



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA ·0001· Environment House ·473 Steve Biko Road, Arcadia· PRETORIA

DFFE Reference: 14/12/16/3/3/2/2009

Enquiries: Mr Thando Booï

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Dr Kilian Hagemann
Oya Energy (Pty) Ltd
5th Floor, 125 Buitengracht Street
CAPE TOWN
8001

Telephone Number: (021) 300 0613
Email Address: Oya@g7energies.com

PER EMAIL / MAIL

Dear Dr Kilian Hagemann

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED: FOR THE PROPOSED DEVELOPMENT OF THE 301MW OYA ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE NEAR MATJIESFONTEIN, WESTERN CAPE PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing and within fourteen (14) days of the date of the decision as well as the provisions regarding the submission of appeals that are contained in the Regulations.

In terms of the Promotion of Administrative Justice Act, Act No. 3 of 2000, you are entitled to the right to fair, lawful and reasonable administrative action; and to written reasons for administrative action that affects you negatively. Further your attention is drawn to the provisions of the Protection of Personal Information Act, Act No. 4 of 2013 which stipulates that the Department should conduct itself in a responsible manner when collecting, processing, storing and sharing an individual or another entity's personal information by holding the Department accountable should the Department abuses or compromises your personal information in any way.

Your attention is drawn to Chapter 2 of National Environmental Management Act, Act No. 107 of 1998 National Appeal Regulations published under Government Notice R993 in Government Gazette No. 38303 dated 08 December 2014 (National Appeal Regulations, 2014), which prescribe the appeal procedure to be followed. Kindly include a copy of this document (National Appeal Regulations, 2014) with the letter of notification to interested and affected parties in this matter.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

Appeals must be submitted in writing in the prescribed form to:

The Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appeals@environment.gov.za;


By hand: Environment House
473 Steve Biko
Arcadia
Pretoria
0083; or

By post: Private Bag X447
Pretoria
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, Act No. 107 of 1998, as amended, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at https://www.environment.gov.za/documents/forms#legal_authorisations or request a copy of the documents at appeals@environment.gov.za.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Forestry, Fisheries and the Environment

Date: 29/04/2009

cc:	Stephan Jacobs	SIVEST SA (Pty) Ltd	Email: stephanj@sivest.co.za
	Mr Zaahir Toefy	DEADP: Western Cape	Email: Zaahirtoefy@westerncape.gov.za
	Mr Hennie Taljaard	Witzenberg Local Municipality	Email: htaljaard@witzenberg.gov.za



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 25 of the Environmental Impact Assessment Regulations, 2014, as amended

Development of the 301MW Oya Energy Facility and Associated Infrastructure near Matjiesfontein,
Western Cape Province

Cape Winelands District Municipality

Authorisation register number:	<i>14/12/16/3/3/2/2009</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>Oya Energy (Pty) Ltd</i>
Location of activity:	<i>Remainder of Farm Baakens Rivier No. 155 in Ward 12 of Witzenberg Local Municipality within Cape Winelands District Municipality in the Western Cape Province</i>

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this Environmental Authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this Environmental Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, Act No. 107 of 1998, as amended and the EIA Regulations, 2014, as amended.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment Regulations, 2014, as amended, the Department hereby authorises –

OYA ENERGY (PTY) LTD

with the following contact details –

Dr Kilian Hagemann

Oya Energy (Pty) Ltd

5th Floor, 125 Buitengracht Street

CAPE TOWN

8001

Telephone Number: (021) 300 0613

Email Address: Oya@g7energies.com

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1, Listing Notice 2 and Listing Notice 3 of the EIA Regulations, 2014 as amended:

Activity number	Activity description
<p><u>Listing Notice 1, Item 9:</u></p> <p><i>"The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water—</i></p> <p><i>(i) with an internal diameter of 0,36 metres or more; or excluding where—</i></p> <p><i>(a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or</i></p> <p><i>(b) where such development will occur within an urban area."</i></p>	<p>Pipelines will be constructed in order to transport water from existing or new boreholes and/or water storage facilities in order to cool the generators. The pipelines will have a combined capacity in excess of 1000 metres (m) and an internal diameter of 0.36m or more and will occur outside and urban area.</p>
<p><u>Listing Notice 1, Item 11:</u></p> <p><i>"The development of facilities or infrastructure for the transmission and distribution of electricity—</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts."</i></p>	<p>A new on-site substation will be constructed as part of the proposed development. The proposed substation will be located outside urban areas and will have a capacity of 33/132kV (33kV yard subject to this EIA). In addition, the substation will occupy a footprint of up to approximately 4 hectare (ha). The 33kV yard portion of the substation which will be owned by the applicant will occupy an area of up to approximately 2ha. It should be noted the 33/132kV substation that is applied for in the application form is the same 33/132kV substation that is applied for in the application for EA with reference number: 14/12/16/3/3/1/2265. The proposed on-site substation will be a shared substation which will consist of a 33kV voltage yard which will be owned and operated by the applicant as well as a 132kV yard which will be owned and operated by Eskom. The proposed substation has therefore been</p>

