

ARCELORMITTAL SOUTH AFRICA
VANDERBIJLPARK SOLAR CLUSTER ENERGY
FACILITY AND ASSOCIATED
INFRASTRUCTURE

Gauteng Province

Social Scoping Study

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REPORT DETAILS

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ACRONYMS

DM	District Municipality
DME	Department of Mineral and Energy
DoE	Department of Energy
DoJ	Department of Justice
DM	District Municipality
EEDSM	Energy efficiency demand-side management
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GNR	Government Notice
IDP	Integrated Development Plan
IFC	International Finance co
IRP	Integrated Resource Plan
km	Kilometre
kV	Kilovolt
LED	Local Economic Development
ELM	Emfuleni Local Municipality
NEMA	National Environmental Management Act (No. 107 of 1998)
NDP	National Development Plan
PSDF	Provincial Spatial Development Framework
RBS	Revised Balanced Scenarios
REIPPP	Renewable Independent Power Producer Programme
SDF	Spatial Development Framework
SIA	Social Impact Assessment
SP	Significance Points
SDM	Sedibeng District Municipality

1. INTRODUCTION

Savannah Environmental (Pty) Ltd has been appointed by ArcelorMittal South Africa as the lead consultants to undertake and manage the Environmental Impact Assessment (EIA) process for the development of the proposed ArcelorMittal South Africa Vanderbijlpark Solar Cluster Energy facility and associated infrastructure (hereafter referred to as “the Project”). The proposed development is located on a site ~5 km to the north of the town of Vanderbijlpark, within the Emfuleni Local Municipality within the Sedibeng District Municipality, Gauteng Province (refer to Figure 1-1).

Molatela Ledwaba of Savannah Environmental (Pty) Ltd is the independent social consultant responsible for undertaking a Social Impact Assessment (SIA) and compiling the report as part of the EIA process being conducted for the project.

1.1 Study Objective

The purpose of this Scoping Study is to examine all relevant factors in order to provide unbiased assessment of the potential social impact of the proposed construction and operation of the Project. The report presents the potential prospects and constraints identified through the scoping study that would potentially arise as a result of the implementation of the project.

