

Brandvalley Wind Farm (Pty) Ltd, a subsidiary of G7 Renewable Energies (Pty) Ltd, propose to develop a 132kV above-ground electricity distribution line, in order to evacuate up to 140 megawatt (MW) energy from the Brandvalley Wind Energy Facility (WEF) near Laingsburg, bordering and adjacent to the Northern and Western Cape Province, South Africa to the national grid..

The power line will cross properties of land in the Karoo Hoogland, the Witzenberg (Ceres) and the Laingsburg Local Municipalities, which fall within the Namakwa, the Cape Winelands and the Central Karoo District Municipalities, respectively.

The electrical distribution infrastructure related to this Basic Assessment process is:

- High voltage components of the 33/132kV onsite substation including transformers, isolators, cabling, light mast and other as required by Eskom. The onsite substation would have a footprint of up to 200m x 200m that would also house site offices, storage areas, ablution facilities and the maintenance building.
- 132kV above-ground distribution line to connect the onsite 33/132kV substation to the grid. The pylons for this line will have an average spacing of 250m to 300m.
- Extension of the national grid in order to connect the wind farm. There are three options being considered and the preferred option will be informed by environmental, technical considerations and Eskom's preference:
 - Extension of the existing 400kV Komsberg substation with several electrical components to be defined by Eskom (e.g. additional feeder bay, transformer bay) on the existing substation property or
 - Extension of the Bon Espirange satellite 132kV substation with several electrical components. The Bon Espirange satellite substation will be established by Eskom and other IPPs as an alternative to connecting all wind farms west of Komsberg directly to the Eskom Komsberg Substation.
 - Construction of a central switching station (up to 200m x 200m) to be shared by both Brandvalley and Rietkloof if both are awarded preferred bidders. If the central hub or switching station option is ultimately selected by Eskom, each project will build their own 33/132kV substation and connect to the central station. From there one 132kV line for both projects will lead to either the Komsberg or Bon Espirange substation.

A generalised depiction of the infrastructure under this application is shown in Figure 1.1 below. The WEF and other associated infrastructure will be applied for in a separate Environmental Impact Assessment process.

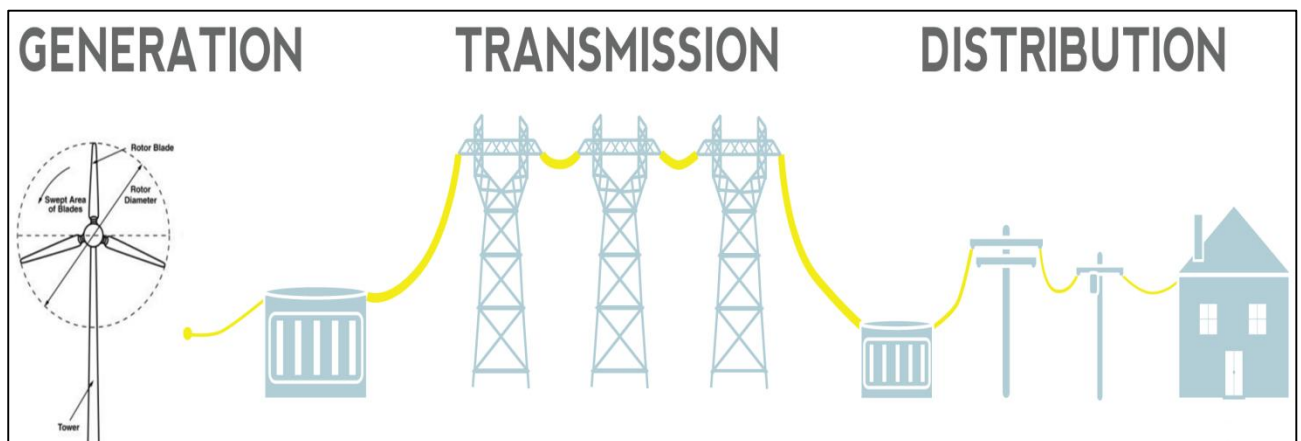


Figure 1.1 Typical WEF electricity evacuation process.

Brandvalley Alternatives

Various alternatives are being considered to 1) step up the voltage from 33kV to 132kV (onsite 33/132kV substations), 2) to distribute the 132kV electricity to the grid (overhead distribution line) and 3) various grid connection options.

