake of RE generation has already met the IRP 2019 requirement for 2027 and the TDP 2022 requirement for 2026. Grid congestion is, therefore, not the lack of grid capacity, but instead the result of integrating more RE generation than what is required by 2025; that is, the vessel has been filled to the brim beyond what is required, possibly overfilled in some supply areas.

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1. Introduction

Since the launch of the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in 2011, there has been an overwhelming increase in the number of applications from independent power producers (IPPs) to connect to the Eskom grid.

The amendment to Schedule 2 of South Africa's Electricity Regulation Act removed the threshold for self-generation or distributed generation. The change allows private companies to construct power plants with generation capacities of any size for commercial use without requiring a power generation licence from the National Energy Regulator of South Africa (NERSA).

Having both RE deployment processes (public and private) competing for the same grid capacity has led to RE projects becoming concentrated in areas of high renewable resources and diminishing grid capacity.

The GCCA, therefore, aims to assist generation customers to make more informed decisions about where to pursue generation projects by providing information about the generation connection capacity that will be available on the transmission grid in a specific year, assuming that all planned projects are completed on time.

The term "generation connection capacity" refers to the amount of generation that can be accommodated on the transmission system at a given time and at a given location without adversely affecting grid reliability and without requiring significant infrastructure upgrades. Generation connection capacity is, however, not fixed; if network upgrades are implemented or if demand increases, the generation connection capacity of a system may increase. Conversely, if new generation is added at a certain location or if the load decreases, the generation connection capacity will likely decrease.

The GCCA 2025 is in response to the announcement of Bid Window Round 7 (BW7), for which preferred bidders are expected to be connected in the year 2025. The network used in the GCCA 2025 study incorporates all the preferred bidders for the bid windows up to Round 6 (BW6) and all the budget quotations (BQs) that have been issued or are pending for private off-takers.

2. Methodology

The GCCA provides the generation connection capacity at four levels, namely:

i. substation level (which is the transformation capacity limit at the substation);
ii. substation area level (which is the limit due to the loss of any single line connecting the substation to the rest of the grid);
iii. local area level (which is the limit of the transmission network connecting transmission substations in a local area under the loss of any single line in the local area); and
iv. supply area level (which is the limit of the transmission network connecting all local areas within a supply area under the loss of any single line in the supply area).

The hierarchy is such that a substation lies within a substation area, several substation areas lie within a local area, and several local areas lie within a supply area. A condition of the hierarchy is that the combined substation area limits may not exceed the local area limit, and the combined local area limits may not exceed the supply area limit; that is, the stated generation connection capacity is limited by the lowest capacity at all the levels.

Although this hierarchy is respected, it is important to note that it is depicted slightly differently, as shown in Figure 11, where the substation limits are not provided within the substation area limits diagram, but rather within the local area limits diagram purely for better visual appearance. KwaZulu-Natal is used for illustrative purposes in this case.

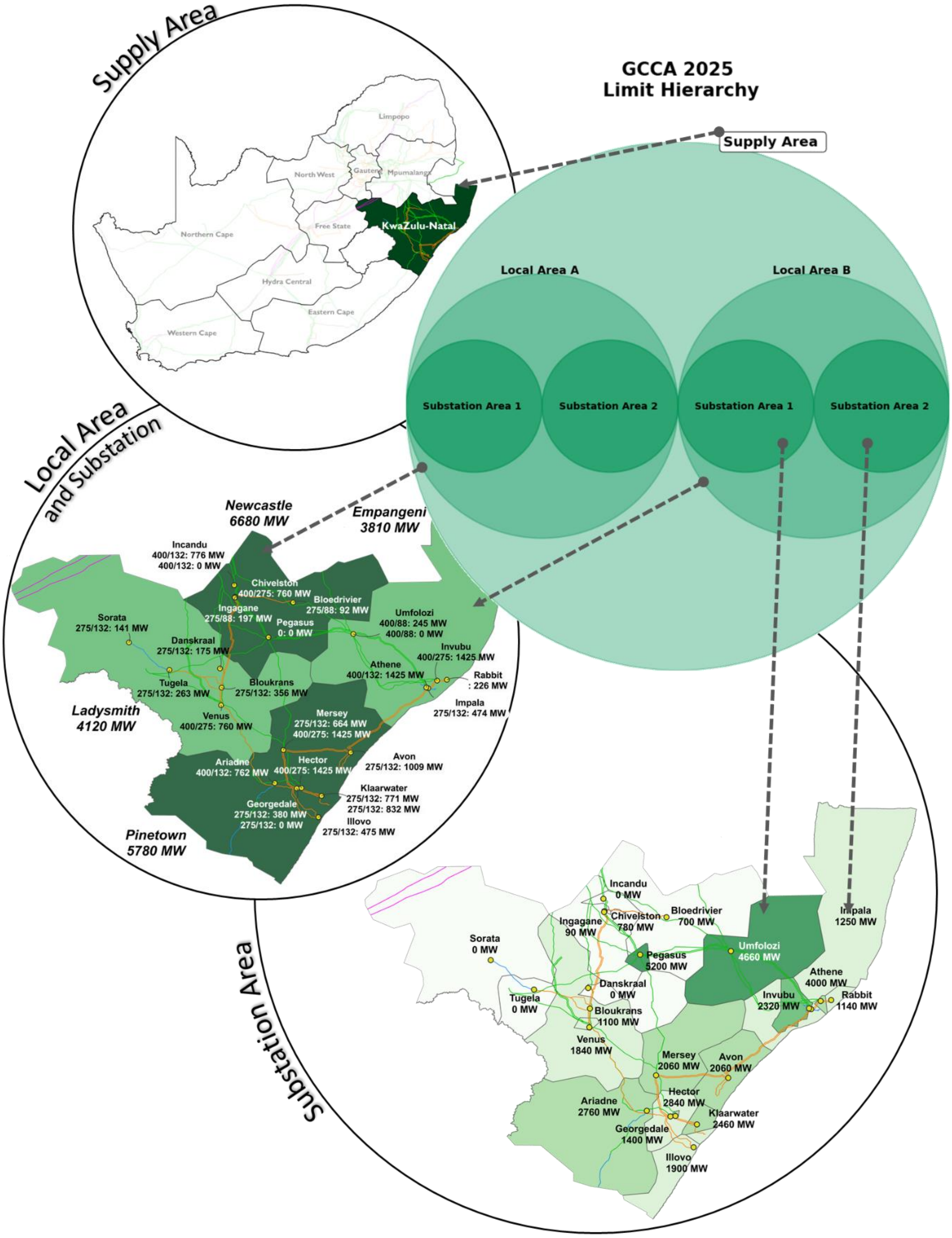

Figure 11: Generation connection capacity limits hierarchy

2.1. Supply areas

The South African transmission network is subdivided into 10 supply areas, as shown in Figure 12. These are as follows:

- Northern Cape
- Western Cape
- Hydra Central
- Eastern Cape
- Free State
- KwaZulu-Natal
- North West
- Gauteng
- Mpumalanga
- Limpopo

The departure from administrative and provincial boundaries to supply areas is deemed to be more appropriate for this type of assessment. Provincial boundaries may, therefore, not be respected when referring to provincial names for some supply areas.

Figure 12: Supply area demarcation

The high interest in generation connection in the Northern Cape, Western Cape, Eastern Cape, and Hydra Central will result in power flowing through other supply areas towards the largest loads in the country in Gauteng, KwaZulu-Natal, and North West, as shown in Figure 13. Some of the generation from the Cape provinces tends to compete for the same corridor through Hydra Central, which, therefore, further limits the generation connection capacity for these individual supply areas as well as for Hydra Central.

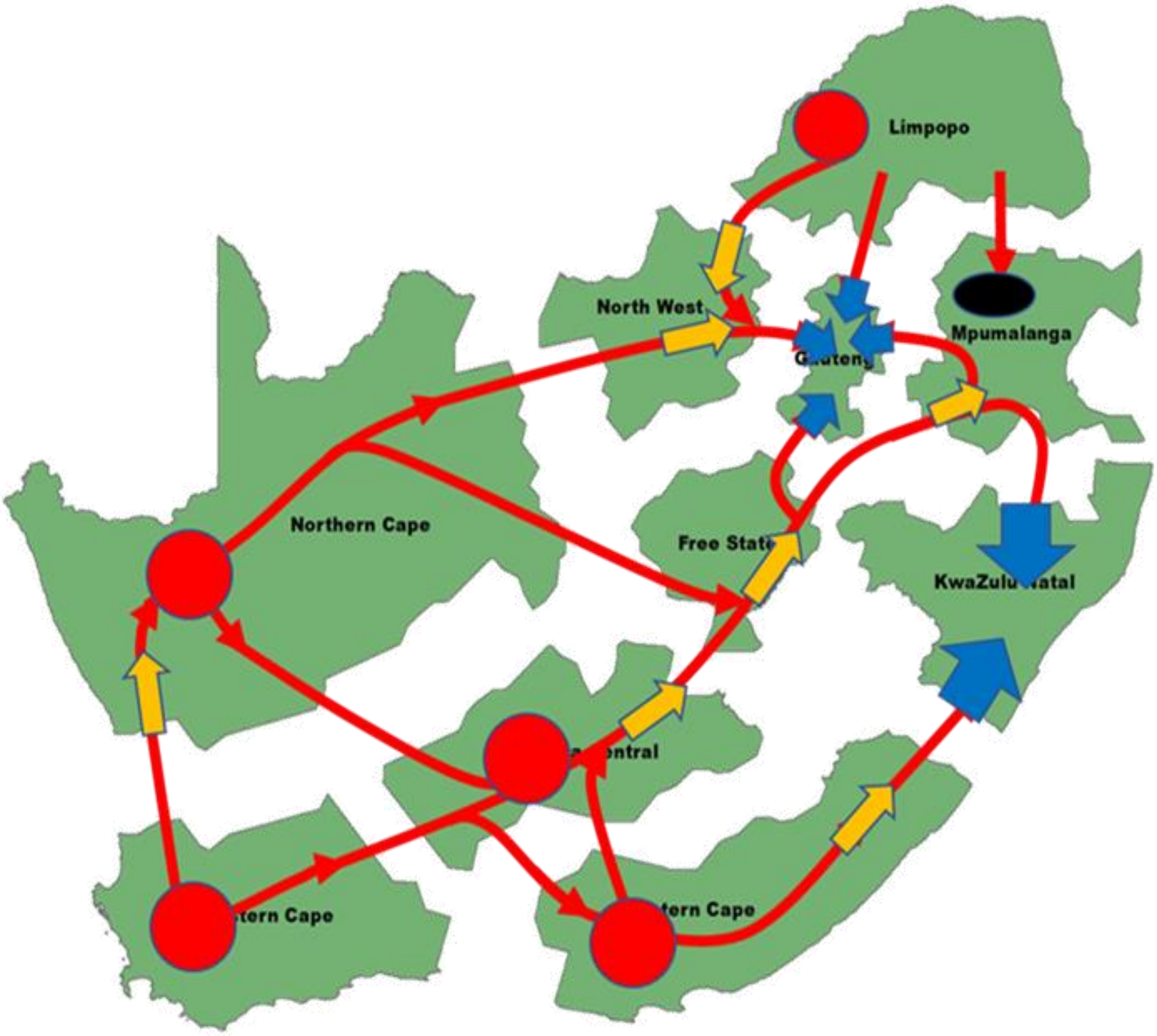

Figure 13: Power flows through the transmission network

2.2. Local areas

The 10 supply areas are further divided into local areas, as shown in Figure 14.

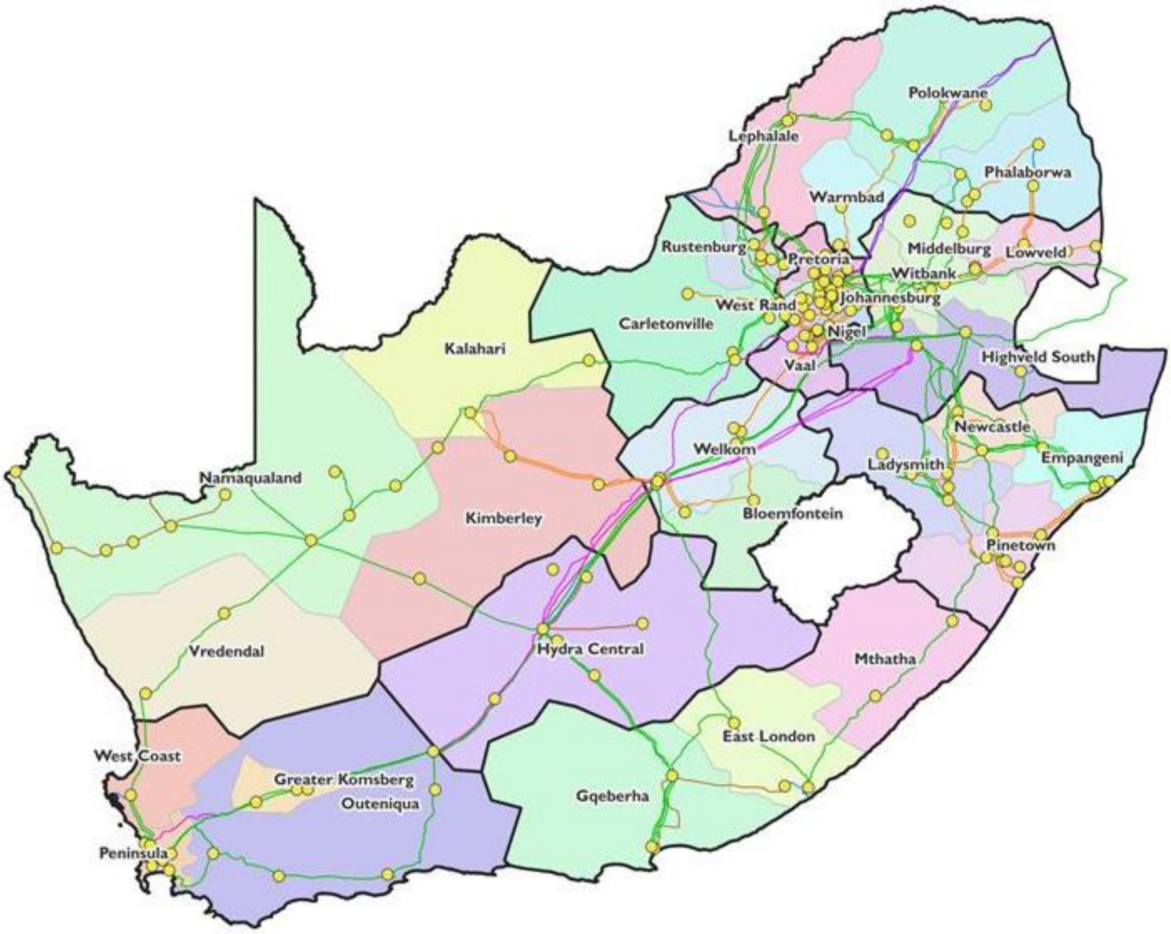

Figure 14: Local areas shown within supply area demarcations

Compared to the GCCA 2024, the GCCA 2025 has additional local areas, or changes have been made to existing local areas, as follows:

- In the Northern Cape, there are new local areas called Vredendal and Kalahari.
- In the Western Cape, the Greater Peninsula is divided into West Coast and Peninsula, and the area within the Komsberg Renewable Energy Development Zone (REDZ) 2 is demarcated as Greater Komsberg.
- In the Eastern Cape, there is a new local area called Mthatha.
- In Gauteng, the local areas have changed from East Rand, Vaal Triangle, West Rand, and Johannesburg to Midrand, Nigel, Pretoria, West Rand, Johannesburg, and Vaal.
- In Limpopo, Warmbad is included, which consists of Pelly and Warmbad substations.

2.3. *Calculating the generation connection capacity*

This section provides a high-level explanation of how the generation connection capacity was calculated at each of the four levels of the transmission network. The following network redundancy has been assumed for integration of distributed generation (DG), inverter-based resources (IBRs), or distributed energy resources (DERs) at an aggregated transmission level.

Table 3: Network redundancy

Category	Transformer	Line
Load together with generation	N-1	N-1
Generation ≤ 1 000 MW	N-0	N-0
Generation > 1 000 MW	N-1	N-1

2.3.1. Level 1: substation

At Level 1, the available transformation capacity at a substation is calculated by connecting a generator at a substation secondary busbar, as shown in Figure 15. The transformation capacity is assessed either under N-0 or N-1, depending on the amount of generation as well as whether the substation supplies load or not.

When a generator is connected to the secondary busbar at a substation, the power generated is first absorbed by the local load, and the excess is fed upstream through the transformers.