	<p>included in both the EIA and BA processes to allow for handover of the 132kV yard to Eskom. The substation will be constructed by the applicant, however, ownership of the 132kV yard portion will be ceded to Eskom after construction. Once ownership of the 132kV yard portion of the substation has been ceded, Eskom will accept sole responsibility for this and the IPP will not be able to operate or maintain this portion of the substation (i.e. will not have access to this portion of the substation). As such, both the IPP (i.e. the applicant) as well as Eskom will require a substation in the respective EAs (should these be issued) to allow for the construction and operation of this on-site substation. It can however be confirmed that only one (1) substation (up to 4ha) will be constructed for both proposed projects (Oya Energy Facility with DFFE Ref No.: 14/12/16/3/3/2/2009 as well as Oya Grid with DFFE Ref No.: 14/12/16/3/3/1/2265). This is evident when comparing the coordinates for the substation which forms part of both the Environmental Impact Assessment (14/12/16/3/3/2/2009) and Basic Assessment (14/12/16/3/3/1/2265) processes respectively.</p>
<p><u>Listing Notice 1, Item 12:</u> <i>"The development of:</i> ii) <i>infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs-</i> (a) <i>within a watercourse;</i> (c) <i>if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse."</i></p>	<p>The proposed development will entail the construction of buildings and other infrastructure with a physical footprint of approximately 100m² or more within a surface water feature/watercourse or within 32m of a surface water feature/watercourse. The infrastructure associated with the proposed development will avoid the identified surface water features/watercourses where possible, although some structures (such as roads) will occur within a</p>

	<p>surface water feature/watercourse and/or within 32m of a surface water feature/watercourse.</p>
<p><u>Listing Notice 1, Item 14:</u> <i>"The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80m³ or more but not exceeding 500m³."</i></p>	<p>The proposed development will include the construction of an on-site storage facility for the temporary storage of fuel for the duration of construction. The combined temporary construction phase storage capacity will be larger than 80m³ but will not exceed 500m³. This infrastructure would be placed within the footprint of either the BESS/Substation/Construction Camp.</p>
<p><u>Listing Notice 1, Item 19:</u> <i>"The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse"</i></p>	<p>The proposed development will involve the excavation, removal, infilling, depositing and moving of more than 10 cubic metres (m³) of soil, sand, pebbles or rock from some of the identified surface water features / watercourses. Although the layout of the proposed development has been designed to avoid the identified surface water features/watercourses as far as possible, some of the internal and/or access roads will need to traverse the identified surface water features/watercourses. In addition, during construction of these roads, soil will need to be removed from some of the identified surface water features/watercourses.</p>
<p><u>Listing Notice 1, Item 24</u> <i>"The development of a road - ii) with a reserve wider than 13,5 metres, or where no reserve exists where the road is wider than 8 metres."</i></p>	<p>New internal access roads will be constructed between some of the Photovoltaic arrays, Battery Energy Storage System, Fuel Based Generation Facility, Construction Camp and substation, to facilitate access throughout the facility. It is proposed that these internal access roads will be wider than 8m with additional yet associated servitudes/reserves for above or below ground cable installation and</p>

	<p>maintenance. Existing roads will be used wherever possible, although new roads will be constructed where necessary. Transport Impact Assessment has been undertaken to assess the impacts of the proposed development on the transport network.</p>
<p><u>Listing Notice 1, Item 28</u> <i>“Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development (ii) will occur outside an urban area, where the total land to be development is bigger than 1 hectare”</i></p>	<p>The proposed development site is currently zoned for agricultural land use; however, the property is no longer actively used for agricultural activities. The proposed development will result in special zoning being required, as an area greater than 1ha will be transformed into industrial/commercial use.</p>
<p><u>Listing Notice 1, Item 31</u> <i>“The decommissioning of existing facilities, structures or infrastructure for - (i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014.”</i></p>	<p>Should the proposed development's Power Purchase Agreement (PPA) not be renewed after 20 years (anticipated operational lifespan of proposed development), the proposed development would need to be decommissioned. This would include the decommissioning of the entire facility, including medium voltage lines connecting the PV panels to the on-site substation.</p> <p>This activity is not recommended for approval as the proposed development does not have any development and related operation activities. The EAP confirmed that in the email dated 20 & 21 April 2021 (uploaded on EDMS).</p>
<p><u>Listing Notice 1, Item 48</u> <i>“The expansion of- (i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; where such expansion occurs— (a) within a watercourse; or</i></p>	<p>The proposed development will entail the expansion (upgrading) of roads and other infrastructure by 100m² or more within a surface water feature/watercourse or within 32m from the edge of a surface water feature/watercourse. Although the layout of the proposed development has been</p>