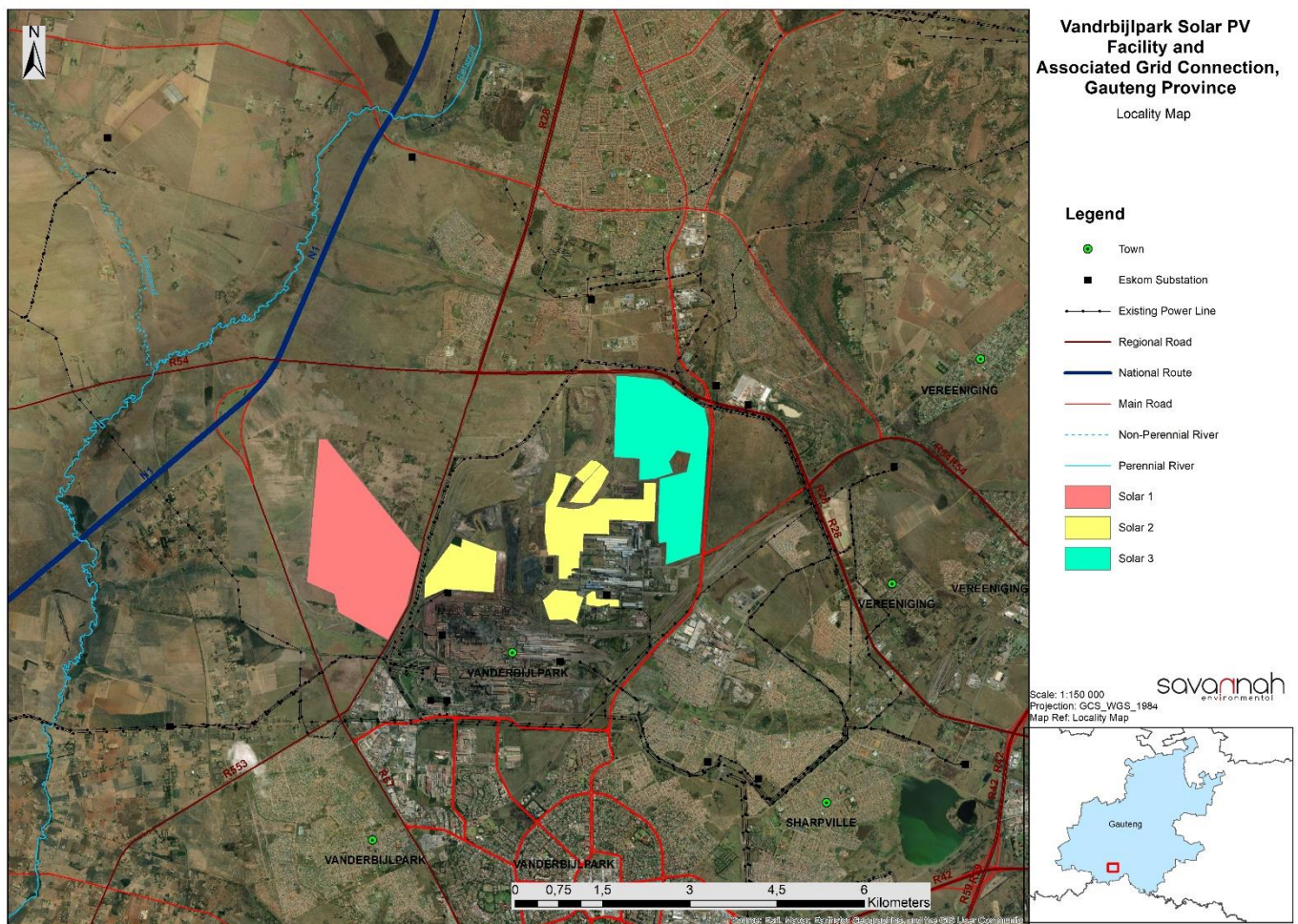


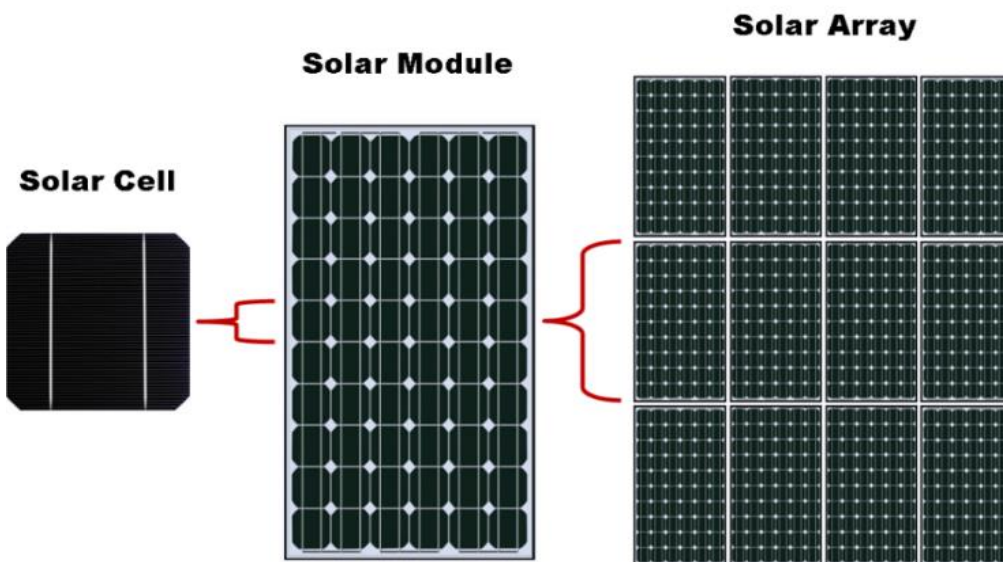
Figure 1-1 Locality map illustrating the location of the ArcelorMittal South Africa Solar Cluster Energy Facility, Gauteng Province

1.2 Project Description

The proposed development is located on the following farm portions on Portion 1 of farm Vanderbijlpark 550IQ. The facility development area of ~255ha has been considered in the scoping phase and will have a capacity between 270MWac. The Project will include specific infrastructure, namely:

- » Solar PV array, with branch strings, comprising PV panels and mounting structures.
- » Inverters and transformers.
- » Cabling between project components.
- » A battery energy storage system (BESS) with the footprint of 4.6ha.
- » AMSA Vanderbijlpark Solar Cluster will connect to on-site Transformers in the existing substation bay to facilitate the connection between the Solar PV Energy Facility with a footprint of 648 ha for AMSA Vanderbijlpark.
- » Storage area of 4.6ha.
- » 132kV power line from the PV Site for the distribution of the generated power, which will be connected to the existing substation.
- » Temporary laydown areas and a construction yard.
- » Access road (gravel), internal gravel roads, firebreaks (4m width) and fencing around the PV Site.
- » An O & M building, which will include a site security office, control areas, standard single storey height or warehouse not exceeding 8.6m.