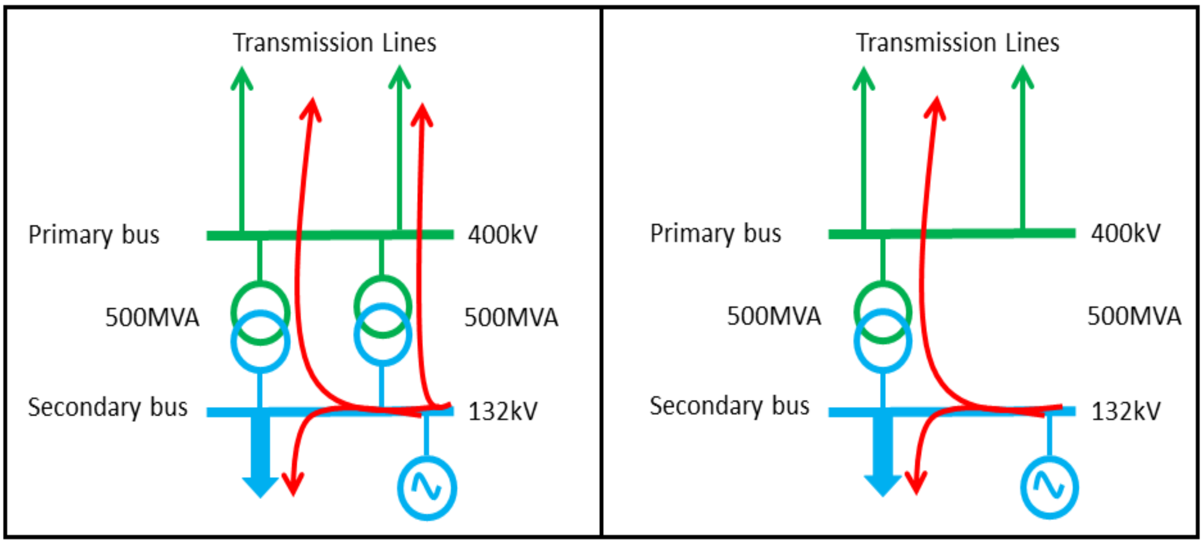

Figure 15: Substation capacity assessment

2.3.2. Level 2: substation area

At Level 2, the substation area limit is evaluated by connecting a generator at the primary busbar of each substation, one at a time, as shown in Figure 16. The network is assessed under all credible N-1 line contingencies.

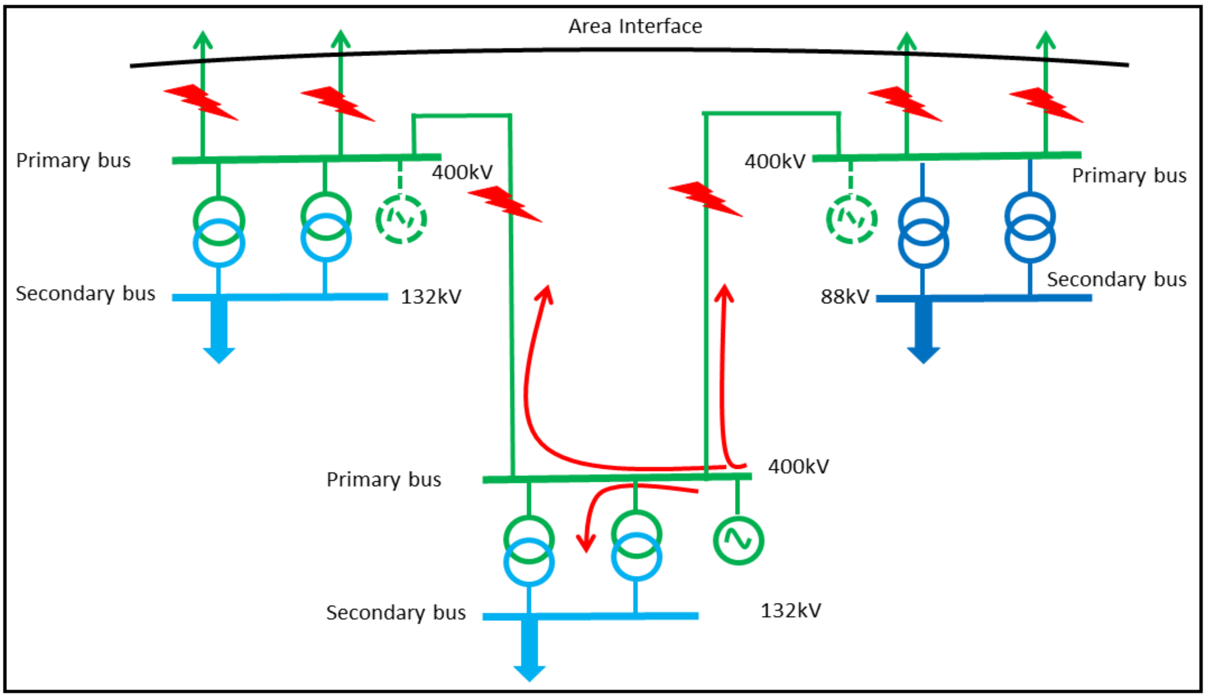

Figure 16: Substation area limit assessment

2.3.3. Level 3: local area

At Level 3, the local area limit is assessed by scaling all the connected generation in a local area in proportion to their Level 2 limits. The local area limit is determined by connecting generators at the primary busbar of each substation, simultaneously, as shown in Figure 17. The network is assessed under all credible N-1 line contingencies.

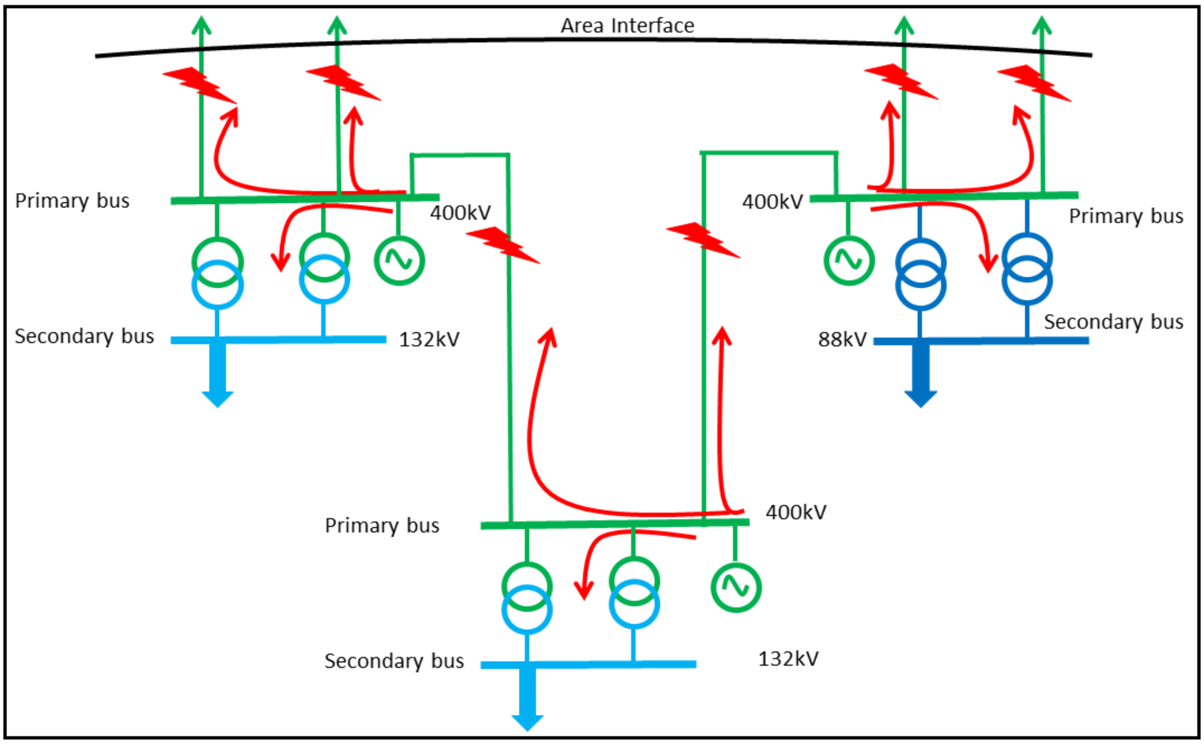

Figure 17: Local area limit assessment

2.3.4. Level 4: supply area

At Level 4, the supply area limit is assessed by scaling all the connected generation in a supply area in proportion to their Level 3 limits. The supply area limit is determined by connecting generators at the primary busbar of each substation, simultaneously, as shown in Figure 18. The network is assessed under all credible N-1 line contingencies.

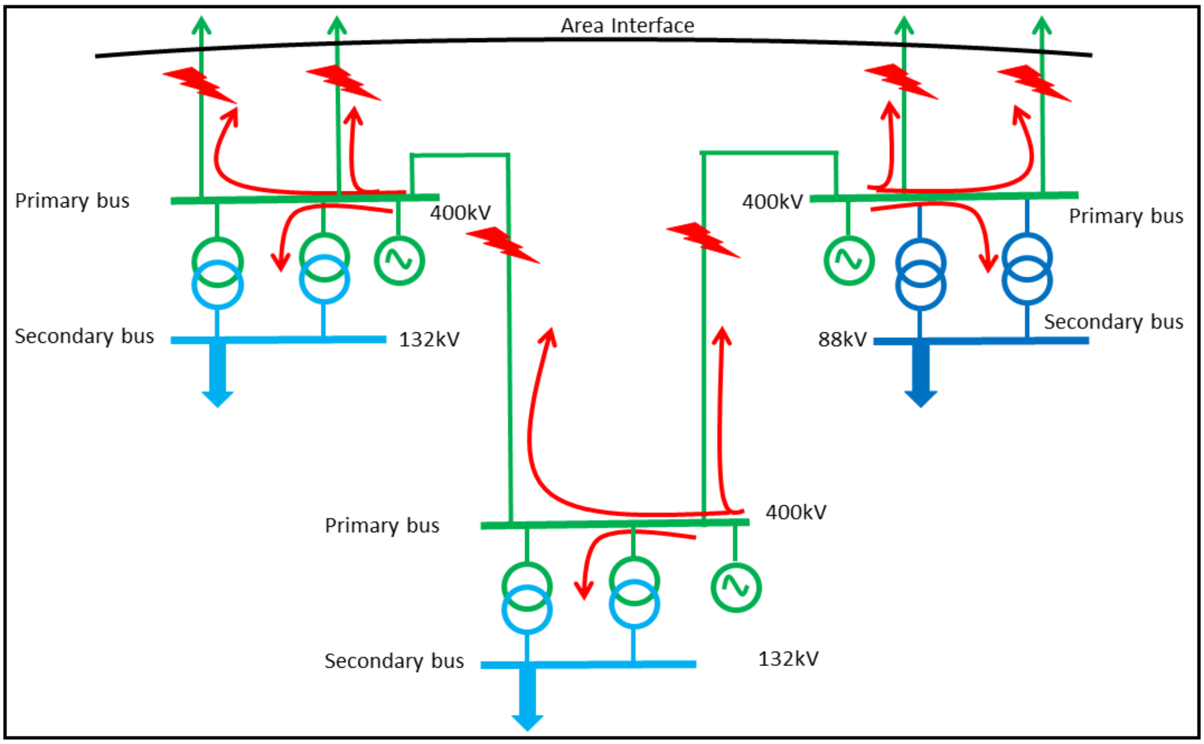

Figure 18: Supply area limit assessment

3. Generation assumptions

Compared to the GCCA 2024, there is an additional 8.2 GW of IPP generation committed, as shown in Figure 19, with incremental values per supply area indicated below:

- Western Cape (1 924 MW)
- North West (1 490 MW)
- Free State (1 277 MW)
- Hydra Central (1 230 MW)
- Limpopo (930 MW)
- Mpumalanga (518 MW from previously having 0 MW)
- Gauteng (480 MW)
- Eastern Cape (333 MW)
- KwaZulu-Natal (0 MW)
- Northern Cape (0 MW)

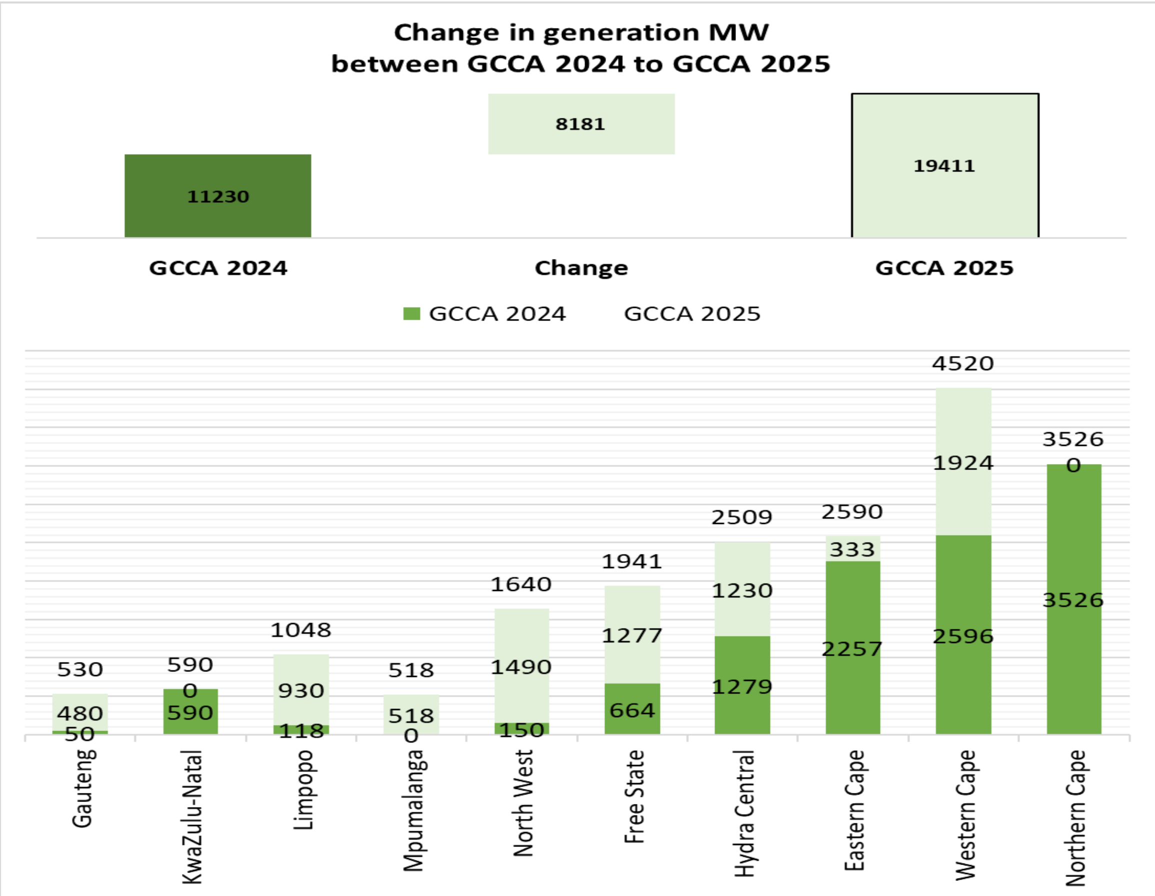

Figure 19: Change in generation between GCCA 2024 and GCCA 2025

Figure 20 provides a summary breakdown of the committed IPP generation in the GCCA 2025. Two different views are provided: one at a technology level and the other at a supply area level.