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<p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse."</i></p>	<p>designed to avoid the identified surface water features/watercourses as far as possible, some of the internal and access roads to be upgraded will need to traverse the identified surface water features/watercourses and construction will occur within some of the surface water features/watercourses and/or be within 32m of some of the surface water features/watercourses.</p>
<p><u>Listing Notice 1, Item 56</u></p> <p><i>"The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –</i></p> <p><i>(i) where the existing reserve is wider than 13.5 metres, or</i></p> <p><i>(ii) where no reserve exists, where the existing road is wider than 8 metres."</i></p>	<p>New internal roads will be constructed between some of the photovoltaic arrays, Battery Energy Storage System, Fuel Based Generation Facility, Construction Camp and substation, in order to facilitate access throughout the facility. It is proposed that these internal access roads will be between approximately 4m and 8m wide. The existing internal and access roads will thus need to be upgraded by widening by more than 6m, or by lengthening them by more than 1 kilometre (km).</p>
<p><u>Listing Notice 2, Item 1</u></p> <p><i>"The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more"</i></p>	<p>The proposed development will entail the development of a solar photovoltaic (PV) facility, Battery Energy Storage System and Fuel Based Generation Facility with a maximum generation capacity of up to 301MW, with 155MW of this generation capacity coming from solar energy. In addition, the proposed development will be located outside an urban area. It should be noted that the proposed hybrid energy facility will have installed electricity generation capacity of 155MW (generating electricity by solar PV), while the FBGF can generate 106MW of energy (through fuel burn). Both generation assets can generate at different capacity factors (i.e. the % of time the asset can generate at</p>

	<p>full capacity). An additional 70MW of electricity (generated from either the PV or FBGF in the case of this application, but the BESS may be charged by other developments co-located and thus may be charged by wind) which is not directly evacuated to the on-site substation will be stored in the BESS and dispatched as and when required. The facility can thus generate and evacuate up to a maximum of 301MW of electricity at any given time (should it be required to).</p>
<p><u>Listing Notice 2, Item 2</u> <i>"The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more"</i></p>	<p>The proposed development will entail the development of a Fuel Based Generation Facility with a maximum generation capacity of up to 106MW. The FBGF will generate electricity from a non-renewable resource. The FBGF will consist up to a maximum of 37 dual-fuel capable reciprocating Generators ("gensets"), approximately 7m x 3m x 3m each. Please note that the fuel-based generators operate on diesel/similar hydrocarbon that are not in gaseous form. The Generators will be located inside a building (either 1 building or multiple buildings) or containers. It should be noted that the proposed hybrid energy facility will have installed electricity generation capacity of 155MW (generating electricity by solar PV), while the FBGF can generate 106MW of energy (through fuel burn). Both generation assets can generate at different capacity factors (i.e. the % of time the asset can generate at full capacity). An additional 70MW of electricity (generated from either the PV or FBGF in the case of this application, but the BESS may be charged by other developments co-located and thus may be charged by wind) which is not directly evacuated to the on-site substation will</p>

	<p>be stored in the BESS and dispatched as and when required. The facility can thus generate and evacuate up to a maximum of 301MW of electricity at any given time (should it be required to).</p>
<p><u>Listing Notice 2, Item 4</u> <i>"The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres."</i></p>	<p>The proposed development will entail the construction of up to ten (10) permanent storage tanks for the storage of diesel/similar hydrocarbons to feed into the Fuel Based Generation Facility and will be less than 1000m³ combined capacity.</p>
<p><u>Listing Notice 2, Item 7</u> <i>"The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods—: (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1000 metres in length, with a throughput capacity of more than 50 cubic metres per day."</i></p>	<p>The proposed development will entail the construction of a Fuel Based Generation Facility as well as the permanent storage of dangerous goods (diesel/hydrocarbon equivalent). The fuel will be transported via pipelines within the FBGF which will have a combined length in excess of 1000m and at a worst-case scenario will have a throughout capacity of 50 cubic meters per day.</p>
<p><u>Listing Notice 2, Item 15</u> <i>"The clearance of an area of 20 hectares or more of indigenous vegetation"</i></p>	<p>The proposed development will involve the clearance of more than 20ha of indigenous vegetation. Clearance will also be required for the proposed on-site substation, fuel generator, internal access roads and other associated infrastructure.</p>
<p><u>Listing Notice 3, Item 4</u> <i>"The development of a road wider than 4 metres with a reserve less than 13,5 metres. i. Western Cape ii. Areas outside urban areas: (aa) Areas containing indigenous vegetation."</i></p>	<p>New internal roads will be constructed between some of the PV arrays, Battery Energy Storage System, Fuel Based Generation Facility, Construction Camp and substation, to facilitate access throughout the facility. It is proposed that these internal access roads will be between approximately 4m and 8m wide. Existing roads will be used wherever possible, although new roads will be constructed where</p>