There are three potential grid connection options being considered:

- Komsberg's existing 400kV substation
- Bon Espirange satellite substation that will be constructed as an alternative for all wind farms connecting from the West of Komsberg
- Rietkloof and Brandvalley Central Hub switching station in case both projects Rietkloof and Brandvalley get awarded preferred bidder at the same time. This option would be an opportunity to share infrastructure and reduce the project footprint. From the switching station there will be one shared 132kV line to either Komsberg or Bon Espirange substation

All three grid connection options above have different sub-alternatives for line routings to connect to the four potential onsite 33/132kV substations as indicated below.

- Substation alternative 1 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 1 (referred to as alternative BV SS1- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 1 (referred to as alternative BV SS1-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 1 (referred to as alternative BV SS1- Bon Espirange)
- Substation alternative 2 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 2 (referred to as alternative BV SS2- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 2 (referred to as alternative BV SS2-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 2 (referred to as alternative BV SS2- Bon Espirange)
- Substation alternative 3 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 3 (referred to as alternative BV SS3- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 3 (referred to as alternative BV SS3-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 3 (referred to as alternative BV SS3- Bon Espirange)
- Substation alternative 4 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 4 (referred to as alternative BV SS4- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 4 (referred to as alternative BV SS4-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 4 (referred to as alternative BV SS4- Bon Espirange)

Each of these distribution line alternatives will be buffered by 100m in order to allow for micro-siting. Although numerous alternatives are considered, only one 33/132kV substation and one 132kV overhead power line will be built to connect to one grid connection option per project.

Rietkloof project description

Rietkloof Wind Farm (Pty) Ltd, a subsidiary of G7 Renewable Energies (Pty) Ltd, propose to develop a 132kV above-ground electricity distribution line, in order to evacuate up to 140 megawatt (MW) energy from the Rietkloof Wind Energy Facility (WEF) near Laingsburg, Western Cape Province, South Africa to the national grid.

The power line will cross properties of land in the Witzenberg (Ceres) and the Laingsburg Local Municipalities, which fall within the Cape Winelands and the Central Karoo District Municipalities, respectively.

The electrical distribution infrastructure related to this Basic Assessment process is:

- High voltage components of the 33/132kV onsite substation including transformers, isolators, cabling, light mast and other as required by Eskom. The onsite substation would have a footprint of up to 200m x 200m that will also house site offices, storage areas, ablution facilities and the maintenance building.
- 132kV above-ground distribution line to connect the onsite 33/132kV substation to the grid. The pylons for this line will have an average spacing of 250m to 300m.
- Extension of the national grid in order to connect the wind farm. There are three options being considered and the preferred option will be informed by environmental, technical considerations and Eskom's preference:
 - Extension of the existing 400kV Komsberg substation with several electrical components to be defined by Eskom (e.g. additional feeder bay, transformer bay) on the existing substation property or
 - Extension of the Bon Espirange satellite 132kV substation with several electrical components. The Bon Espirange satellite substation will be established by Eskom and other IPPs as an alternative to connecting all wind farms west of Komsberg directly to the Eskom Komsberg Substation.
 - Construction of a central switching station (up to 200m x 200m) to be shared by both Brandvalley and Rietkloof if both are awarded preferred bidders. If the central hub or switching station option is ultimately selected by Eskom, each project will build their own 33/132kV substation and connect to the central station. From there one 132kV line for both projects will lead to either the Komsberg or Bon Espirange substation

A generalised depiction of the infrastructure under this application is shown in Figure 1.1 below. The WEF and other associated infrastructure will be applied for in a separate Environmental Impact Assessment process.