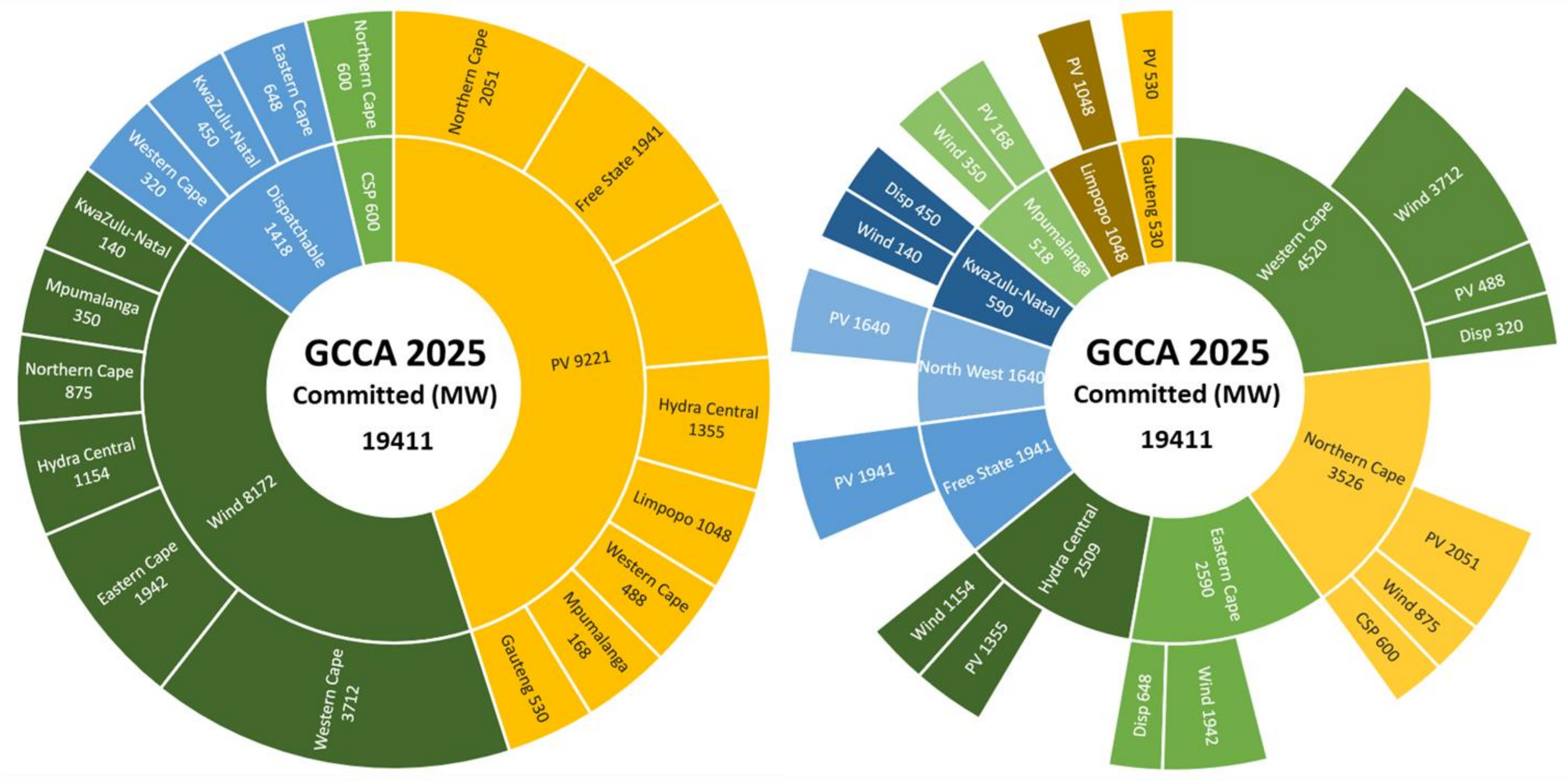

Figure 20: Summary of committed IPP generation

The committed IPP generation comprises PV (9 221 MW), wind (8 172 MW), dispatchable generation (1 418 MW), and CSP (600 MW). It is clear that IPPs are starting to move away from the Cape areas towards the Free State, North West, and even Mpumalanga and Limpopo, where capacity remains.

With the substantial increase in IPP generation, more of the conventional generation in the Limpopo and Mpumalanga supply areas had to be taken out of service or operated at reduced output in order to balance the generation (supply) and load (demand) in the network.

4. Geospatial results

Generation connection capacity in the Northern Cape, Western Cape, Eastern Cape, and Hydra Central supply areas has been depleted, as shown in Figure 21. Supply areas with remaining capacity totalling 19.94 GW are as follows:

- KwaZulu-Natal (5 500 MW)
- Gauteng (4 680 MW)
- Limpopo (3 360 MW)
- Mpumalanga (3 320 MW)
- North West (1 660 MW)
- Free State (1 420 MW)