To avoid areas of potential sensitivity and to ensure that potential detrimental environmental impacts are minimised as far as possible, the developer will identify a suitable development footprint within which the infrastructure of ArcelorMittal South Africa Vanderbijlpark Solar Cluster Energy facility and its associated infrastructure is proposed to be located and fully assessed during the EIA Phase.



Photograph 1-1 Typical Photovoltaic Cell, module and array

1.3 Details of the Independent Specialist

This SIA Report has been undertaken by Molatela Ledwaba of Savannah Environmental. Tony Barbour has undertaken an external review of this SIA and has provided an external reviewer's letter. This letter is attached as **Appendix C**.

- » **Molafela Ledwaba** – holds a BA honours in environmental Management and has 13 years of experience. Her key focus is on Socio-Economic Baselines, Social Impact Assessment, public participation, stakeholder engagement, project coordination and production of maps using QGIS and ArcGIS.
- » **Tony Barbour** - is a social specialist who has undertaken in the region of 230 SIA's, including approximately 100 SIA's for a renewable energy projects, including wind and solar energy facilities. All of the SIAs have included as assessment of socio-economic issues. In addition, he is the author of the Guidelines for undertaking SIA's as part of the EIA process commissioned by the Western Cape Provincial Environmental Authorities in 2007. These guidelines have been used throughout South Africa. Tony has also undertaken a number of SIAs for PV facilities within the Northern Cape Province and is therefore familiar with the local socio-economic conditions.

1.4 Structure of the SIA Scoping Report

This SIA scoping report is divided into five (5) main sections:

- » Section 1: Introduction and Project Description
- » Section 2: Approach to Study and Methodology
- » Section 3: Related Policy and Planning Documents
- » Section 4: Overview of Study area
- » Section 5: Identification of key issues and
- » Section 6: Summary of Key findings

This SIA Scoping Report has been prepared in accordance with the requirements of Appendix 6 of the 2014 EIA Regulations, as amended. An overview of the contents of this SIA Scoping Report, as prescribed by Appendix 6 of the 2014 EIA Regulations (GNR 326), and where the corresponding information can be found within the report is provided in **Table 1-1**

Table 1-1: Specialist report requirements

Requirement	Location in Report
(a) Details of – (i) The specialist who prepared the report. (ii) The expertise of that specialist to compile a specialist report including a curriculum vitae.	Section 1
(b) A declaration that the specialist is independent in a form as may be specified by the competent authority.	Specialist Declaration of Interest
(c) An indication of the scope of, and the purpose for which, the report was prepared.	Section 1
(cA) An indication of the quality and age of base data used for the specialist report.	Section Error! Reference source not found.
(cB) A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change.	Section 5
(d) The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment.	Section 2
(e) A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used.	Section 2

Requirement		Location in Report
(f)	Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternative.	To be provided during EIA Phase
(g)	An identification of any areas to be avoided, including buffers.	N/A
(h)	A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	N/A
(i)	A description of any assumptions made and any uncertainties or gaps in knowledge.	Section
(j)	A description of the findings and potential implications of such findings on the impact of the proposed activity or activities.	Section 6
(k)	Any mitigation measures for inclusion in the EMPr.	To be provided during EIA Phase
(l)	A description of any consultation process that was undertaken during the course of preparing the specialist report.	Section
(m)	A summary and copies of any comments received during any consultation process and where applicable all responses thereto.	To be undertaken during EIA Phase
(n)	Any other information requested by the competent authority.	N/A
2.	Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	N/A

2. METHODOLOGY

This scoping of the proposed ArcelorMittal South Africa Solar Cluster Energy facility was largely a desktop study that relied on existing and available data. Data was collected by means of the following techniques.