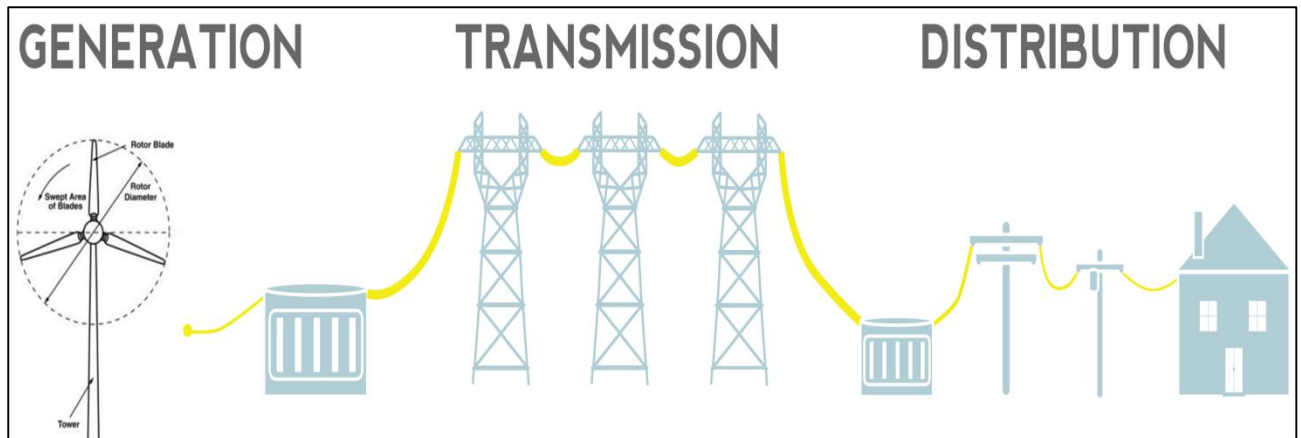


Figure 1.1 Typical WEF electricity evacuation process.

Rietkloof Alternatives

Various alternatives are being considered to 1) step up the voltage from 33kV to 132kV (onsite 33/132kV substations), 2) to distribute the 132kV electricity to the grid (overhead distribution line) and 3) various grid connection options.

There are three potential grid connection options being considered:

- Komsberg's existing 400kV substation
- Bon Espirange satellite hub substation that will be constructed for all wind farms connecting from the West of Komsberg
- Rietkloof and Brandvalley Central Hub switching station in case both projects Rietkloof and Brandvalley get awarded preferred bidder at the same time. This option would be an opportunity to share infrastructure and reduce the project footprint.

All three grid connection options above have different sub-alternatives for line routings to connect to the seven potential onsite 33/132kV substations as indicated below.

- Substation alternative 1 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 1 (referred to as alternative RK SS1- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 1 (referred to as alternative RK SS1-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 1 (referred to as alternative RK SS1- Bon Espirange)
- Substation alternative 2 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 2 (referred to as alternative RK SS2- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 2 (referred to as alternative RK SS2-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 2 (referred to as alternative RK SS2- Bon Espirange)
- Substation alternative 3 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 3 (referred to as alternative RK SS3- central switching station)

- Eskom Komsberg substation via one 132kV overhead distribution line from substation 3 (referred to as alternative RK SS3-Komsberg)
- Bon Espirange Substation via one 132kV overhead distribution line from substation 3 (referred to as alternative RK SS3- Bon Espirange)
- Substation alternative 4 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 4 (referred to as alternative RK SS4- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 4 (referred to as alternative RK SS4-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 4 (referred to as alternative RK SS4- Bon Espirange)
- Substation alternative 5 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 5 (referred to as alternative RK SS5- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 5 (referred to as alternative RK SS5-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 5 (referred to as alternative RK SS5- Bon Espirange)
- Substation alternative 6 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 6 (referred to as alternative RK SS6- central switching station)
 - Eskom Komsberg substation 132kV overhead distribution line from substation 6 (referred to as alternative RK SS6-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 6 (referred to as alternative RK SS6- Bon Espirange)
- Substation alternative 7 to:
 - Brandvalley and Rietkloof shared central switching station via one 132kV overhead distribution line from substation 7 (referred to as alternative RK SS7- central switching station)
 - Eskom Komsberg substation via one 132kV overhead distribution line from substation 7 (referred to as alternative RK SS7-Komsberg)
 - Bon Espirange Substation via one 132kV overhead distribution line from substation 7 (referred to as alternative RK SS7- Bon Espirange)

Each of these distribution line alternatives will be buffered by 100m in order to allow for micro-sitting. Although numerous alternatives are considered, only one 33/132kV substation and one 132kV overhead power line will be built to connect to one grid connection option per project.