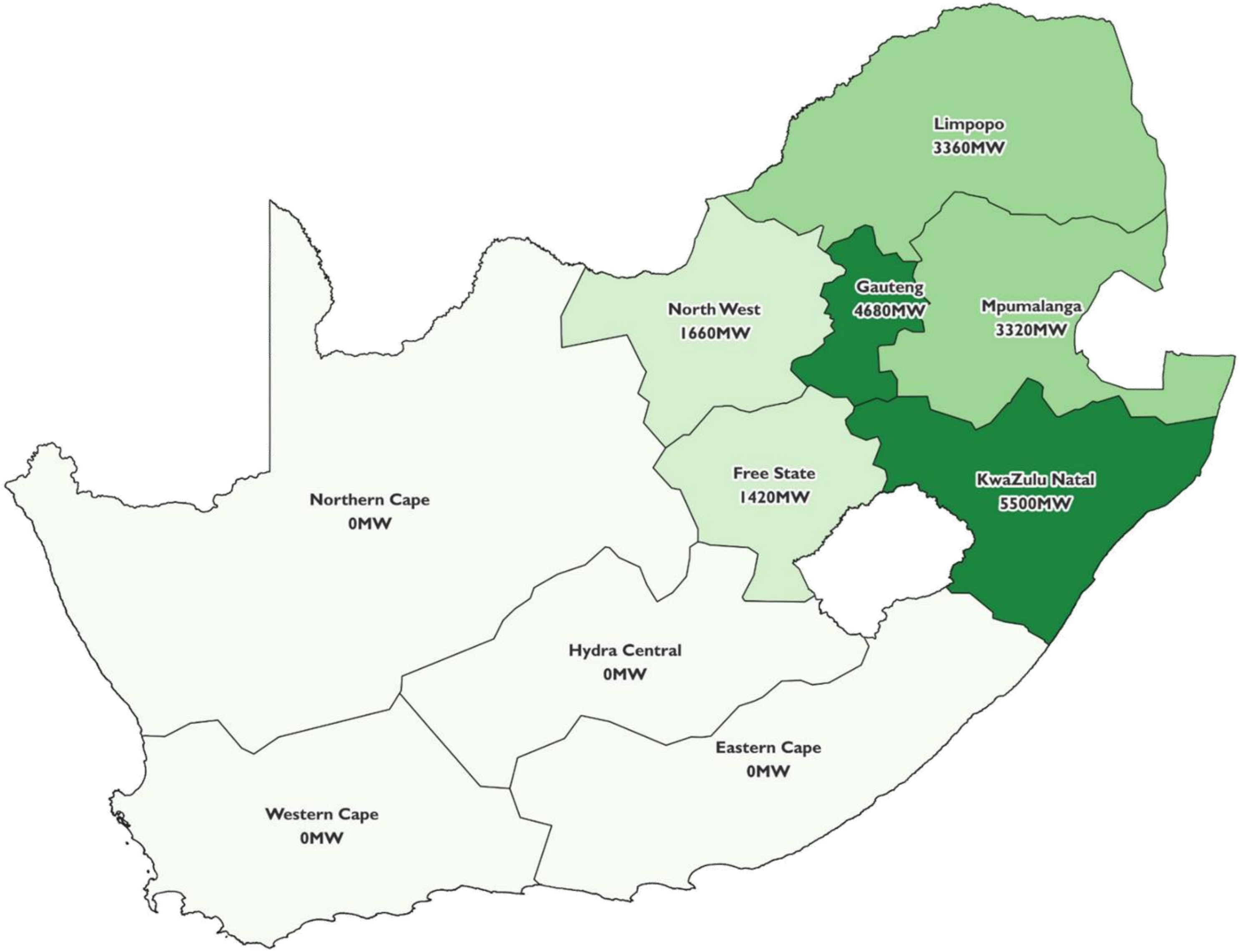

Figure 21: Supply area results

4.1. Eastern Cape

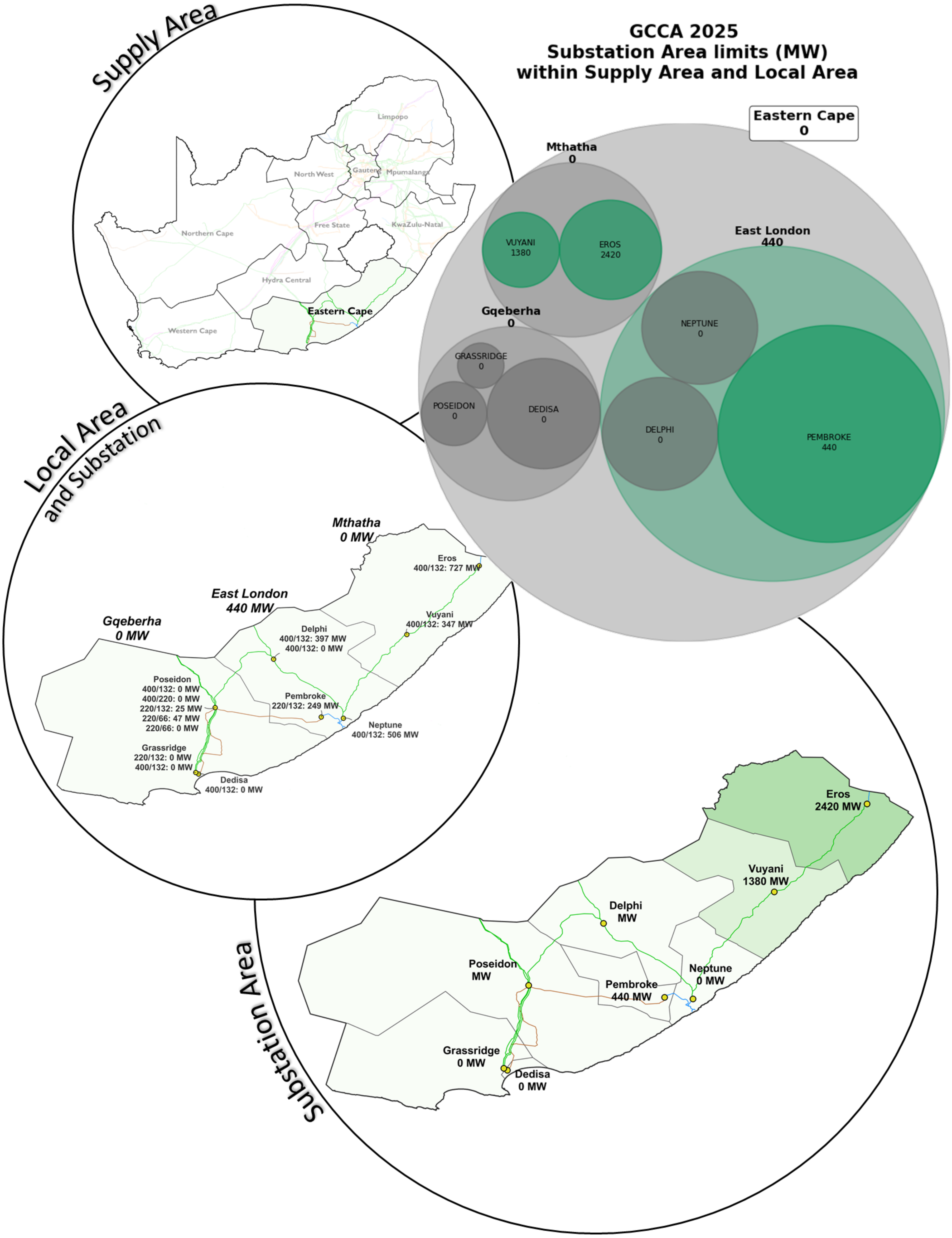

Figure 22: Eastern Cape results

4.2. Free State

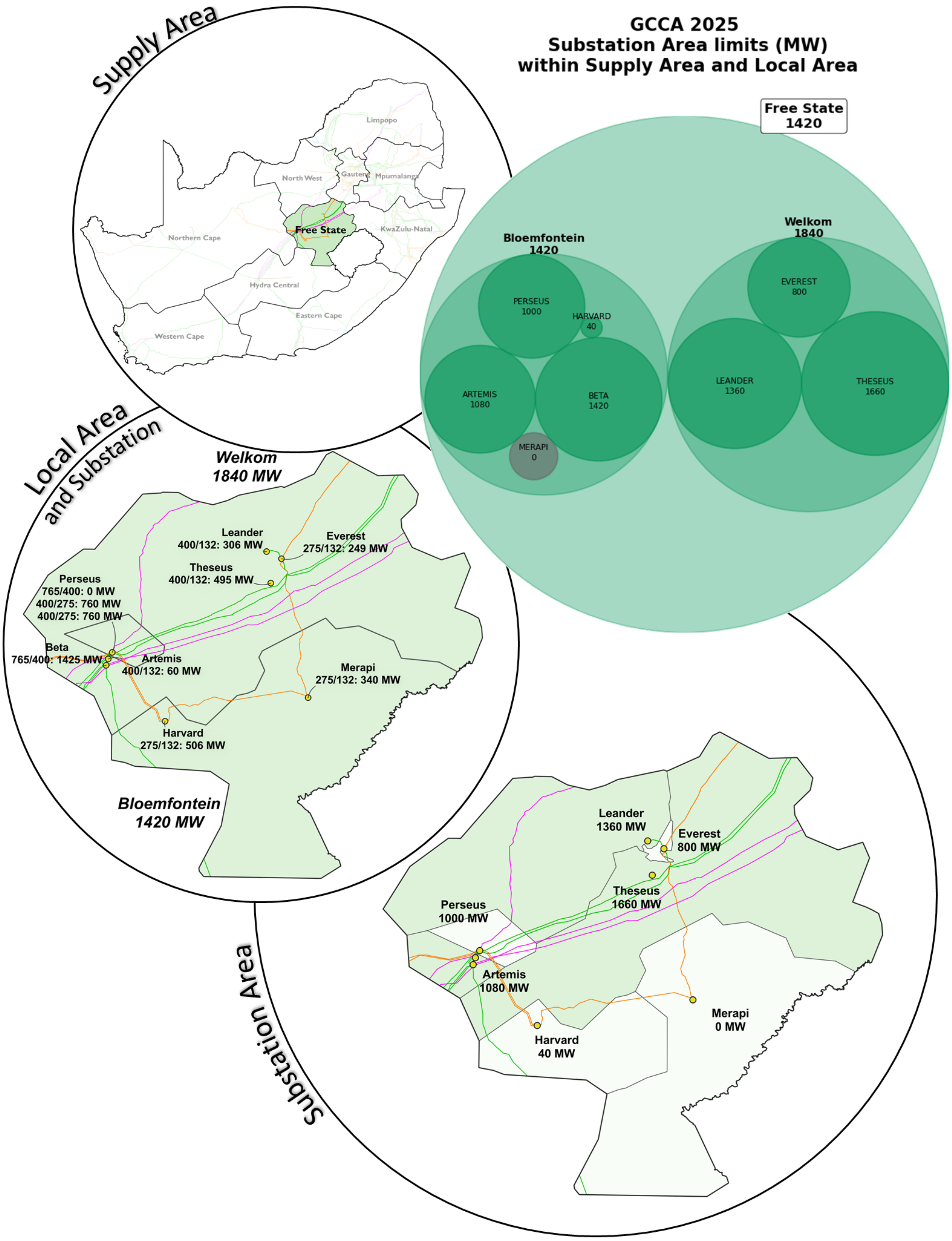

Figure 23: Free State results

4.3. Gauteng (Part A – Pretoria, Johannesburg, Midrand and West Rand)

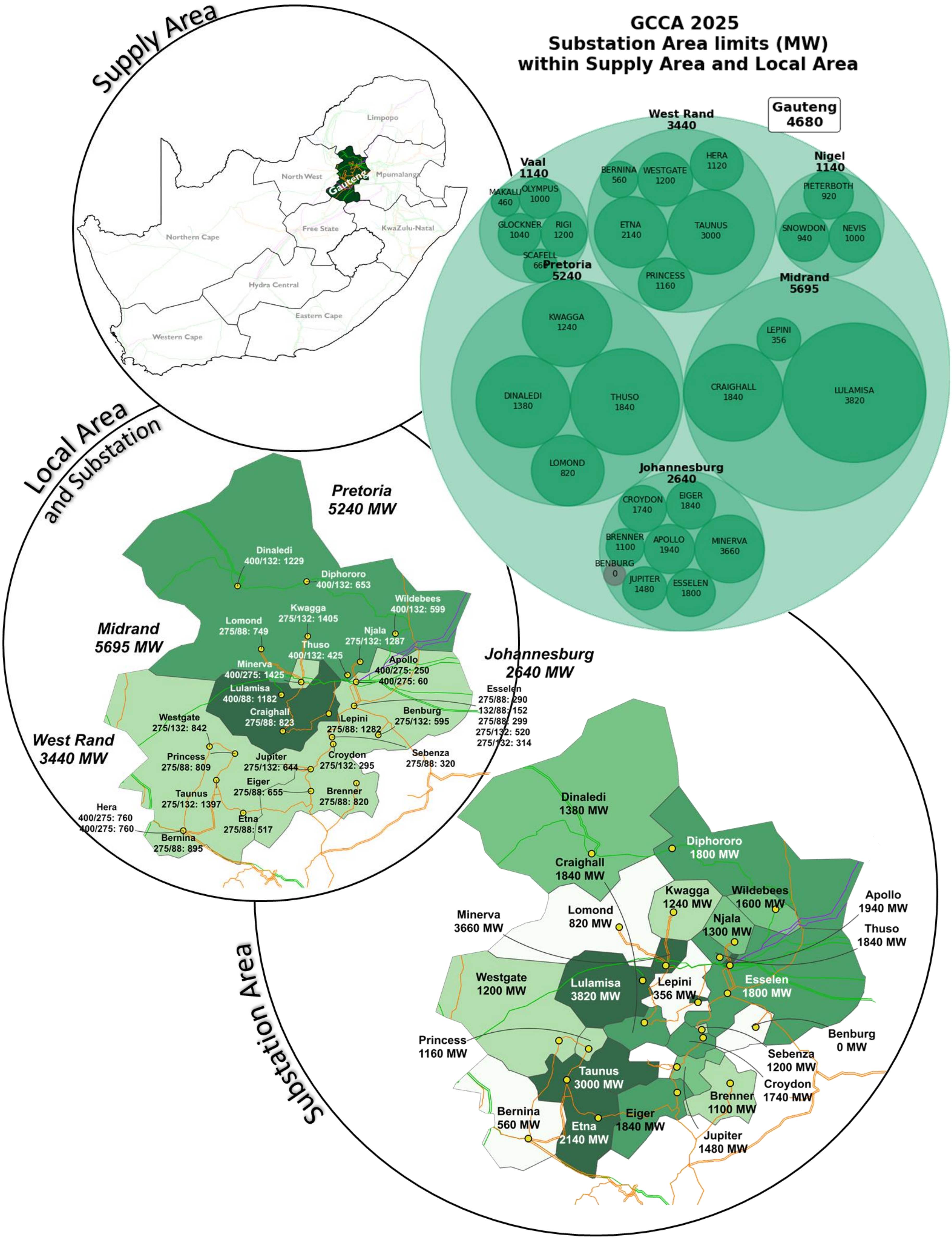

Figure 24: Gauteng results (Part A)

4.4. Gauteng (Part B – Nigel and Vaal)

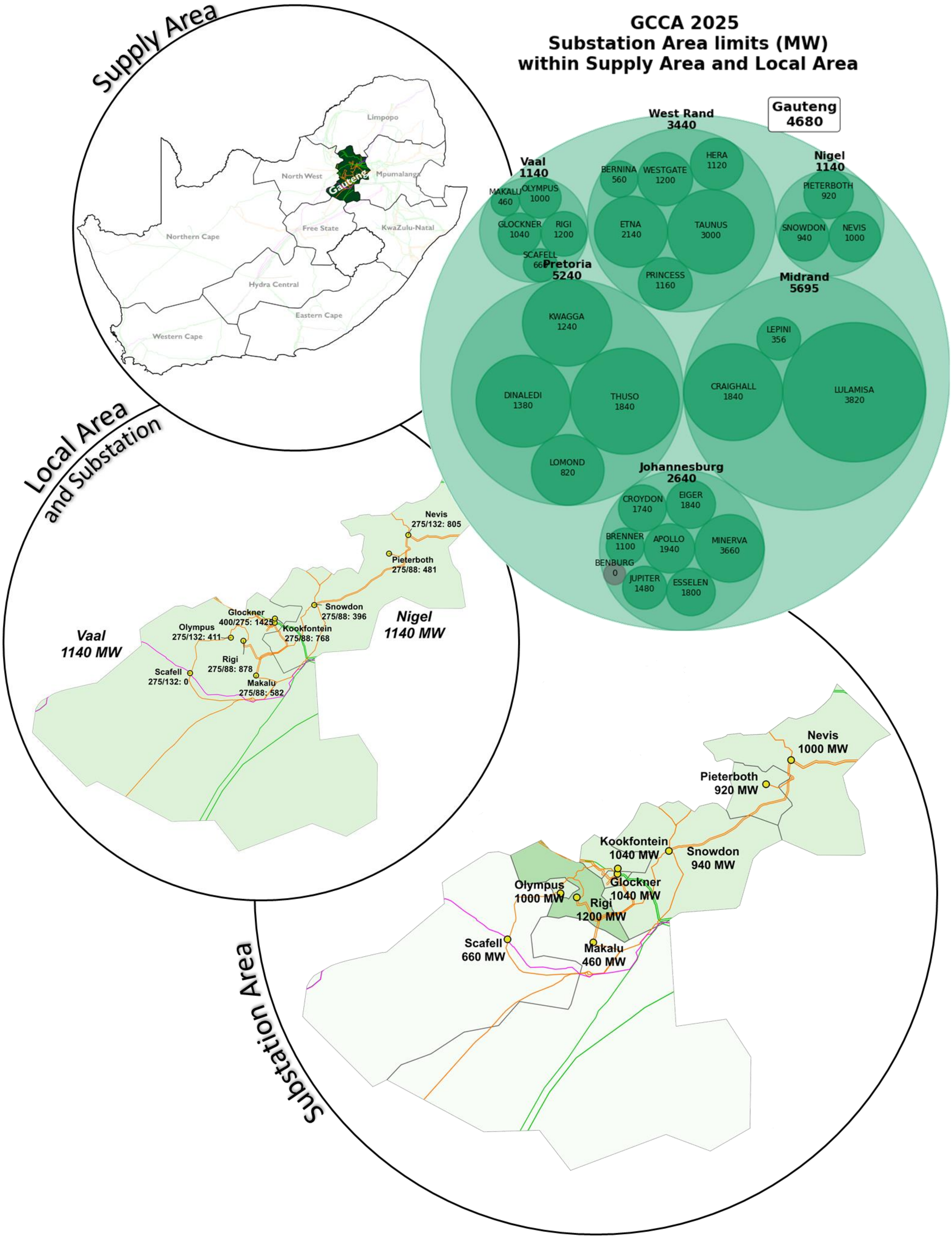

Figure 25: Gauteng results (Part B)