	<p>necessary. These roads will occur within the Western Cape Province, outside urban areas. In addition, the proposed development site contains indigenous vegetation. A Terrestrial Ecology Impact Assessment has been undertaken to assess the impacts of the proposed development on the indigenous vegetation. A Transport Impact Assessment has been undertaken to assess the impacts of the proposed development on the transport network.</p>
<p><u>Listing Notice 3, Item 18</u> <i>"The widening of a road by more than 4 meters, or the lengthening of a road by more than 1 kilometre</i> i. Western Cape <i>ii. All areas outside urban areas:</i> <i>(aa) Areas containing indigenous vegetation."</i></p>	<p>New internal roads will be constructed between some of the photovoltaic PV arrays, Battery Energy Storage System, Fuel Base Generation Facility, construction Camp and substation, in order to facilitate access throughout the facility. It is proposed that these internal access roads will be between approximately 4m and 8m wide. The footprint of these is included in the overall PV array, BESS and FBGF. Existing roads will be used wherever possible, although new roads will be constructed where necessary. In addition, during construction, minor road strengthening will take place within the road reserves of the existing public road network. Existing access roads will thus need to be upgraded as part of the proposed development. Access roads will be widened by more than 4m or lengthened by more than 1km. These roads will occur within the Western Cape Province, outside an urban area. In addition, this widening of the roads will occur within areas containing indigenous vegetation and will also occur within and/or within 100m from the edge of a surface water feature/water course. A Terrestrial Ecology Impact Assessment has been undertaken to assess the impacts of the proposed development on the</p>

	indigenous vegetation. The results of the Terrestrial Ecology Impact Assessment found that there are some sensitivities on site related to natural habitat and to individual species, but that these can be minimised or avoided with the application of appropriate mitigation or management measures.
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as described in the Environmental Impact Assessment Report (EIAR) dated 24 February 2021 at:

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Oya Energy Facility (preferred site)	Latitude	Longitude
1	32° 52' 11.464"S	20° 12' 21.280"E
2	32° 54' 28.981"S	20° 13' 34.753"E
3	32° 54' 34.507"S	20° 12' 20.205"E
4	32° 55' 13.194"S	20° 12' 15.385"E
5	32° 56' 3.895"S	20° 12' 26.330"E
6	32° 56' 12.929"S	20° 11' 16.988"E
7	32° 55' 38.363"S	20° 9' 20.611"E
8	32° 54' 56.533"S	20° 9' 15.790"E
9	32° 54' 45.536"S	20° 8' 55.471"E
10	32° 54' 18.000"S	20° 9' 11.192"E
11	32° 54' 13.557"S	20° 9' 23.325"E
12	32° 53' 59.701"S	20° 9' 41.082"E
13	32° 53' 54.356"S	20° 9' 40.992"E

DEVELOPMENT AREA	Latitude	Longitude
CENTRE	32° 54' 19.908"S	20° 11' 56.502"E

PREFERRED O&M AND ON-SITE SUBSTATION SITE ALTERNATIVE	Latitude	Longitude
CENTRE	32° 54' 24.448"S	20° 12' 28.565"E

PREFERRED O&M AND ON-SITE SUBSTATION SITE ALTERNATIVE	Latitude	Longitude
SUB3_01	32° 54' 20.126" S	20° 12' 26.732" E
SUB3_02	32° 54' 22.902" S	20° 12' 33.689" E
SUB3_03	32° 54' 28.770" S	20° 12' 30.399" E
SUB3_04	32° 54' 25.995" S	20° 12' 23.441" E

PREFERRED BATTERY ENERGY STORAGE SYSTEM (BESS) SITE ALTERNATIVE	Latitude	Longitude
CENTRE	32° 54' 16.240"S	20° 12' 34.303"E

PREFERRED BATTERY ENERGY STORAGE SYSTEM (BESS) SITE ALTERNATIVE	Latitude	Longitude
BESS3_01	32° 54' 10.291"S	20° 12' 33.151"E
BESS3_02	32° 54' 11.086"S	20° 12' 35.820"E
BESS3_03	32° 54' 11.015"S	20° 12' 40.949"E
BESS3_04	32° 54' 17.421"S	20° 12' 38.164"E
BESS3_05	32° 54' 22.760"S	20° 12' 35.002"E
BESS3_06	32° 54' 19.842"S	20° 12' 27.587"E

PREFERRED CONSTRUCTION CAMP AND LAYDOWN AREA SITE ALTERNATIVE	Latitude	Longitude
CENTRE	32° 54' 4.574"S	20° 12' 41.341"E

PREFERRED CONSTRUCTION CAMP AND LAYDOWN AREA SITE ALTERNATIVE	Latitude	Longitude
CC6_01	32° 53' 58.237"S	20° 12' 41.799"E
CC6_02	32° 54' 2.479"S	20° 12' 46.746"E
CC6_03	32° 54' 10.904"S	20° 12' 40.970"E
CC6_04	32° 54' 6.627"S	20° 12' 35.896"E