2.1 Data Collection

The specialist conducted secondary desktop data collection (desktop review) to understand the socioeconomic baseline conditions of the project-affected areas and socio-economic implications of the proposed project to the receiving environment. These two methods are elaborated further in the following sections.

2.1.1 Desktop review

The specialist reviewed available documents to obtain information regarding the socio-economic conditions in the study area. The documents reviewed include the following:

- » Documents pertaining to the proposed project, including the project description document.
- » IDPs and Spatial Development Framework of the affected local and district municipalities
- » The review of demographic and Socio-economic statistics from the 2011 Census Survey and relevant data as received from the identified municipalities.
- » The review of relevant planning and policy framework for the proposed area of intervention.
- » A review of information from similar projects.
- » Identification and description of social impacts, which can be associated with the proposed project.
- » The formulation of key findings and recommendations based on the collected data for the proposed project.

2.1.2 Limitations and Assumption

This section of the report briefly describes the assumption and limitations for this SIA Scoping Study.

Limitations

The one limitation identified for this SIA is the use and availability of demographic data. Data derived from the 2011 Census, documents from Sedibeng District Municipality and Emfuleni Local municipality were used to generate most of the information in the baseline profile of the study area. Dated data was treated with care and have been updated with 2016 community survey data where needed.

Assumption

The first assumption is that it is strategically important to promote renewable energy sources like solar energy. This is supported by the National and Provincial policies discussed in Section 3 of this report. Additionally, a crucial part of the SIA process is determining how well the development fits with key planning and policy documents to detect and evaluate any potential social impacts. The planned development cannot be supported if the findings of this review show that it does not adhere to the relevant policy documents. The proposed study does, however, acknowledge the strategic value of supporting solar energy, as was already mentioned.

3. RELATED POLICY AND PLANNING DOCUMENTS

This Section of the report provides an overview of the related policy and planning documents affecting the proposed ArcelorMittal South Africa Cluster Energy Facility. The overview of these documents includes policy and planning documents on National, Provisional, District and Local level. The following policy and planning documents were reviewed to meet the objectives on this SIA report.

3.1 National Level

- » Constitution of the Republic of South Africa, 1996
- » White Paper on the Energy Policy of the Republic of South Africa (1998)
- » White Paper on Renewable energy of 2003
- » National Development Plan (NDP) 2030
- » National Energy Act (No. 34 of 2008)
- » Integrated Resource Planning for South Africa of 2010-2030

3.2 Provincial Level

- » Gauteng Spatial Development Framework (GSDF).
- » Gauteng 2055 Development Vision.

3.3 District Level

- » Sedibeng District Municipality Final Integrated Development Plan - Framework for 2021 – 2022.

3.4 Local Level

- » Emfuleni Local Municipality Integrated Development Plan Review for 2018 – 2019.
- » Emfuleni Local Municipality Spatial Development Framework Review Document- Section A for 2019

Table 3-1 Relevant legislation and policies for the proposed ArcelorMittal South Africa Solar Energy Facility

Relevant legislation or policy	Relevance to the proposed project
Constitution of the Republic of South Africa, 1996	Section 24 of the Constitution pertains specifically to the environment. It states that Everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. The Constitution outlines the need to promote social and economic development. Section 24 of the Constitution therefore requires that development be conducted in such a manner that it does not infringe on an individual's environmental rights, health, or well-being. This is especially significant for previously disadvantaged individuals who are most at risk to environmental impacts.
White Paper on the Energy Policy of the Republic of South Africa of 1998	The White Paper on the Energy Policy of the Republic of South Africa of 1998 (further referred to as the White Paper) provides an overview of the South African energy sector's contribution to the country's economic sector. The White paper states that the South African Energy systems can greatly contribute to a successful development strategy and a more sustainable