4.5. Hydra Central

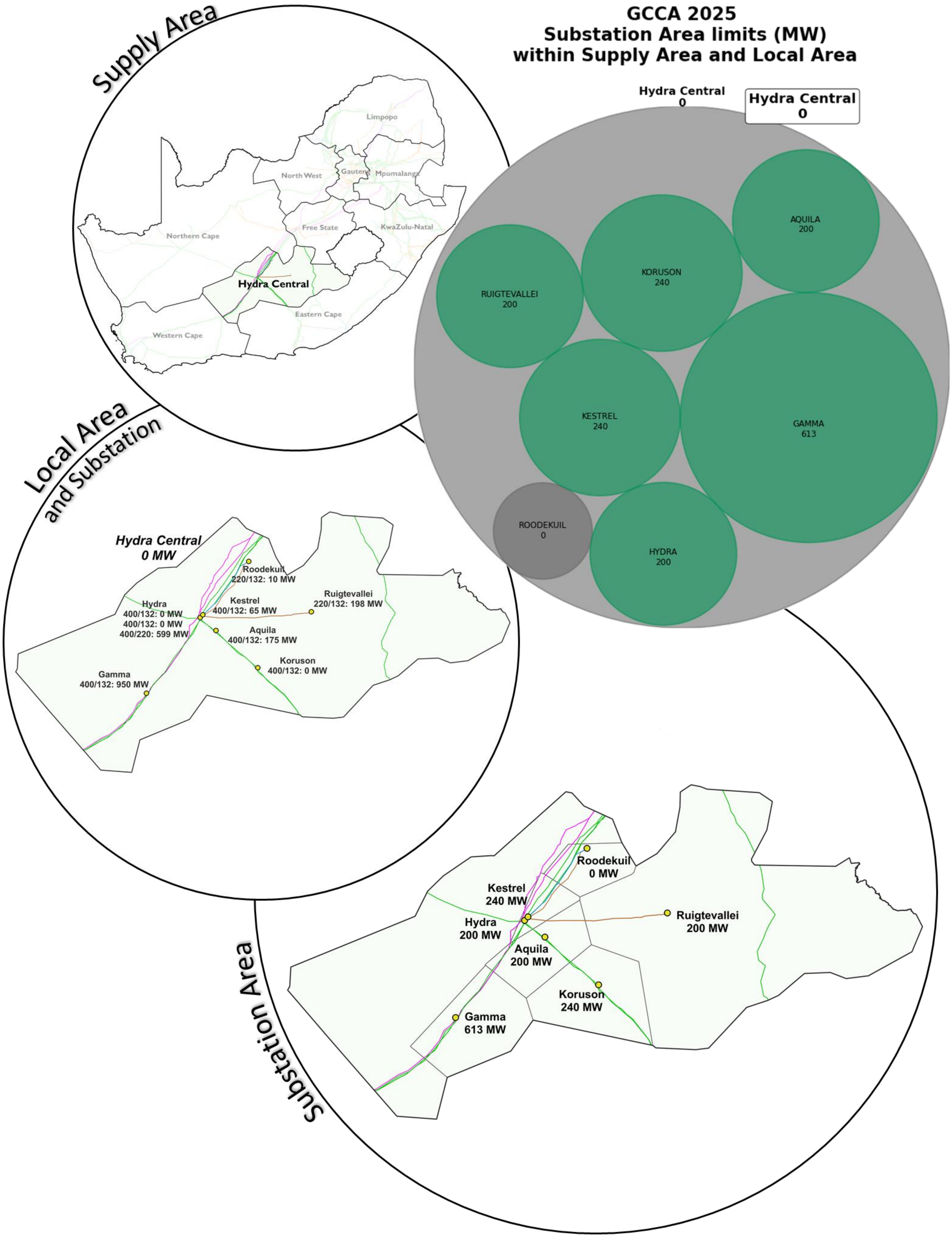

Figure 26: Hydra Central results

4.6. KwaZulu-Natal

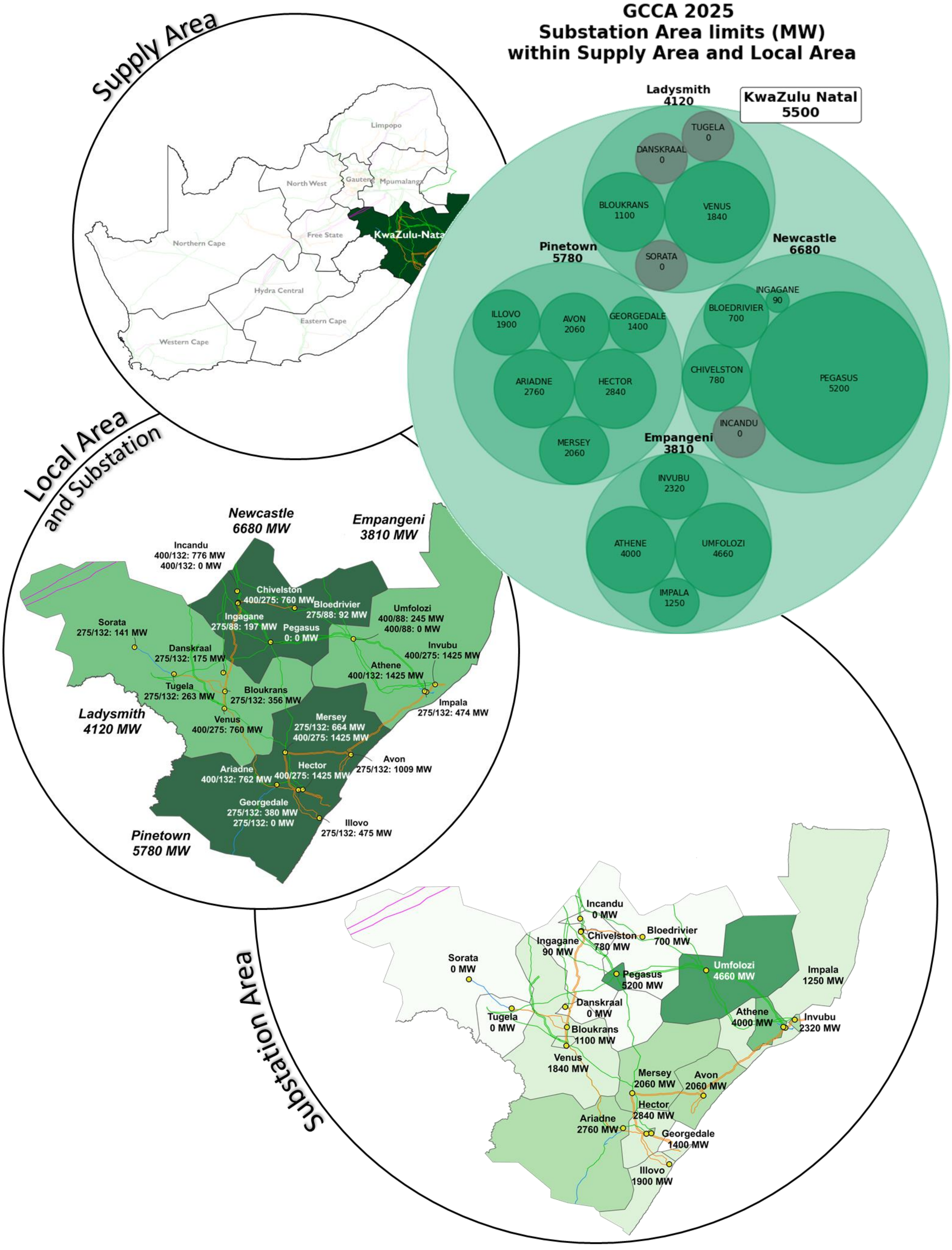

Figure 27: KwaZulu-Natal results

4.7. Limpopo

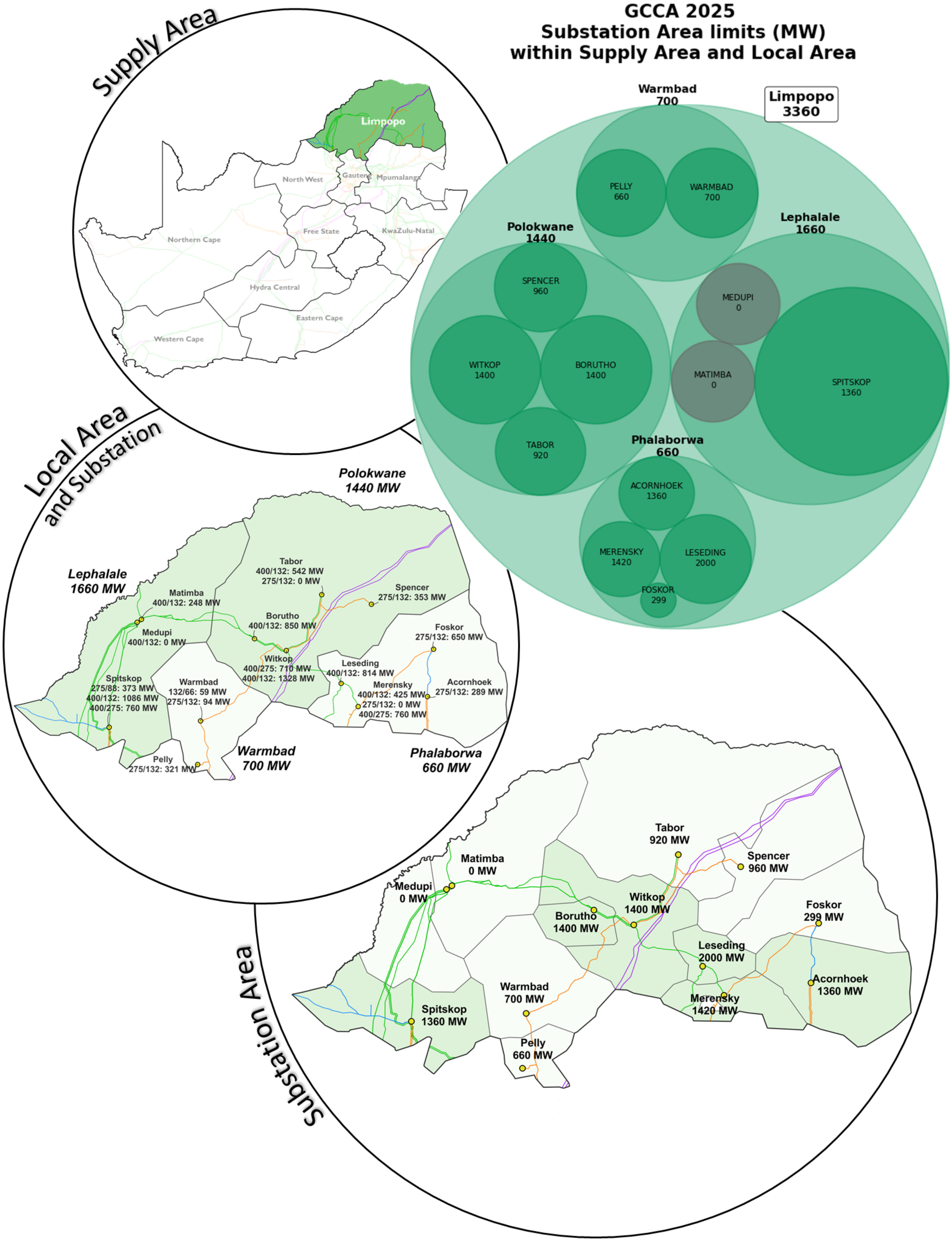

Figure 28: Limpopo results

4.8. Mpumalanga

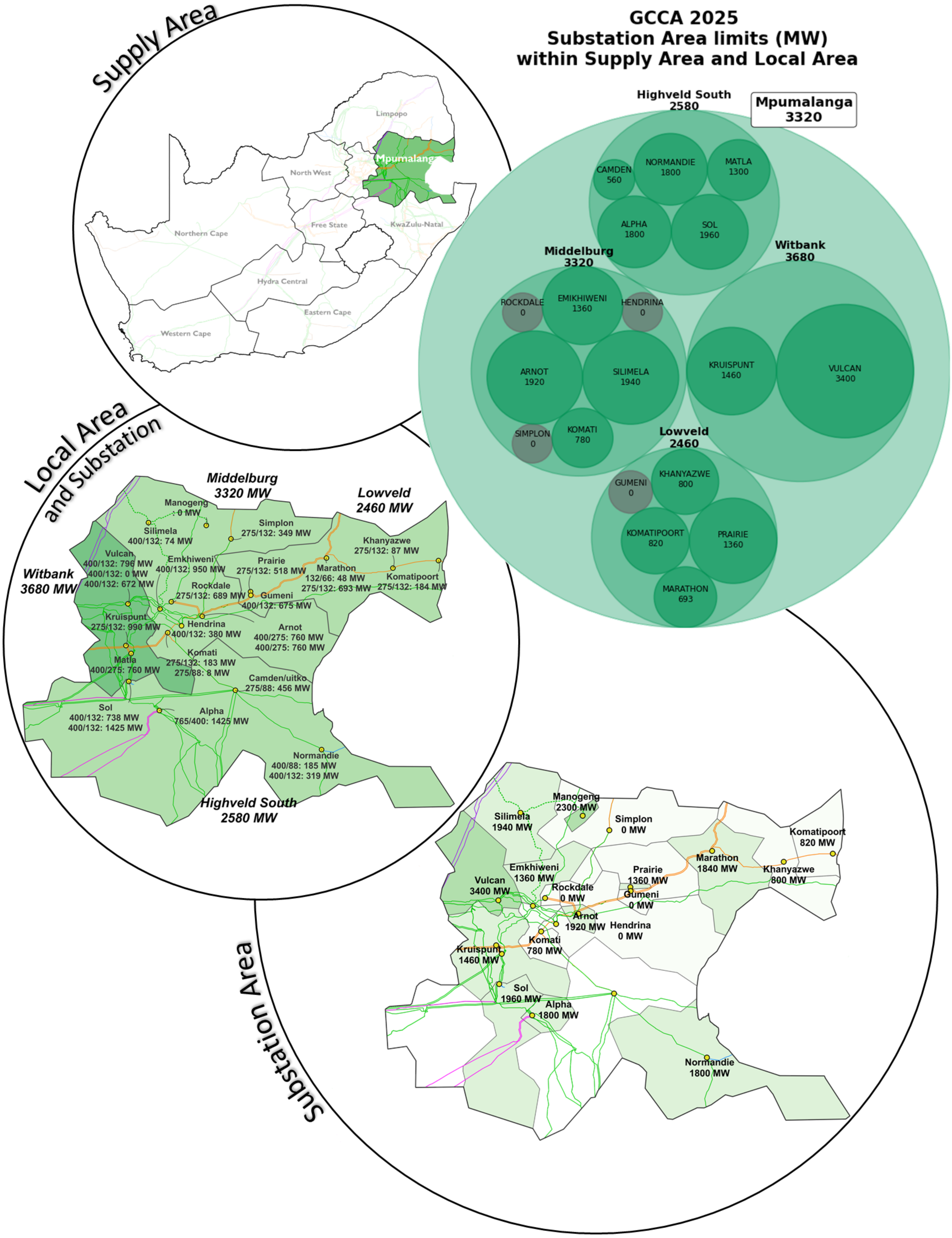

Figure 29: Mpumalanga results

4.9. Northwest

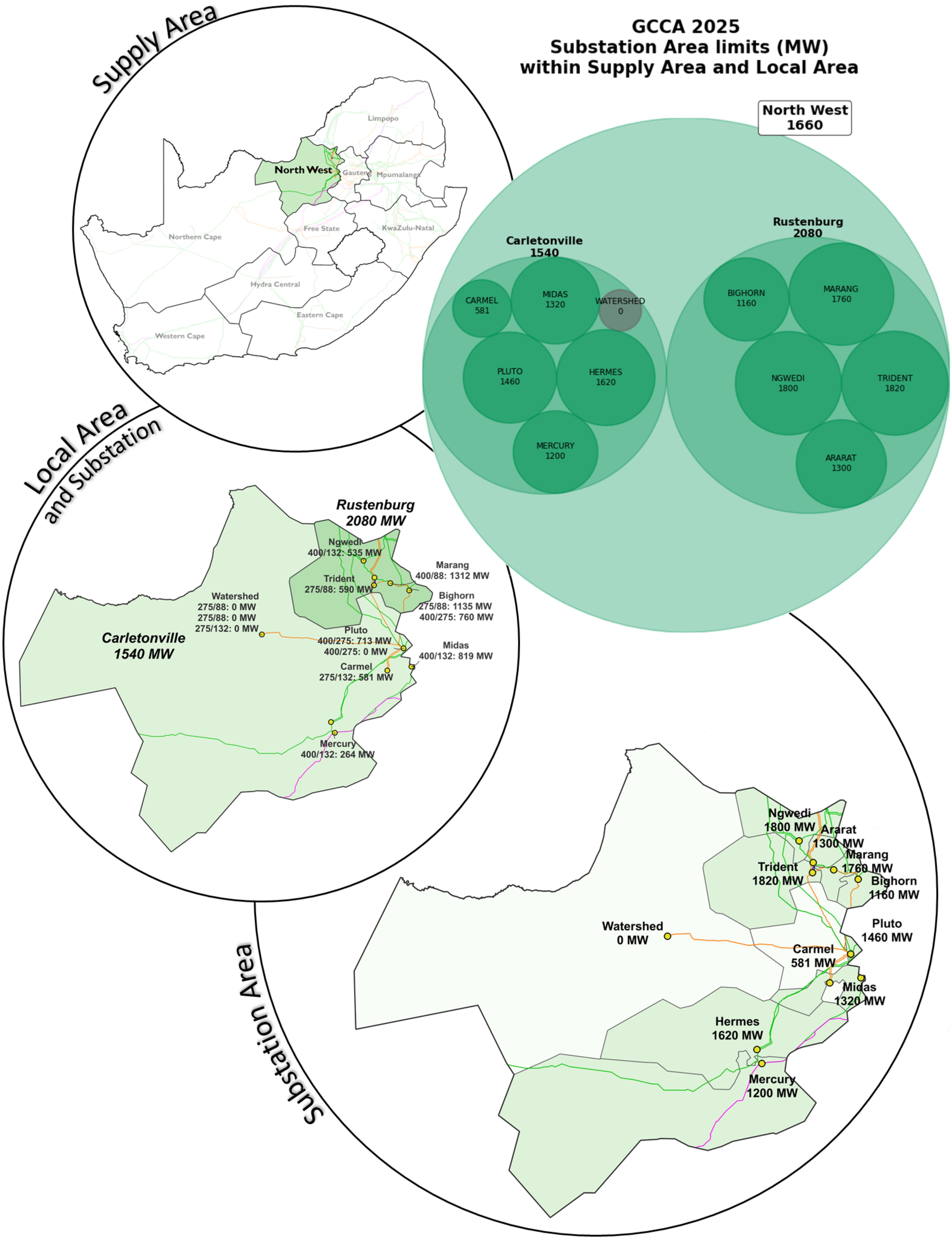

Figure 30: North West results

4.10. Northern Cape

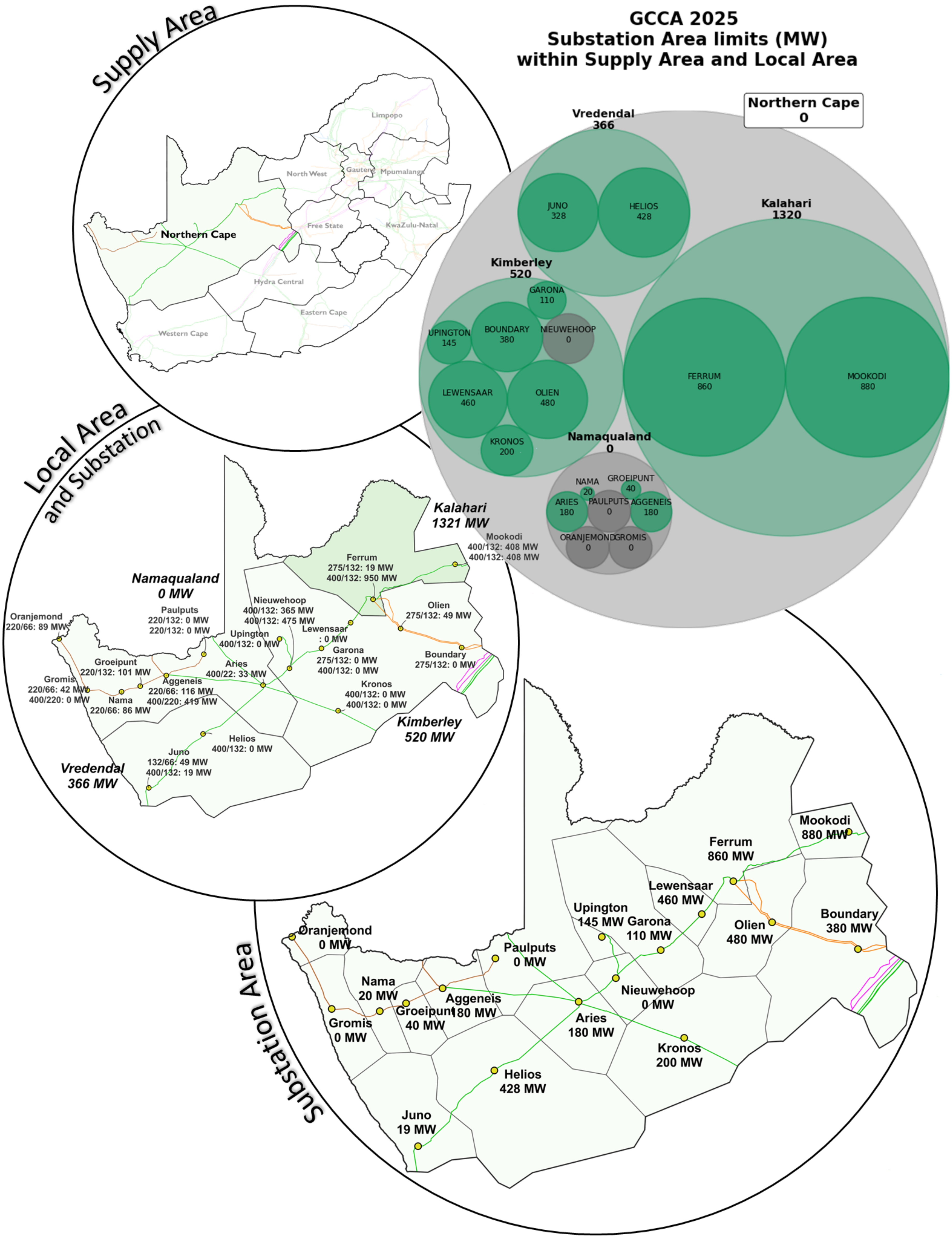

Figure 31: Northern Cape results

4.11. Western Cape

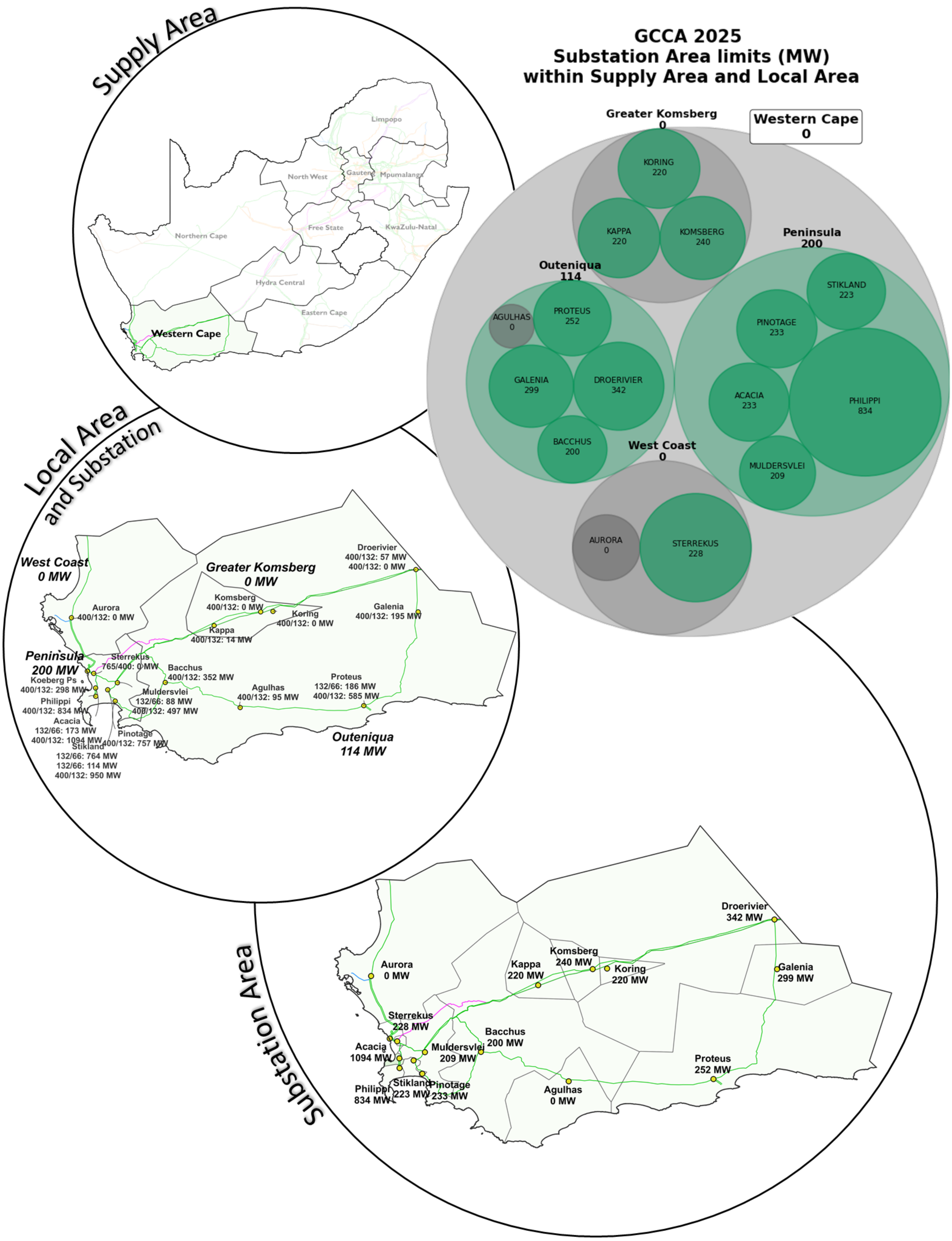

Figure 32: Western Cape results

5. Conclusion

Parts of the transmission network located within the most favourable areas for wind and PV generation such as the Northern Cape, Eastern Cape, Western Cape and Hydra Central have no capacity as all of the capacity has been depleted from previous bid window rounds and private off-takers. The depletion of generation connection capacity in these areas has resulted in many generation projects being denied connection. These areas remain in high demand due to their abundant energy resources for renewable generation. To unlock capacity in these areas will require significant amount of transmission network investment which often takes several years to develop and construct.