PREFERRED FUEL-BASED GENERATOR FACILITY (FBGF) ALTERNATIVE	Latitude	Longitude
CENTRE	32° 54' 17.591"S	20° 12' 30.840"E

PREFERRED FUEL-BASED GENERATOR FACILITY (FBGF) ALTERNATIVE	Latitude	Longitude
DG2_01	32° 54' 14.032"S	20° 12' 30.893"E
DG2_02	32° 54' 15.264"S	20° 12' 34.033"E
DG2_03	32° 54' 21.150"S	20° 12' 30.787"E
DG2_04	32° 54' 19.918"S	20° 12' 27.647"E

- for the development of the 301MW Oya Energy Facility and associated infrastructure near Matjiesfontein within Witzenberg Local Municipality in the Western Cape Province, hereafter referred to as "the property".

The facility will comprise the following:

Solar Photovoltaic (PV) arrays:

- The proposed facility will include PV fields (arrays) comprising multiple PV modules. The PV modules are arranged in rows and columns, some of which may require levelling of the terrain and associated slope stabilisation measures.
- Each PV module will be approximately 2.5m long and 1.2m wide and mounted on supporting structures above ground. At this stage it is anticipated that the structures will be primarily north-south facing tracking the sun east-west; and monofacial, single axis tracking.
- The foundations will most likely be either concrete or rammed piles. The final foundation design will be subject to detailed design work.
- During pre-development, a pyranometer or similar may be placed at the development area which will not need vegetation clearance. This unit will calculate and record: wind, solar radiation, temperature, rainfall and all-weather data requirements for the facility.
- During operation there will be an operations and maintenance building which will be placed in the same footprint as either the construction camp or the substation and it will be used to house the people that will be on site during working hours as well as those monitoring the facility.

On-site 33/132kV substation and BESS:

- The proposed development will include the construction of one (1) new on-site substation with a voltage capacity of 33/132kV and occupying an area of up to approximately 4ha. It should be noted that the 33kV yard portion of the substation which will be owned by the applicant will occupy an area of up to approximately 2ha. The on-site substation will contain transformer(s) for voltage step-up from medium voltage to high voltage. Direct Current (DC) power from the modules will be converted into Alternating Current (AC) power in the inverters and the voltage will be stepped up to medium voltage in the inverter transformers. Medium voltage cabling will link the various PV arrays to an on-site substation. These cables will be laid underground, wherever technically feasible.
- A BESS will be located next to the on-site 33/132kV substation, or in between the PV arrays. The BESS would cover an area of up to approximately 7.8ha. The storage capacity of the BESS will be up to 70MW and the type of technology will be **Lithium ion**. It must be noted that the batteries to be used in the BESS are already assembled prior to delivery and come as 'plug and play' modular units. As such, these batteries are not considered hazardous goods as they will be storing 'energy'.
- Medium voltage cabling will link the proposed facility to the grid connection infrastructure (namely the on-site substation). Cables will be buried along access roads, where feasible, with overhead 33kV lines grouping PV panels to crossing valleys and ridges outside of the road footprints to get to the substation.
- Temporary construction laydown area to house construction equipment, components, offices and material. The construction laydown area will be up to approximately 6.4ha in extent. Limited extent permanent construction laydown area(s) may be required.

Up to 106MW FBGF, comprising of:

- Up to a maximum 37 dual-fuel capable reciprocating generators ("gensets"), approximately 7m x 3m x 3m each. It should be noted that the fuel-based generators operate on diesel/similar hydrocarbon that are not in gaseous form.
- The fuel-based generator will cover an area of approximately 1.8ha.
- The fuel-based turbines/gensets are modular components that are pre-assembled and come as 'plug and play' units.
- The fuel-based turbines/gensets will be located inside a building (either 1 building or multiple buildings) or containers.
- A maximum of ten (10) permanent fuel storage tanks with a maximum combined capacity of less than 1000m³ will also be required. The individual tank sizes will range from less than or equal to (\leq) 100m³, 250m³ or 500m³ for the permanent storage of diesel / similar hydrocarbons that is not in gaseous form. The tanks will be placed above-ground.

- Generators will be cooled using a water and ethylene glycol mixture.

Associated abatement equipment to reduce emissions, manage fumes and for monitoring purposes once the plant is operational:

- Multiple Continuous Emissions Monitoring Systems (CEMS), 1 installed per stack;
- Multiple Stacks for capturing emissions and multiple scrubbers; and
- Operation and Maintenance (O&M) buildings for use during the operational phase. The O&M building will be used throughout the operational phase of the facility and will be a single-storey building, included in the footprint of the substation (namely within the 4ha footprint).