Relevant legislation or policy	Relevance to the proposed project
	<p>national growth. Therefore, this White Paper supports investment initiatives in renewable energy. Globally there has been rapid development in renewable energy technologies, due to its many advantages, including cost-effectiveness. However, in South Africa the development and the implementation hereof have been neglected. According to the White Paper approximately 10% of South Africa's primary energy resources are provided through renewable energy resources. The advantages of renewable energy applications include: the impact on the environment is kept to the minimum, more cost-effective than traditional supply technologies and higher labour intensities</p> <p>The disadvantages of the renewable energy applications include: higher capital costs, lower densities and level of availability (depending on specific environmental systems like the sun and wind). Despite these disadvantages, renewable energy resources still operate from an unlimited resource base, meaning that another major advantage is that renewable energy is a more sustainable energy resource on the long-term.</p> <p>South Africa consists of very attractive renewable energy resources, including solar. This statement according to the White Paper guides the development of South Africa's renewable energy policy. The Government policy according to the White Paper (1998:79) is still concerned with meeting the following challenges:</p> <ul style="list-style-type: none"> » To ensure that the technologies and applications which are being implemented are economically feasible. » To ensure that an equitable level of national resources is invested in these renewable energy technologies; and » To address the constraints experienced on the development of the renewable energy industry. <p>Despite the Government policy's concerns, the policy still recognise renewable energy sources as unlimited resource bases with potential sustainability for the long-term. The Government stated also its support by stating in the White Paper on the Energy Policy of the Republic of South Africa of 1998 (1998:80) that the "Government will provide focused support for the development, demonstration and implementation of renewable energy sources for both small and large-scale applications".</p>
<p>White Paper on Renewable Energy of 2003</p>	<p>The White Paper on Renewable Energy of 2003 (further referred to as the White Paper) sets out the Government's vision, goals, objectives, policies and principles with regards to promoting and implementing renewable energy in South Africa. This Paper can be considered as a supplement paper to the White Paper on Energy Policy of 1998, which recognised the significant potential of renewable energy over medium- and long-term periods. The White paper has two overarching goals, namely to inform the public and Government agencies, including the Organs of the State, and the international community, of the Government's goals and the manner in which the Government plan to achieve these goals.</p> <p>The Paper states that the Government recognised the emission of greenhouse gasses and the effect of climate change globally. For this reason, the Government committed in reducing the greenhouse gas footprint of South Africa. According to the White Paper the Government's vision for renewable energy is "an energy economy in which modern renewable energy increases its share of energy consumed and provides affordable access to energy throughout South Africa, thus contributing to sustainable development and environmental conservation."</p>

Relevant legislation or policy	Relevance to the proposed project
	<p>Besides referring to other technologies of renewable energy, this paper specifically refers to the potential of solar resources for solar water heating applications, solar photovoltaic and solar thermal power generation in South Africa, directly relating to the proposed ArcelorMittal South Africa Cluster Energy Facility</p>
<p>National Development Plan 2030</p>	<p>The National Development Plan (NDP) 2030 is a plan prepared by the National Planning Commission in consultation with the South African public which is aimed at eliminating poverty and reducing inequality by 2030.</p> <p>In terms of the Energy Sector's role in empowering South Africa, the NDP envisages that, by 2030, South Africa will have an energy sector that promotes:</p> <ul style="list-style-type: none"> » Economic growth and development through adequate investment in energy infrastructure. The sector should provide reliable and efficient energy service at competitive rates, while supporting economic growth through job creation. » Social equity through expanded access to energy at affordable tariffs and through targeted, sustainable subsidies for needy households. » Environmental sustainability through efforts to reduce pollution and mitigate the effects of climate change. <p>The NDP aims to provide a supportive environment for growth and development, while promoting a more labour-absorbing economy.</p>
<p>National Energy Act (No.34 of 2008)</p>	<p>The purpose of the National Energy Act (No. 34 of 2008) is to ensure that diverse energy resources are available, in sustainable quantities and at affordable prices, to the South African economy in support of economic growth and poverty alleviation, while taking environmental management requirements into account. In addition, the Act also provides for energy planning, and increased generation and consumption of Renewable Energies (REs). The objectives of the Act, are to amongst other things, to:</p> <ul style="list-style-type: none"> » Ensure uninterrupted supply of energy to the Republic. » Promote diversity of supply of energy and its sources. » Facilitate energy access for improvement of the quality of life of the people of the Republic. » Contribute to the sustainable development of South Africa's economy. <p>The National Energy Act therefore recognises the significant role which electricity plays growing the economy while improving citizens' quality of life. The Act provides the legal framework which supports the development of RE facilities for the greater environmental and social good and provides the backdrop against which South Africa's strategic planning regarding future electricity provision and supply takes place. It also provides the legal framework which supports the development of RE facilities for the greater environmental and social good.</p>
<p>Integrated Resource Planning for Electricity - South Africa of 2010-2030</p>	<p>The Integrated Resource Plan for Electricity for South Africa of 2010-2030 (further referred to as the IRP) is a "living plan" which is expected to be revised and updated continuously as necessary due to changing circumstances. According to the Summary of the plan the current IRP for South Africa, which was originally initiated by the Department of Energy (DoE) in June 2010, led to the Revised Balanced Scenarios (RBS) for the period 2010- 2030.</p> <p>"This scenario was derived based on the cost-optimal solution for new build options (considering the direct costs of new build power plants), which was then "balanced" in</p>