Curtailment studies were therefore conducted to provide IPP developers with an alternate option if they are still keen to connect in these constrained areas. The implementation of curtailment is currently in the governance process. Governance within Eskom has been approved to a large extent; it will now follow a regulatory approval process before any of the curtailment results and opportunities can be shared, most likely in the next release of the GCCA or possibly sooner in an addendum, pending the outcome from the regulator.

Generation customers are therefore strongly encouraged to consider developing their projects in those areas with remaining capacity, although they may have less favourable wind speeds and solar irradiation.

6. References

[1] G. Parkinson, “Renew Economy,” 15 September 2022. [Online]. Available: https://reneweconomy.com.au/remarkable-south-australia-may-soon-be-first-big-grid-to-run-on-renewables-only/. [Accessed 28 September 2023].

[2] G. Parkinson, “Renew Economy,” 6 March 2023. [Online]. Available: https://reneweconomy.com.au/south-australia-enjoys-80-1-pct-wind-and-solar-share-in-blackout-free-summer/. [Accessed 29 September 2023].

[3] Department of Mineral Resourcecs and Energy (DMRE), “Integrated Resource Plan (IRP2019),” 2019.

[4] J. C. Dr Jarrad Wright, “Systems analysis to support increasingly ambitious CO2 emissions scenarios in the South African electricity system,” CSIR, 2020.

[5] Eskom, “Transmission Development Plan 2023-2032,” Eskom, 2022.

7. Annexures

7.1. Annexure A - Tabular Results

7.1.1. Eastern Cape

Table 4: Eastern Cape summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Eastern Cape	East London	Delphi	1	500	400/132	500	141	100	0	0	0	397	0	440	0
Eastern Cape	East London	Delphi	3	125	400/132	375	0	0	0	0	0	0	0	0	0
Eastern Cape	East London	Neptune	2	500	400/132	1000	31	0	0	0	0	506	0	440	0
Eastern Cape	East London	Pembroke	2	250	220/132	500	65	53	0	0	0	249	440	440	0
Eastern Cape	Mthatha	Eros	2	500	400/132	1000	252	0	0	0	0	727	2420	0	0
Eastern Cape	Mthatha	Vuyani	2	250	400/132	500	109	0	0	0	0	347	1380	0	0
Eastern Cape	Gqeberha	Dedisa	2	500	400/132	1000	169	0	648	0	0	0	0	0	0
Eastern Cape	Gqeberha	Grassridge	2	360	220/132	720	417	733	75	0	333	0	20	0	0
Eastern Cape	Gqeberha	Grassridge	2	500	400/132	1000	0	0	0	0	0	0	0	0	0
Eastern Cape	Gqeberha	Poseidon	1	500	400/132	500	0	484	0	0	0	0	0	0	0
Eastern Cape	Gqeberha	Poseidon	2	500	400/220	1000	0	0	0	0	0	0	0	0	0
Eastern Cape	Gqeberha	Poseidon	2	125	220/132	250	70	164	0	0	0	25	40	0	0
Eastern Cape	Gqeberha	Poseidon	1	40	220/66	40	9	0	0	0	0	47	40	0	0
Eastern Cape	Gqeberha	Poseidon	1	80	220/66	80	70	0	0	0	0	0	0	0	0

7.1.2. Free State

Table 5: Free State summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Free State	Bloemfontein	Artemis	2	500	400/132	1000	0	890	0	0	0	60	1080	1420	1420
Free State	Bloemfontein	Beta	2	2000	765/400	4000	0	0	0	0	0	1425	1420	1420	1420
Free State	Bloemfontein	Harvard	2	500	275/132	1000	215	139	0	0	45	506	40	1420	1420
Free State	Bloemfontein	Merapi	2	250	275/132	500	102	0	0	0	0	340	0	1420	1420
Free State	Bloemfontein	Perseus	1	2000	765/400	2000	0	0	0	0	0	0	1000	1420	1420
Free State	Bloemfontein	Perseus	1	800	400/275	800	0	0	0	0	0	760	40	1420	1420
Free State	Bloemfontein	Perseus	2	400	400/275	800	0	0	0	0	0	760	40	1420	1420
Free State	Welkom	Everest	2	500	275/132	1000	86	0	0	0	312	249	800	1840	1420
Free State	Welkom	Leander	2	500	400/132	1000	146	75	0	0	240	306	1360	1840	1420
Free State	Welkom	Theseus	2	500	400/132	1000	260	240	0	0	0	495	1660	1840	1420

7.1.3. Gauteng

Table 6: Gauteng summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit (MW)
Gauteng	Johannesburg	Apollo	2	1000	400/275	2000	-700	0	0	0	0	250	1940	2640	4680
Gauteng	Johannesburg	Apollo	1	800	400/275	800	-700	0	0	0	0	60	1940	2640	4680
Gauteng	Johannesburg	Benburg	3	250	275/132	750	120	0	0	0	0	595	0	2640	4680
Gauteng	Johannesburg	Brenner	3	315	275/88	945	281	0	0	0	60	820	1100	2640	4680
Gauteng	Johannesburg	Croydon	2	250	275/132	500	57	0	0	0	0	295	1740	2640	4680
Gauteng	Johannesburg	Eiger	3	315	275/88	945	56	0	0	0	0	655	1840	2640	4680
Gauteng	Johannesburg	Esselen	1	315	275/88	315	143	0	0	0	0	290	1800	2640	4680
Gauteng	Johannesburg	Esselen	1	160	132/88	160	0	0	0	0	0	152	1800	2640	4680
Gauteng	Johannesburg	Esselen	1	315	275/88	315	0	0	0	0	0	299	1800	2640	4680
Gauteng	Johannesburg	Esselen	1	250	275/132	250	178	0	0	0	0	520	1800	2640	4680
Gauteng	Johannesburg	Esselen	2	180	275/132	360	143	0	0	0	0	314	1800	2640	4680
Gauteng	Johannesburg	Fordsburg	4	250	275/88	1000	381	0	0	0	0	1094	1540	2640	4680
Gauteng	Johannesburg	Jupiter	3	180	275/132	540	302	0	0	0	0	644	1480	2640	4680
Gauteng	Johannesburg	Minerva	4	800	400/275	3200	0	0	0	0	0	1425	3660	2640	4680
Gauteng	Johannesburg	Prospect	4	250	275/88	1000	513	0	0	0	0	1226	1680	2640	4680
Gauteng	Johannesburg	Sebenza	2	315	275/88	630	21	0	0	0	0	320	1200	2640	4680
Gauteng	Midrand	Craighall	3	315	275/88	945	224	0	0	0	0	823	1840	5695	4680
Gauteng	Midrand	Lepini	4	315	275/88	1260	384	0	0	0	0	1282	356	5695	4680
Gauteng	Midrand	Lulamisa	3	315	400/88	945	583	0	0	0	0	1182	3820	5695	4680
Gauteng	Nigel	Nevis	2	500	275/132	1000	330	0	0	0	0	805	1000	1140	4680
Gauteng	Nigel	Pieterboth	2	315	275/88	630	182	0	0	0	0	481	920	1140	4680
Gauteng	Nigel	Snowdon	3	160	275/88	480	167	0	0	0	75	396	940	1140	4680

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit (MW)
Gauteng	Pretoria	Dinaledi	3	500	400/132	1500	304	0	0	0	25	1229	1380	5240	4680
Gauteng	Pretoria	Diphororo	2	500	400/132	1000	178	0	0	0	0	653	1800	5240	4680
Gauteng	Pretoria	Kwagga	4	300	275/132	1200	550	0	0	0	0	1405	1240	5240	4680
Gauteng	Pretoria	Lomond	3	315	275/88	945	200	50	0	0	0	749	820	5240	4680
Gauteng	Pretoria	Njala	4	250	275/132	1000	574	0	0	0	0	1287	1300	5240	4680
Gauteng	Pretoria	Thuso	2	250	400/132	500	187	0	0	0	0	425	1840	5240	4680
Gauteng	Pretoria	Wildebees	2	315	400/132	630	0	0	0	0	0	599	1600	5240	4680
Gauteng	Vaal	Glockner	3	800	400/275	2400	0	0	0	0	0	1425	1040	1140	4680
Gauteng	Vaal	Kookfontein	3	315	275/88	945	169	0	0	0	0	768	1040	1140	4680
Gauteng	Vaal	Makalu	4	160	275/88	640	126	0	0	0	0	582	460	1140	4680
Gauteng	Vaal	Olympus	2	250	275/132	500	173	0	0	0	0	411	1000	1140	4680
Gauteng	Vaal	Rigi	3	315	275/88	945	279	0	0	0	0	878	1200	1140	4680
Gauteng	Vaal	Scafell	2	135	275/132	270	34	0	0	0	320	0	660	1140	4680
Gauteng	West Rand	Bernina	3	315	275/88	945	296	0	0	0	0	895	560	3440	4680
Gauteng	West Rand	Etna	2	315	275/88	630	218	0	0	0	0	517	2140	3440	4680
Gauteng	West Rand	Hera	2	800	400/275	1600	0	0	0	0	0	760	2940	3440	4680
Gauteng	West Rand	Hera	2	800	400/275	1600	0	0	0	0	0	760	1120	3440	4680
Gauteng	West Rand	Princess	3	315	275/88	945	210	0	0	0	0	809	1160	3440	4680
Gauteng	West Rand	Taunus	3	500	275/132	1500	447	0	0	0	0	1397	3000	3440	4680
Gauteng	West Rand	Westgate	2	500	275/132	1000	367	0	0	0	0	842	1200	3440	4680

7.1.4. Hydra Central

Table 7: Hydra Central summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit (MW)
Hydra Central	Hydra Central	GAMMA	2	500	400/132	1000	0	0	0	0	0	950	613	0	0
Hydra Central	Hydra Central	HYDRA B	1	500	400/132	500	0	0	0	0	410	65	240	0	0
Hydra Central	Hydra Central	HYDRA D	1	500	400/132	500	0	0	0	0	300	175	200	0	0
Hydra Central	Hydra Central	HYDRA	2	250	400/132	500	104	399	0	0	0	0	200	0	0
Hydra Central	Hydra Central	HYDRA	1	500	400/132	500	0	310	75	0	0	0	200	0	0
Hydra Central	Hydra Central	HYDRA	2	315	400/220	630	0	0	0	0	0	599	200	0	0
Hydra Central	Hydra Central	KORUSON	1	500	400/132	500	0	420	0	0	520	0	240	0	0
Hydra Central	Hydra Central	ROODEKUIL	1	125	220/132	125	10	0	0	0	0	10	0	0	0
Hydra Central	Hydra Central	RUIGTEVALLEI	2	250	220/132	500	35	75	0	0	0	198	200	0	0

7.1.5. KwaZulu-Natal

Table 8:Kwa Zulu Natal summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
KwaZulu Natal	Empangeni	Athene	4	500	400/132	2000	1282	0	0	0	0	1425	4000	3810	5500
KwaZulu Natal	Empangeni	Impala	4	250	275/132	1000	211	0	450	0	0	474	1250	3810	5500
KwaZulu Natal	Empangeni	Invubu	3	800	400/275	2400	0	0	0	0	0	1425	2320	3810	5500
KwaZulu Natal	Empangeni	Rabbit				0	226	0	0	0	0	226	1140	3810	5500
KwaZulu Natal	Empangeni	Umfolozi	1	315	400/88	315	93	0	0	0	0	245	4660	3810	5500
KwaZulu Natal	Empangeni	Umfolozi	1	160	400/88	160	0	0	0	0	0	0	4660	3810	5500
KwaZulu Natal	Ladysmith	Bloukrans	2	250	275/132	500	118	0	0	0	0	356	1100	4120	5500
KwaZulu Natal	Ladysmith	Danskraal	2	125	275/132	250	56	0	0	0	0	175	0	4120	5500
KwaZulu Natal	Ladysmith	Sorata	1	250	275/132	250	141	0	0	0	0	141	0	4120	5500
KwaZulu Natal	Ladysmith	Tugela	2	180	275/132	360	92	0	0	0	0	263	0	4120	5500
KwaZulu Natal	Ladysmith	Venus	2	800	400/275	1600	0	0	0	0	0	760	1840	4120	5500
KwaZulu Natal	Newcastle	Bloedrivier	2	160	275/88	320	80	140	0	0	0	92	700	6680	5500
KwaZulu Natal	Newcastle	Chivelston	1	800	400/275	800	0	0	0	0	0	760	780	6680	5500
KwaZulu Natal	Newcastle	Incandu	2	315	400/132	630	177	0	0	0	0	776	0	6680	5500
KwaZulu Natal	Newcastle	Incandu	1	500	400/132	500	177	0	0	0	0	0	0	6680	5500
KwaZulu Natal	Newcastle	Ingagane	2	160	275/88	320	45	0	0	0	0	197	90	6680	5500
KwaZulu Natal	Newcastle	Pegasus	0	0	0	0	0	0	0	0	0	0	5200	6680	5500
KwaZulu Natal	Pinetown	Ariadne	2	500	400/132	1000	287	0	0	0	0	762	2760	5780	5500
KwaZulu Natal	Pinetown	Avon	3	250	275/132	750	534	0	0	0	0	1009	2060	5780	5500
KwaZulu Natal	Pinetown	Georgedale	1	250	275/132	250	95	0	0	0	0	380	1400	5780	5500
KwaZulu Natal	Pinetown	Georgedale	2	150	275/132	300	0	0	0	0	0	0	1400	5780	5500
KwaZulu Natal	Pinetown	Hector	3	800	400/275	2400	0	0	0	0	0	1425	2840	5780	5500

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
KwaZulu Natal	Pinetown	Illovo	2	250	275/132	500	0	0	0	0	0	475	1900	5780	5500
KwaZulu Natal	Pinetown	Klaarwater	2	250	275/132	500	533	0	0	0	0	771	2460	5780	5500
KwaZulu Natal	Pinetown	Klaarwater	2	315	275/132	630	533	0	0	0	0	832	2460	5780	5500
KwaZulu Natal	Pinetown	Mersey	3	250	275/132	750	189	0	0	0	0	664	2060	5780	5500
KwaZulu Natal	Pinetown	Mersey	3	800	400/275	2400	189	0	0	0	0	1425	2920	5780	5500

7.1.6. Limpopo

Table 9: Limpopo summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Limpopo	Lephalale	Matimba	2	250	400/132	500	70	60	0	0	0	248	0	1660	3360
Limpopo	Lephalale	Medupi	2	250	400/132	500	117	0	0	0	150	205	0	1660	3360
Limpopo	Lephalale	Spitskop	2	315	275/88	630	334	0	0	0	260	373	1360	1660	3360
Limpopo	Lephalale	Spitskop	3	500	400/132	1500	136	0	0	0	0	1086	900	1660	3360
Limpopo	Lephalale	Spitskop	2	800	400/275	1600	0	0	0	0	0	760	900	1660	3360
Limpopo	Phalaborwa	Acornhoek	2	125	275/132	250	170	0	0	0	0	289	1360	660	3360
Limpopo	Phalaborwa	Foskor	3	250	275/132	750	175	0	0	0	0	650	299	660	3360
Limpopo	Phalaborwa	Leseding	2	500	400/132	1000	339	0	0	0	0	814	2000	660	3360
Limpopo	Phalaborwa	Tubatse				0	0	0	0	0	0	0	2300	660	3360
Limpopo	Phalaborwa	Merensky	1	500	400/132	500	50	0	0	0	100	425	1580	660	3360
Limpopo	Phalaborwa	Merensky	2	250	275/132	500	0	0	0	0	0	0	1580	660	3360
Limpopo	Phalaborwa	Merensky	2	400	400/275	800	0	0	0	0	0	760	1420	660	3360
Limpopo	Phalaborwa	Senakangwedi				0	123	0	0	0	0	123	0	660	3360
Limpopo	Polokwane	Borutho	2	500	400/132	1000	0	0	0	0	100	850	1400	1440	3360
Limpopo	Polokwane	Spencer	2	250	275/132	500	190	0	0	0	75	353	960	1440	3360
Limpopo	Polokwane	Tabor	1	500	400/132	500	245	28	0	0	150	542	920	1440	3360
Limpopo	Polokwane	Tabor	2	250	275/132	500	0	0	0	0	0	0	920	1440	3360
Limpopo	Polokwane	Witkop	2	400	400/275	800	0	30	0	0	20	710	1400	1440	3360
Limpopo	Polokwane	Witkop	3	500	400/132	1500	378	0	0	0	0	1328	1400	1440	3360
Limpopo	Warmbad	Pelly	2	250	275/132	500	83	0	0	0	0	321	660	700	3360
Limpopo	Warmbad	Warmbad	2	40	132/66	80	21	0	0	0	0	59	700	700	3360
Limpopo	Warmbad	Warmbad	2	125	275/132	250	50	0	0	0	75	94	700	700	3360