Temporary infrastructure:

- To obtain water from available local sources. New or existing boreholes, including a potential temporary above ground pipeline (approximately 50cm in diameter), to feed water to the on-site batching plant are being proposed. Water will potentially be stored in temporary water storage tanks.
- Temporary containers of approximately 80m³ for the storage of fuel on site during the construction phase.

Access roads:

- The existing gravel road, linked to the R356, is the only access road to the proposed facility as it is an existing road and allows direct access to the site.
- During construction, the facility would be accessed via the above-mentioned existing gravel road which has been upgraded and is currently used as an access route to renewable energy facilities on neighbouring properties. Minor road strengthening will take place within the existing road reserves.
- New roads will be wider than 8m (with additional yet associated servitudes/reserves for above or below ground cable installation and maintenance) would be constructed between some of the PV arrays to facilitate access throughout the facility. The footprint of these are included in the overall PV array.

Fencing and lighting for safety:

- Fencing will surround the entire facility (for security purposes) and will be approximately 2m high.

Technical details of the Facility:

Component	Description/ Dimensions
Farm name and Area	Remainder of the Farm Baakens Rivier No. 155 Application Site = approximately 2 942ha
Development area	Approximately 2 321ha
Total Generation Capacity	Maximum of up to 301MW
Generation Capacity of Solar PV Component	Maximum of up to 155MW
Generation Capacity of FBGF	Maximum of up to 106MW
Capacity of On-site Substation	33/132kV
Voltage of Electricity to be processed at On-site Substation (i.e. capacity of on-site substation)	On-site substation will consist of a 33kV yard which will be owned and operated by the Applicant as well as a 132kV yard which will be owned and operated by Eskom. The 132kV yard has been included in the application with DFFE Ref No.: 14/12/16/3/3/1/2265, which was submitted to the DFFE for decision making on 15 January 2021.
PV Panels / Modules Dimensions	<ul style="list-style-type: none"> • Width: up to approximately 1.2m; • Length: up to approximately 2.5m; and • Height: between approximately 1m and 4m.
Area of PV Arrays	Approximately 285ha (full development area is 353ha in extent, including all infrastructure and internal roads)
Number of inverters required	43 (3MW inverters)
Area occupied by inverter / transformer stations	The PV inverters will be located within the overall PV array area (i.e. within 353ha area).
Internal Access Roads (width & length)	<ul style="list-style-type: none"> • Internal access roads will be approximately 4m and 8m (with additional yet associated servitudes/reserves for above or below ground cable installation and maintenance); • Existing site roads will be used wherever possible, although new site roads will be constructed where necessary; • Footprint of internal access roads is included in the overall PV array area; and

	<ul style="list-style-type: none"> • Internal access roads are incorporated in the PV development area (namely within the 353ha development area)
Site Access	<ul style="list-style-type: none"> • The existing gravel road, linked to the R356, is the preferred access road to the to the proposed facility as it is an existing road and allows direct access to the site; and • Minor road strengthening will take place within the existing road reserves.
On-site Substation	<ul style="list-style-type: none"> • One (1) new 33/132kV on-site substation; • Total footprint: up to approximately 4ha. The 33kV yard portion of the substation which will be owned by the Applicant will occupy an area of up to approximately 2ha.
Battery Energy Storage Systems (BESS)	<ul style="list-style-type: none"> • One (1) BESS with total footprint of up to approximately 7.8ha; • Storage capacity of up to approximately 70MW; • Type of technology will be Lithium Ion; and • Batteries to be used in BESS are already assembled prior to delivery and come as 'plug and play' modular units. As such, these batteries are not considered hazardous goods as they will be storing 'energy'
Fuel-Based Generator Facility (FBGF)	<ul style="list-style-type: none"> • Up to 106MW FBGF occupying an area of up to approximately 1.8ha; • Up to a maximum of 37 dual-fuel capable reciprocating Generators ("gensets"), approximately 7m x 3m x 3m each; • Fuel-based generators operate on diesel / similar hydrocarbon that are not in gaseous form; • Fuel-based turbines are modular components that are pre-assembled and come as 'plug and play' units; • Fuel-based turbines will be located inside a building (either 1 building or multiple buildings) or containers;