7.1.7. Mpumalanga

Table 10: Mpumalanga summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Mpumalanga	Highveld South	Alpha	3	2000	765/400	6000	0	0	0	0	0	1425	1800	2580	3320
Mpumalanga	Highveld South	Camden/uitko	3	160	275/88	480	0	0	0	0	0	456	560	2580	3320
Mpumalanga	Highveld South	Matla	1	800	400/275	800	0	0	0	0	0	760	1300	2580	3320
Mpumalanga	Highveld South	Normandie	2	160	400/88	320	33	0	0	0	0	185	1800	2580	3320
Mpumalanga	Highveld South	Normandie	2	250	400/132	500	81	0	0	0	0	319	1800	2580	3320
Mpumalanga	Highveld South	Sol	2	500	400/132	1000	328	0	0	0	65	738	1960	2580	3320
Mpumalanga	Highveld South	Sol	3	500	400/132	1500	562	0	0	0	0	1425	2560	2580	3320
Mpumalanga	Lowveld	Gumeni	1	500	400/132	1000	200	0	0	0	0	518	1360	2460	3320
Mpumalanga	Lowveld	Malelane	1	250	275/132	250	87	0	0	0	0	87	800	2460	3320
Mpumalanga	Lowveld	Komatipoort	2	125	275/132	250	65	0	0	0	0	184	820	2460	3320
Mpumalanga	Lowveld	Marathon	2	40	132/66	80	10	0	0	0	0	48	693	2460	3320
Mpumalanga	Lowveld	Marathon	2	500	275/132	1000	218	0	0	0	0	693	1840	2460	3320
Mpumalanga	Lowveld	Prairie	2	500	275/132	1000	43	0	0	0	0	518	1360	2460	3320
Mpumalanga	Middelburg	Arnot	2	400	400/275	800	0	0	0	0	0	760	1920	3320	3320
Mpumalanga	Middelburg	Arnot	1	800	400/275	800	0	0	0	0	0	760	1920	3320	3320
Mpumalanga	Middelburg	Emikhiweni	2	500	400/132	1000	0	0	0	0	0	950	1360	3320	3320
Mpumalanga	Middelburg	Komati	2	250	275/132	500	44	0	0	0	99	183	780	3320	3320
Mpumalanga	Middelburg	Komati	1	160	275/88	160	8	0	0	0	0	8	780	3320	3320
Mpumalanga	Middelburg	Rockdale	2	500	275/132	1000	214	0	0	0	0	689	0	3320	3320
Mpumalanga	Middelburg	Silimela	2	500	400/132	1000	74	0	0	0	0	549	1940	3320	3320
Mpumalanga	Middelburg	Simplon	2	250	275/132	500	111	0	0	0	0	349	800	3320	3320
Mpumalanga	Middelburg	Hendrina	3	250	400/132	750	105	0	0	0	200	380	0	3320	3320

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Mpumalanga	Witbank	Kruispunt	4	250	275/132	1000	281	0	0	0	4	990	1460	3680	3320
Mpumalanga	Witbank	Vulcan n	2	300	400/132	600	273	0	0	0	0	796	3400	3680	3320
Mpumalanga	Witbank	Vulcan n	1	250	400/132	250	0	0	0	0	0	0	3400	3680	3320
Mpumalanga	Witbank	Vulcan s	2	500	400/132	1000	197	0	0	0	0	672	3400	3680	3320

7.1.8. North West

Table 11: North West summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
North West	Carletonville	CARMEL	2	500	275/132	1000	116	0	0	0	10	581	581	1540	1660
North West	Carletonville	HERMES	1	160	132/88	160	53	0	0	0	0	205	911	1540	1660
North West	Carletonville	HERMES	1	180	132/88	180	0					0	911	1540	1660
North West	Carletonville	HERMES	3	500	400/132	1500	271	120	0	0	190	911	1620	1540	1660
North West	Carletonville	MERCURY	2	500	400/132	1000	137	67.9	0	0	280	264	1200	1540	1660
North West	Carletonville	MIDAS	2	500	400/132	1000	394	0	0	0	50	819	1320	1540	1660
North West	Carletonville	PLUTO	1	750	400/275	750	0	0	0	0	0	713	1460	1540	1660
North West	Carletonville	PLUTO	1	800	400/275	800	0					0	1460	1540	1660
North West	Carletonville	WATERSHED	1	315	275/88	315	119	375	0	0	0	0	0	1540	1660
North West	Carletonville	WATERSHED	1	315	275/88	315	0					0	0	1540	1660
North West	Carletonville	WATERSHED	1	250	275/132	250	0	0	0	0	540	0	0	1540	1660
North West	Rustenburg	ARARAT	3	315	275/88	945	497	0	0	0	0	1096	1300	2080	1660
North West	Rustenburg	BIGHORN	3	315	275/88	945	543	7	0	0	0	1135	760	2080	1660
North West	Rustenburg	BIGHORN	2	800	400/275	1600	0					760	1160	2080	1660
North West	Rustenburg	MARANG	4	315	400/88	1260	414	0	0	0	0	1312	1760	2080	1660
North West	Rustenburg	NGWEDI	2	500	400/132	1000	60	0	0	0	0	535	1800	2080	1660
North West	Rustenburg	TRIDENT	2	315	275/88	630	291	0	0	0	0	590	1820	2080	1660

7.1.9. Northern Cape

Table 12: Northern Cape summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Northern Cape	Kalahari	Ferrum	3	80	132/66	240	32	0	0	0	0	184	19	1321	0
Northern Cape	Kalahari	Ferrum	2	250	275/132	500	106	324	0	0	0	19	900	1321	0
Northern Cape	Kalahari	Ferrum	2	500	400/132	1000	0	0	0	0	0	950	860	1321	0
Northern Cape	Kalahari	Mookodi	2	250	400/132	500	8	75	0	0	0	408	880	1321	0
Northern Cape	Kalahari	Mookodi	1	500	400/132	500	0	0	0	0	0	408	880	1321	0
Northern Cape	Kimberley	Boundary	2	250	275/132	500	49	333	0	0	0	0	380	520	0
Northern Cape	Kimberley	Kronos	1	250	400/132	250	27	473	0	0	0	0	200	520	0
Northern Cape	Kimberley	Kronos	1	500	400/132	500	0	0	0	0		0	200	520	0
Northern Cape	Kimberley	Lewensaar				0	0	0	0	0	0	0	460	520	0
Northern Cape	Kimberley	Nieuwehoop	1	250	400/132	250	0	0	348	0	0	365	0	520	0
Northern Cape	Kimberley	Nieuwehoop	1	500	400/132	500	0	0	0	0	0	475	0	520	0
Northern Cape	Kimberley	Olien	2	250	275/132	500	70	259	0	0	0	49	480	520	0
Northern Cape	Kimberley	Upington	1	500	400/132	500	54	384	75	0	0	0	145	520	0
Northern Cape	Namaqualand	Aggeneis	3	40	220/66	120	80	40	0	0	0	116	180	0	0
Northern Cape	Namaqualand	Aggeneis	2	315	400/220	630	120	0	0	0	0	419	200	0	0
Northern Cape	Namaqualand	Aries	1	45	400/22	45	0	10	0	0	0	33	180	0	0
Northern Cape	Namaqualand	Garona	1	500	275/132	500	73	50	150	0	0	0	110	0	0
Northern Cape	Namaqualand	Garona	1	500	400/132	500	0	0	0	0		0	150	0	0
Northern Cape	Namaqualand	Groeipunt	1	250	220/132	250	0	137	0	0	0	101	40	0	0
Northern Cape	Namaqualand	Gromis	2	40	220/66	80	4	0	0	0	0	42	0	0	0

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Northern Cape	Namaqualand	Gromis	1	315	400/220	315	0	0	0	0	0	0	0	0	0
Northern Cape	Namaqualand	Nama	2	80	220/66	160	10	0	0	0	0	86	20	0	0
Northern Cape	Namaqualand	Oranjemond	2	80	220/66	160	13	0	0	0	0	89	0	0	0
Northern Cape	Namaqualand	Paulputs	1	125	220/132	125	38	285	0	0	0	0	0	0	0
Northern Cape	Namaqualand	Paulputs	1	250	220/132	250	0	0	0	0	0	0	0	0	0
Northern Cape	Vredendal	Helios	1	500	400/132	500	8	475	0	0	0	0	428	366	0
Northern Cape	Vredendal	Juno	2	40	132/66	80	11	0	0	0	0	49	19	366	0
Northern Cape	Vredendal	Juno	2	125	400/132	250	9	9	0	100	0	19	328	366	0

7.1.10. Western Cape

Table 13: Western Cape summary of results

Supply Area	Local Area	Substation Name	No. of Trfrs	Transformer Size (MVA)	Transformation (kV/kV)	Installed Transformer (MVA)	TOSM Load	REIPPP	RMIPPP	Eskom RE	BQ	Substation Limit (MW)	Substation Area Limit (MW)	Local Area_Limit (MW)	Supply_Area_Limit
Western Cape	Greater Komsberg	Kappa	1	500	400/132	500	0	333	128	0	0	14	220	0	0
Western Cape	Greater Komsberg	Komsberg	2	500	400/132	1000	0	699	0	0	460	0	240	0	0
Western Cape	Greater Komsberg	Koring	1	500	400/132	500	0	280	0	0	380	0	220	0	0
Western Cape	Outeniqua	Bacchus	2	500	400/132	1000	216	95	0	0	244	352	200	114	0
Western Cape	Outeniqua	Droerivier	1	125	400/132	125	13	75	0	0	0	57	342	114	0
Western Cape	Outeniqua	Droerivier	1	250	400/132	250	0	0	0	0	0	0	342	114	0
Western Cape	Outeniqua	Galenia	1	500	400/132	500	0	280	0	0	0	195	299	114	0
Western Cape	Outeniqua	Proteus	2	80	132/66	160	110	0	0	0	0	186	585	114	0
Western Cape	Outeniqua	Proteus	2	500	400/132	1000	110	0	0	0	0	585	252	114	0
Western Cape	Outeniqua	Agulhas	1	500	400/132	500	0	0	0	0	380	95	0	114	0
Western Cape	Peninsula	Acacia	2	120	132/66	240	59	0	0	0	0	173	1094	200	0
Western Cape	Peninsula	Acacia	3	500	400/132	1500	144	0	0	0	0	1094	233	200	0
Western Cape	Peninsula	Koeberg	2	250	400/132	500	60	0	0	0	0	298	0	200	0
Western Cape	Peninsula	Muldersvlei	2	80	132/66	160	12	0	0	0	0	88	209	200	0
Western Cape	Peninsula	Muldersvlei	3	500	400/132	1500	25	138	0	0	340	497	209	200	0
Western Cape	Peninsula	Philippi	2	500	400/132	1000	359	0	0	0	0	834	834	200	0
Western Cape	Peninsula	Pinotage	2	500	400/132	1000	282	0	0	0	0	757	233	200	0
Western Cape	Peninsula	Stikland	3	160	132/66	480	346	0	0	0	0	764	950	200	0
Western Cape	Peninsula	Stikland	1	120	132/66	120	0	0	0	0	0	114	950	200	0
Western Cape	Peninsula	Stikland	2	500	400/132	1000	0	0	0	0	0	950	223	200	0
Western Cape	West Coast	Aurora	2	250	400/132	500	4	248	320	0	120	0	0	0	0
Western Cape	West Coast	Sterrekus	1	2000	765/400	2000	0	0	0	0	0	0	228	0	0

7.2. Annexure B: Behind the Meter Generation

Table 14: Behind the meter generation (rooftop and commercial PV)

Month	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	Northern Cape	North-West	Western Cape	Total
Jul-23	**368.2**	**280.2**	**1,207.8**	**810.9**	**296.6**	**450.7**	**129.5**	**669.3**	**527.4**	**4,740.4**
Jun-23	284.3	280.2	1,207.8	565.8	296.6	450.7	129.5	669.3	527.4	**4,411.5**
May-23	190	204.9	1,072.1	565.8	296.6	450.7	129.5	669.3	457.9	**4,036.8**
Apr-23	163.2	160.5	917.5	417.5	226.8	326.7	117.5	669.3	369	**3,368.0**
Mar-23	163.2	160.5	917.5	417.5	189.8	317.9	117.5	669.3	289.7	**3,242.8**
Feb-23	163.2	160.5	917.5	417.5	189.8	305.6	117.5	669.3	198	**3,138.8**
Jan-23	143.1	160.5	917.5	417.5	189.8	298.8	82.6	669.3	198	**3,077.1**
Dec-22	130.2	160.3	848.3	368.7	189.8	298.8	82	310.4	198	**2,586.4**
Nov-22	130.2	160.3	848.3	368.7	189.8	298.8	79.1	184.8	161.9	**2,421.9**
Oct-22	130.2	160.3	848.3	296.9	189.8	298.8	79.1	184.8	150	**2,338.1**
Sep-22	130.2	160.3	848.3	296.9	189.8	298.8	79.1	184.8	145.5	**2,333.6**
Aug-22	130.2	160.3	848.3	296.9	189.8	298.8	79.1	184.8	145.5	**2,333.6**
Jul-22	130.2	148.8	790.6	296.9	189.8	298.8	79.1	184.8	145.5	**2,264.5**
Apr-22	89.2	66.1	468.3	99	143.1	261.3	79.1	107.2	145.5	**1,458.8**
Mar-22	63.9	66.1	269.6	99	143.1	128.5	64.1	30.4	118.4	**983.1**

7.3. Annexure C: Committed IPP Generation

7.3.1. Eastern Cape

Table 15: Eastern Cape IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Coega Powership	OCGT Gas	450	RMIPPPP	Dedisa	Awarded
Mulilo Coega Gas to Power Plant	OCGT Gas	197.76	RMIPPPP	Dedisa	Awarded
Dorper Wind Farm	Wind	100	RE IPP 1	Delphi	Operational
MetroWind Van Stadens Wind Farm	Wind	26.19	RE IPP 1	Grassridge	Operational
Red Cap Kouga Wind Farm - Oyster Bay	Wind	80	RE IPP 1	Grassridge	Operational
Jeffreys Bay	Wind	138	RE IPP 1	Grassridge	Operational
Grassridge Wind Farm	Wind	60	RE IPP 2	Grassridge	Operational
Tsitsikamma Community Wind Farm	Wind	94.8	RE IPP 2	Grassridge	Operational
Red Cap - Gibson Bay	Wind	110	RE IPP 3	Grassridge	Operational
Oyster Bay Wind Farm	Wind	140	RE IPP 4	Grassridge	Operational
Wolf Wind Farm	Wind	84	RE IPP 5	Grassridge	Awarded
Dassiesridge WEF	Wind	75	RMIPPPP	Grassridge	Awarded
Impofu East Wind Farm(Pty)Ltd	Wind	111	BQ	Grassridge	BQ
Impofu North Wind Farm	Wind	111	BQ	Grassridge	BQ
Impofu West Wind Farm (Pty)Ltd	Wind	111	BQ	Grassridge	BQ
Chaba Wind	Wind	20.6	RE IPP 2	Pembroke	Operational
Wesley-Ciskei Wind Project	Wind	32.7	RE IPP 4B	Pembroke	Operational
Cookhouse	Wind	140	RE IPP 1	Poseidon	Operational
Waainek	Wind	23.86	RE IPP 2	Poseidon	Operational
Amakhala Emoyeni (Phase 1) Eastern Cape	Wind	140	RE IPP 2	Poseidon	Operational
Nojoli Wind Farm	Wind	87	RE IPP 3	Poseidon	Operational
Golden Valley Wind	Wind	117.72	RE IPP 4	Poseidon	Operational
Nxuba Wind Farm	Wind	138.9	RE IPP 4	Poseidon	Operational
Total		**2589.53**			

7.3.2. Free State

Table 16: Free State IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[AREA]	STATUS
Braklaagte PV	PV	75	RE IPP 5	Artemis	Awarded
DPT Hennenman Solar Farm	PV	20	RfBQ	Everest	BQ
GOOD HOPE 2 SOLAR PARK 200MW	PV	200	RE IPP 6	Artemis	Awarded
GROOTSPRUIT SOLAR PROJECT	PV	75	RE IPP 5	Artemis	Awarded
Kentanie PV	PV	75	RE IPP 5	Artemis	Awarded
Khauta South Solar PV Facility (RF) (Pty) Ltd	PV	240	BQ	Leander	BQ
Klipfontein PV	PV	75	RE IPP 5	Artemis	Awarded
Klipfontein PV 2	PV	75	RE IPP 5	Artemis	Awarded
Leliehoek PV	PV	75	RE IPP 5	Harvard	Awarded
Letsatsi Power Company	PV	64	RE IPP 1	Harvard	Operational
Ngonyama Solar	PV	240	RE IPP 6	Artemis	Awarded
SANNASPOS SOLAR PROJECT	PV	75	RE IPP 5	Artemis	Awarded
Sonneblom Solar Power Plant (RF) (Pty) Ltd	PV	45	BQ	Harvard	BQ
Sonoblomo PV	PV	75	RE IPP 5	Leander	Awarded
Sonvanger Solar Power Plant	PV	142	RfBQ	Everest	BQ
Springbok Solar Power Plant (RF) (Pty) Ltd	PV	150	RfBQ	Everest	BQ
Virginia 3 Solar Park	PV	240	RE IPP 6	Theseus	Awarded
TOTAL		**1941**			

7.3.3. Gauteng

Table 17: Gauteng IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[AREA]	STATUS
DRD SPV	PV	60	BQ	Brenner	BQ
Rhovan Vanadium Mine	PV	25	BQ	Dinaledi	BQ
De Wildt Solar Park	PV	50	RE IPP 4B	Lomond	Operational
Damlaagte PV	PV	100	BQ	Scafell	BQ
Ilikwa PV	PV	100	BQ	Scafell	BQ
Sediba Solar Power Plant (RF) (Pty) Ltd.	PV	120	BQ	Scafell	BQ
Lethabo 75MW solar PV	PV	75	BQ	Snowdon	BQ
TOTAL		**530**			

7.3.4. Hydra Central

Table 18: Hydra Central IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Coleskop Wind Power	Wind	140	RE IPP 5	Koruson	Awarded
De Aar Solar PV	PV	48.25	RE IPP 1	Hydra	Operational
Du Plessis Dam Solar PV2	PV	75	BQ	Kestrel	BQ
Du Plessis Solar PV1	PV	75	RE IPP 5	Hydra	Awarded
Hartebeesthoek Wind Power	Wind	140	RfBQ&W	Koruson	BQ
Kalkbult	PV	75	RE IPP 1	Hydra	Operational
Linde	PV	36.8	RE IPP 2	Hydra	Operational
Longyuan Mulilo De Aar 2 North Wind Energy Facility	Wind	139	RE IPP 3	Hydra	Operational
Longyuan Mulilo De Aar Maanhaarberg Wind Energy Facility	Wind	96	RE IPP 3	Hydra	Operational
Mooi Plaats Solar PV Plant	PV	240	RfBQ&W	Koruson	BQ
Mulilo De Aar 2 South Wind Energy Facility	Wind	140	BQ	Kestrel	BQ
Mulilo Renewable Energy Solar PV De Aar	PV	10	RE IPP 1	Hydra	Operational
Mulilo Total Hybrid Storage	PV	75	RMIPPPP	Hydra	Awarded
Noupoort Mainstream Wind	Wind	79	RE IPP 3	Hydra	Operational
Paarde Valley B PV2	PV	120	BQ	Kestrel	BQ
Phezukomoya Wind Farm	Wind	140	RE IPP 5	Koruson	Awarded
Project Dreunberg	PV	75	RE IPP 2	Ruigtevallei	Operational
San Kraal Wind Farm	Wind	140	RE IPP 5	Koruson	Awarded
Solar Capital De Aar	PV	75	RE IPP 1	Hydra	Operational
Solar Capital De Aar 3	PV	75	RE IPP 2	Hydra	Operational
Sun Central 1 PV	PV	100	BQ	Aquila	BQ
Sun Central 2 PV	PV	100	BQ	Aquila	BQ
Sun Central 3 PV	PV	100	BQ	Aquila	BQ
Ukuqala Solar PV	PV	75	(blank)	Kestrel	BQ
Umsobomvu Wind Energy Facility	Wind	140	RfBQ&W	Koruson	BQ
TOTAL		**2509.05**			

7.3.5. KwaZulu-Natal

Table 19: KwaZulu-Natal IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Karpowership	LNG	450	RMIPP	Impala	DRA
Waaihoek	Wind	140	BW5	Bloedrivier	DRA
TOTAL		**590**			

7.3.6. Limpopo

Table 20: Limpopo IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Mogalakwena Solar	PV	100	BQ	Borutho	BQ
Tubatse Ferrochrome - Tubatse PV Plant	PV	60	BQ	Merensky	BQ
Tubatse PV Chrome palnt	PV	40	BQ	Merensky	BQ
Bolobedu Solar PV Plant	PV	75	BQ	Spencer	BQ
Amandelbult PV Plant	PV	5	BQ	Spitskop	BQ
Baphalane (Bojating) Solar Farm Project	PV	100	BQ	Spitskop	BQ
Lion Thorn Solar 4	PV	145	BQ	Spitskop	BQ
PPC Dwaalboom Solar PV 1	PV	10	BQ	Spitskop	BQ
Soutpan Solar Park	PV	28	RE IPP 1	Tabor	Operational
Ingwe Solar Power Plant (RD)(Pty)Ltd	PV	150	BQ	Tabor	BQ
Bela-Bela Solar Park	PV	75	BQ	Warmbad	BQ
Witkop Solar Park 1	PV	30	RE IPP 1	Witkop	Operational
Stellar solar Farm	PV	20	BQ	Witkop	BQ
Lephalale Solar	PV	80	BQ	Medupi PS	BQ
Namane Generation PV Plant	PV	30	BQ	Medupi PS	BQ
Vangpan Solar PV Development	PV	40	BQ	Medupi PS	BQ
Tom Burke Solar Park	PV	60	RE IPP 3	Matimba PS	Operational
TOTAL		**1048**			

7.3.7. Mpumalanga

Table 21: Mpumalanga IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Zone]	STATUS
Zibulo Solar Project	PV	4	BQ	Kruispunt	BQ
Tutuka PS solar PV Plant	PV	65	BQ	Sol	BQ
Ummbila Emoyeni Wind Energy Facility 1	Wind	150	BQ	Sol	BQ
Hendrina South WEF (Pty) Ltd	Wind	200	BQ	Hendrina PS	BQ
Duvha PS Solar PV Plant	PV	23.5	BQ	Komati PS	BQ
Halfgewonnen Solar PV	PV	75	BQ	Komati PS	BQ
TOTAL		**517.5**			

7.3.8. North West

Table 22: North West IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
RustMo1 Solar Farm	PV	7	RE IPP 1	Bighorn	Operational
Blyvoor Solar	PV	10	BQ	Carmel	BQ
Chemwes Solar Park	PV	15	BQ	Hermes	BQ
Doornhoek 1 PV Facility	PV	120	RE IPP 6	Hermes	Awarded
Buffels Solar PV Project	PV	75	RfBQ&W	Hermes	BQ
Noko Solar Power Plant (RF)(Pty)Ltd	PV	100	BQ	Hermes	BQ
Bokamoso Solar Park	PV	67.9	RE IPP 4B	Mercury	Operational
Adara 2 Solar Project	PV	40	BQ	Mercury	BQ
Lion Thorn 40MW Solar Plant	PV	40	BQ	Mercury	BQ
Phofu Solar Power Plant	PV	100	BQ	Mercury	BQ
Thakadu Solar Power Plant (RF) (Pty) Ltd.	PV	100	BQ	Mercury	BQ
Sibanye Gold Solar PV Project	PV	50	BQ	Midas	BQ
Zeerust Solar Park	PV	75	RE IPP 4B	Watershed	Operational
Boitumelo Solar Power Plant (RF) (Pty) Ltd	PV	150	RE IPP 6	Watershed	Awarded
Kutlwano Solar Power Plant	PV	150	RE IPP 6	Watershed	Awarded
BUFFELSPOORT SOLAR PROJECT	PV	30	BQ	Watershed	BQ
Dudfield Solar	PV	50	BQ	Watershed	BQ
Kalgold Solar Park	PV	15	BQ	Watershed	BQ
Leeumax 15MW PV	PV	15	BQ	Watershed	BQ
Lerato Solar Power Plant	PV	120	BQ	Watershed	BQ
Lichtenburg 1 PV	PV	100	BQ	Watershed	BQ
Lichtenburg 2 PV	PV	100	BQ	Watershed	BQ
Lichtenburg 3 PV	PV	100	BQ	Watershed	BQ
PPC Slurry Solar PV 1	PV	10	BQ	Watershed	BQ
TOTAL		**1639.9**			

7.3.9. Northern Cape

Table 23: Northern Cape IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Aggeneys Solar	PV	40	RE IPP 4	Aggeneis	Operational
Aries Solar	PV	9.65	RE IPP 1	Aries	Operational
Droogfontein Solar PV Project	PV	48.25	RE IPP 1	Boundary	Operational
Boshoff Solar Park	PV	60	RE IPP 2	Boundary	Operational
Pulida Solar Park	PV	75	RE IPP 3	Boundary	Operational
Droogfontein Solar Park	PV	75	RE IPP 4	Boundary	Operational
Graspan Solar Project	PV	75	RE IPP 5	Boundary	Awarded
Kathu Solar Energy Facility	PV	75	RE IPP 1	Ferrum	Operational
Sishen Solar Facility	PV	74.4	RE IPP 2	Ferrum	Operational
Adams Solar PV 2	PV	75	RE IPP 3	Ferrum	Operational
Kathu Solar Park	CSP	100	RE IPP 3.5	Ferrum	Operational
Bokpoort CSP Project	CSP	50	RE IPP 2	Garona	Operational
Project Dao 1	PV	150	RMIPPPP	Garona	Awarded
Kangnas	Wind	136.7	RE IPP 4B	Groeipunt	Operational
Khobab Wind	Wind	138	RE IPP 3	Helios	Operational
Loeriesfontein 2 Wind Farm	Wind	138	RE IPP 3	Helios	Operational
Loeriesfontein Orange	PV	75	RE IPP 4B	Helios	Operational
Dwarsrug Wind Farm	Wind	124	RE IPP 5	Helios	Awarded
Sere Wind Farm MEC Increase 111MW	Wind	100	RE Eskom	Juno	Operational
Vredendal	PV	8.8	RE IPP 2	Juno	Operational
Greefspan PV Power Plant	PV	10	RE IPP 1	Kronos	Operational
Mulilo Renewable Energy Solar PV Prieska	PV	20	RE IPP 1	Kronos	Operational
Mulilo Prieska PV	PV	75	RE IPP 3	Kronos	Operational
Mulilo Sonnedix Prieska PV	PV	75	RE IPP 3	Kronos	Operational
Greefspan PV Power Plant No. 2	PV	55	RE IPP 4B	Kronos	Operational
Copperton Wind Farm	Wind	102	RE IPP 4B	Kronos	Operational

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Area]	STATUS
Garob Wind Farm	Wind	135.9	RE IPP 4B	Kronos	Operational
Waterloo Solar Park	PV	75	RE IPP 4B	Mookodi	Operational
Mulilo Total Coega Gemsbok PV256 180MW IPP Power Plant	PV	197.76	RMIPPPP	Nieuwehoop	Awarded
Scatec Kenhardt PV 1	PV	50	RMIPPPP	Nieuwehoop	Awarded
Scatec Kenhardt PV 2	PV	50	RMIPPPP	Nieuwehoop	Awarded
Scatec Kenhardt PV 3	PV	50	RMIPPPP	Nieuwehoop	Awarded
Herbert PV Power Plant	PV	19.93	RE IPP 1	Olien	Operational
Lesedi Power Company	PV	64	RE IPP 1	Olien	Operational
Jasper Power Company	PV	75	RE IPP 2	Olien	Operational
Redstone Solar Thermal Power Plant	CSP	100	RE IPP 3.5	Olien	Operational
Konkoonsies Solar	PV	9.65	RE IPP 1	Paulputs	Operational
KaXu Solar One	CSP	100	RE IPP 1	Paulputs	Operational
XiNa Solar One	CSP	100	RE IPP 3	Paulputs	Operational
Konkoonsies II Solar	PV	75	RE IPP 4	Paulputs	Operational
Khi Solar One	CSP	50	RE IPP 1	Upington	Operational
Upington Solar PV	PV	8.9	RE IPP 2	Upington	Operational
Ilanga CSP 1 / Karoshoek Solar One	CSP	100	RE IPP 3	Upington	Operational
Dyason's Klip 1	PV	75	RE IPP 4	Upington	Operational
Dyason's Klip 2	PV	75	RE IPP 4	Upington	Operational
Sirius Solar PV Project One	PV	75	RE IPP 4	Upington	Operational
Avondale 1 Solar Park	PV	75	RMIPPPP	Upington	Awarded
TOTAL		**3525.94**			

7.3.10. Western Cape

Table 24: Western Cape IPPs

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Zone]	STATUS
FE Overberg	Wind	380	BQ	Agulhas	BQ
SlimSun Swartland Solar Park	PV	5	RE IPP 1	Aurora	Operational
Hopefield Wind Farm	Wind	65.4	RE IPP 1	Aurora	Operational
Aurora	PV	9	RE IPP 2	Aurora	Operational
West Coast 1	Wind	94	RE IPP 2	Aurora	Operational
Electra Capital (Pty) Ltd	PV	75	RE IPP 3	Aurora	Operational
Saldanha Powership	OCGT Gas	320	RMIPPPP	Aurora	Awarded
Darling Wind Power	Wind	10	BQ	Aurora	BQ
Hartebeest Wind Farm	Wind	100	BQ	Aurora	BQ
Slimsun Too - Phase 2	PV	10	BQ	Aurora	BQ
Dassiesklip Wind Energy Facility	Wind	27	RE IPP 1	Bacchus	Operational
Touwsrivier Project	PV	36	RE IPP 1	Bacchus	Operational
Excelsior Wind	Wind	31.9	RE IPP 4B	Bacchus	Operational
Witberg Wind Farm	Wind	120	BQ	Bacchus	BQ
Wolseley Wind Farm	Wind	123.9	BQ	Bacchus	BQ
Noblesfontein	Wind	75	RE IPP 1	Droerivier	Operational
Beaufort West Wind Farm	Wind	140	RE IPP 5	Galenia	Awarded
Trakas Wind Farm	Wind	140	RE IPP 5	Galenia	Awarded
Perdekraal East	Wind	107.7	RE IPP 4B	Kappa	Operational
Grootfontein PV 1	PV	75	RE IPP 5	Kappa	Awarded
Grootfontein PV 2	PV	75	RE IPP 5	Kappa	Awarded
Grootfontein PV 3	PV	75	RE IPP 5	Kappa	Awarded
Oya Wind Farm	PV	128	RMIPPPP	Kappa	Awarded
Karusa Wind Farm	Wind	139.8	RE IPP 4	Komsberg	Operational
Roggeveld	Wind	140	RE IPP 4	Komsberg	Operational
Soetwater Wind Farm	Wind	139.4	RE IPP 4B	Komsberg	Operational

NAME	TECHNOLOGY	CAPACITY (MW)	PROGRAMME	MTS[Zone]	STATUS
Brandvalley Wind Farm	Wind	140	RE IPP 5	Komsberg	Awarded
Rietkloof Wind Farm	Wind	140	RE IPP 5	Komsberg	Awarded
Karreebosch Wind	Wind	140	BQ	Komsberg	BQ
Kudusberg 560MW Wind Farm	Wind	320	BQ	Komsberg	BQ
Rietrug Wind Farm	Wind	140	RE IPP 5	Koring	Awarded
Sutherland Wind Farm	Wind	140	RE IPP 5	Koring	Awarded
GREAT KAROO WIND FARM	Wind	240	BQ	Koring	BQ
Sutherland 2 Wind Farm	Wind	140	BQ	Koring	BQ
Gouda Wind Facility	Wind	138	RE IPP 2	Muldersvlei	Operational
Fe Berg River	PV	200	BQ	Muldersvlei	Operational
FE Bonne Esperance 140MW	PV	140	BQ	Muldersvlei	Operational
TOTAL		**4520.1**			