	<ul style="list-style-type: none"> • Maximum of ten (10) permanent above-ground fuel storage tanks with a maximum combined capacity of less than 1 000m³; and • Individual tank sizes will range from less than or equal to (\leq)100m³, 250m³ or 500m³ for permanent storage of diesel / similar hydrocarbons that is not in gaseous form.
Associated Abatement Equipment	<p>Associated Abatement Equipment to reduce emissions, manage fumes and for monitoring purposes once facility is operational:</p> <ul style="list-style-type: none"> • Multiple Continuous Emissions Monitoring Systems (CEMS) (1 installed per stack); • Multiple Stacks for capturing emissions and Multiple scrubbers
Temporary Construction Laydown Area	<ul style="list-style-type: none"> • One (1) temporary construction laydown area to house construction equipment, components, offices and material; • Total footprint: up to approx. 6.4ha; and • Limited extent permanent construction laydown area(s) may be required.
Operation and Maintenance (O&M) Building	<p>One (1) single-storey Operations and Maintenance (O&M) building for use throughout operational phase of facility.</p>
Area occupied by buildings	<p>Up to approximately 13.6ha (excluding temporary construction laydown area)</p>
Proximity to grid connection	<p>An on-site overhead power line with a voltage capacity of 132kV will run from the on-site substation to the national grid. Although the on-site 33/132kV substation (more specifically the 33kV yard) forms part of this application, the 132kV overhead power line being proposed to feed the electricity generated by the facility into the national grid will require a separate EA and was subject to a separate Basic Assessment (BA) process (DEFF Ref No.: 14/12/16/3/3/1/2265).</p>

Fencing	<ul style="list-style-type: none">• Galvanised steel fencing of up to approximately 2m high; and• Fencing will surround the entire facility for security purposes and be in line with Civil Aviation Authority.
Boreholes and storage tanks	<ul style="list-style-type: none">• Water will be sourced from available local sources;• New or existing boreholes, including a potential temporary above ground pipeline (approximately 50cm in diameter), to feed water to the on-site batching plant;• Water will potentially be stored in temporary water storage tanks;• The necessary approvals from the Department of Human Settlement, Water and Sanitation will be applied for separately (should this be required); and• Temporary containers of approximately 80m³ will be required for the storage of diesel on-site during the construction phase.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The proposed development of the 301MW Oya Energy Facility and associated infrastructure near Matjiesfontein in ward 12 of the Witzenberg Local Municipality in the Western Cape Province is approved as per the geographic coordinates cited in the table above.
2. Authorisation of the activity is subject to the conditions contained in this Environmental Authorisation, which form part of the Environmental Authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this Environmental Authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this Environmental Authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further Environmental Authorisation in terms of the regulations.
6. The holder of an Environmental Authorisation must apply for an amendment of the Environmental Authorisation with the Competent Authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. This activity must commence within a period of ten (10) years from the date of issue of this Environmental Authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for Environmental Authorisation must be made in order for the activity to be undertaken.
8. Construction must be completed within five (05) years of the commencement of the activity on site.

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this Environmental Authorisation, of the decision to authorise the activity.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons of the Competent Authority for the decision.

Commencement of the activity

11. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014, and no appeal has been lodged against the decision. In terms of Section 43(7), an appeal under Section 43 of the National Environmental Management Act, Act No. 107 of 1998, as amended will suspend the Environmental Authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

Management of the activity

12. A copy of the final site layout map must be made available for comments to the registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval prior to commencement of the activity. All available information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:
 - 12.1. The position of the solar PV panels;
 - 12.2. All associated infrastructure;

- 12.3. All sensitive features i.e. graves, stone kraals, archaeological sites, watercourses, buffer zones, etc.;
- 12.4. All “no-go” and buffer areas.
13. The Environmental Management Programme (EMPr) submitted as part of the EIAr is not approved and must be amended to include measures as dictated by the Lithium Ion BESS and the final site lay-out map. The EMPr must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.
14. The amended EMPr must include the final layout map.
15. The EMPr must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
16. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
17. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAr be discovered.

Frequency and process of updating the EMPr

18. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 28 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
19. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
20. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of the EIA Regulations, 2014 as amended. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
21. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of the EIA Regulations, 2014 as amended. Prior to approving an amended EMPr, the Department may request such amendments to the

EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.

22. The holder of the authorisation must apply for an amendment of an EMPr, if such amendment is required before an audit is required. The amendment process is prescribed in Regulation 37 of the EIA Regulations, 2014, as amended. The holder of the authorisation must request comments on the proposed amendments to the impact management outcomes of the EMPr or amendments to the closure objectives of the closure plan from potentially interested and affected parties, including the competent authority, by using any of the methods provided for in the Act for a period of at least 30 days.

Monitoring

23. The holder of the authorisation must appoint an experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
 - 23.1. The ECO must be appointed before commencement of any authorised activities.
 - 23.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
 - 23.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 23.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

24. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department.
25. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.

26. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of the EIA Regulations, 2014 as amended.
27. The holder of the authorisation must, in addition, submit environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
28. The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 as amended and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
29. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Notification to authorities

30. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.

Operation of the activity

31. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

32. Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and Competent Authority at that time.

Specific conditions

33. No activities will be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Human Settlement, Water and Sanitation.
34. The footprint of the development must be limited to the areas required for actual construction works and operational activities.
35. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of protected or endangered plant or animal species.
36. No exotic plants must be used for rehabilitation purposes. Only indigenous plants of the area must be utilised.
37. Hazardous substances must be stored in a bunded and designated area to avoid accidental leakage into the environment.
38. The washing of panels during maintenance must be done with biodegradable soaps to avoid soil contamination and poisoning of small animals.
39. Should archaeological sites or graves be exposed in other areas during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.
40. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste must be disposed of at a landfill licensed in terms of Section 20 (b) of the National Environment Management Waste Act, 2008 (Act No.59 of 2008).

General

41. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
 - 41.1. at the site of the authorised activity;
 - 41.2. to anyone on request; and
 - 41.3. where the holder of the Environmental Authorisation has a website, on such publicly accessible website.
42. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where

construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of Environmental Authorisation: 29/04/2021



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
Department of Forestry, Fisheries and the Environment

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration –

- a) The listed activities as applied for in the application form received on 09 October 2020 and a letter requesting an increase of the storage capacity of BESS received on 12 April 2021 as well as the emails dated 20 and 21 April 2021.
- b) The information contained in the final EIAr dated 24 February 2021.
- c) The comments received from interested and affected parties as included in the EIAr dated 24 February 2021.
- d) Mitigation measures as proposed in the EIAr and the EMPr.
- e) The information contained in the specialist studies contained within the appendices of the EIAr dated 24 February 2021.

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the provision of electricity to the national grid.
- c) The EIAr dated 24 February 2021 identified all legislations and guidelines that have been considered in the preparation of the EIAr.
- d) The location of the proposed wind energy facility.
- e) The methodology used in assessing the potential impacts identified in the EIAr dated 24 February 2021 and the specialist studies have been adequately indicated.
- f) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 as amended for public involvement.

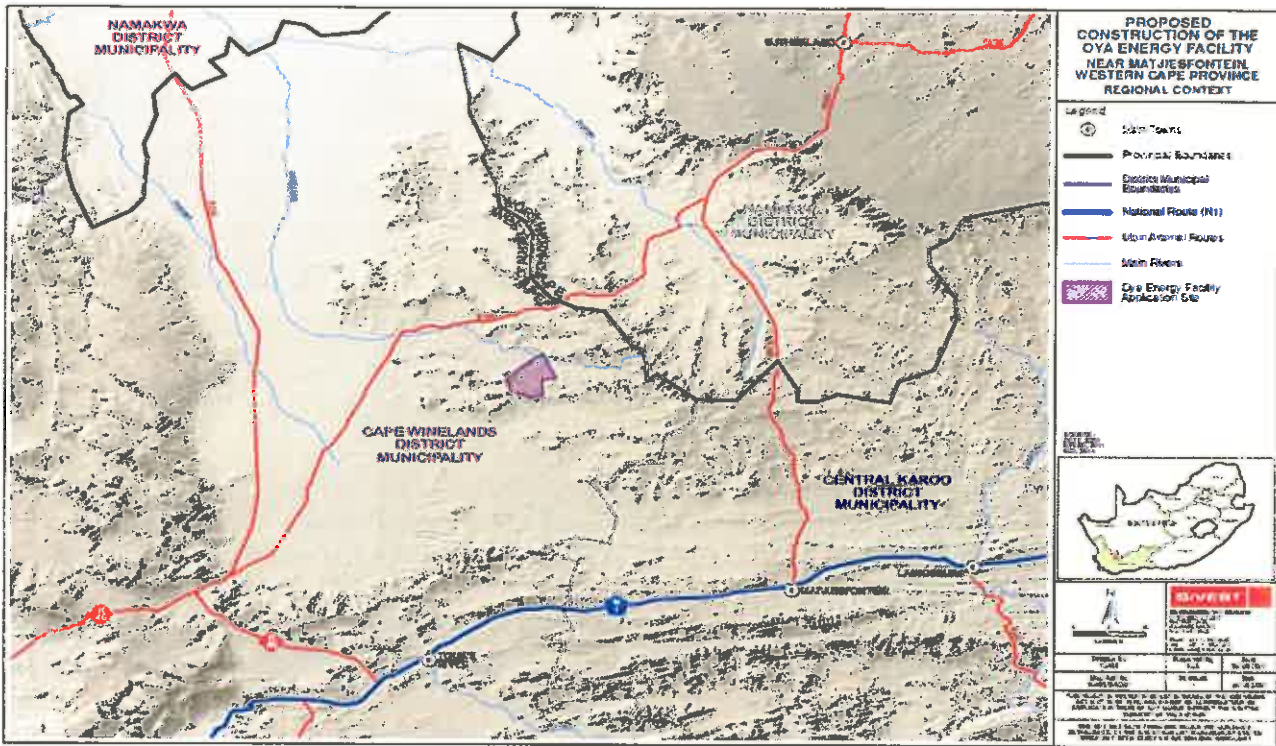
3. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the EIAr dated 24 February 2021 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The information contained in the EIAr dated 24 February 2021.
- d) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIAr and will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.

Annexure 2: Locality map



Layout plan