Relevant legislation or policy	Relevance to the proposed project
	<p>accordance with qualitative measures such as local job creation.” In addition to all existing and committed power plants, the RBS included 11,4 GW of renewables, which relates to the proposed Limestone PV 1. In 2010 several changes were made to the IRP model. The main changes in the IRP were the disaggregation of renewable energy technologies to explicitly display solar photovoltaic (PV), concentrated solar power (CSP) and wind option</p> <p>The summary of the IRP further explains that traditional cost-optimal scenarios were developed based on the previously mentioned changes in the IRP. This resulted in the Policy-Adjusted IRP, which stated that:</p> <ul style="list-style-type: none"> » “The installation of renewables (solar PV, CSP and wind) have been brought forward in order to accelerate a local industry; » To account for the uncertainties associated with the costs of renewables and fuels, a nuclear fleet of 9,6 GW is included in the IRP; » The emission constraint of the RBS (275 million tons of carbon dioxide per year after 2024) is maintained; and » Energy efficiency demand-side management (EEDSM) measures are maintained at the level of the RBS” (IRP, 2011:6). <p>“The Policy-Adjusted IRP includes the same amount of coal and nuclear new builds as the RBS, while reflecting recent developments with respect to prices for renewables. In addition to all existing and committed power plants (including 10 GW committed coal), the plan includes 9,6 GW of nuclear; 6,3 GW of coal; 17,8 GW of renewables; and 8,9 GW of other generation sources” (IRP, 2011:6).</p> <p>The IRP highlights the commitments before the next IRP. The commitments pertaining to the purpose of the proposed Limestone PV 1 in renewable energy is:</p> <ul style="list-style-type: none"> » “Solar PV programme 2012-2015: In order to facilitate the connection of the first solar PV units to the grid in 2012 a firm commitment to this capacity is necessary. Furthermore, to provide the security of investment to ramp up a sustainable local industry cluster, the first four years from 2012 to 2015 require firm commitment.” » “Solar PV 2016 to 2019: As with wind, grid upgrades might become necessary for the second round of solar PV installations from 2016 to 2019, depending on their location. To trigger the associated tasks in a timely manner, a firm commitment to these capacities is necessary in the next round of the IRP at the latest. By then, the assumed cost decreases for solar PV will be confirmed” (IRP, 2011:17). <p>In conclusion the IRP as envisaged in the Policy-Adjusted IRP should pursue solar PV programmes and an accelerated roll-out renewable energy options should be allowed with regards to the benefits of the localization in renewable energy technologies.</p>
<p>Gauteng Spatial development Framework (GSDF)</p>	<p>All metropolitan, regional and local SDFs for Gauteng province jointly seek to achieve the integration of economically disadvantaged communities into the urban system, particularly those on the periphery of the system. Within Gauteng each municipality is required to prepare a SDF which must outline the spatial development within their respective jurisdictions. The GSDF is used as a tool for forward planning to direct decisions with regard to land development throughout the province. The desired outcomes of the GSDF, through infrastructural investment and the management of activity patterns, are:</p> <ul style="list-style-type: none"> » Integration of the apartheid fragmented municipalities in the province and the municipalities in the wider Gauteng City Region.

Relevant legislation or policy	Relevance to the proposed project
	<ul style="list-style-type: none"> » Safe, affordable and sustainable public transport, in contrast with private mobility, on which the present provincial structure is focused. » Quality of life and living through proximity to, or easy and affordable access to quality open space and social and cultural facilities » Shared, sustainable and inclusive economic growth, ensuring that everyone in the province can get access to economic opportunities and contribute to, and share in the economic development of the province. » Protection and enhancement of the natural environment, ensuring the sustainability of natural systems and the fauna and flora habitats within these and their connectivity and bio-diversity. » Choice, enabling individuals and communities to decide within an overarching framework what works for them, where opportunity presents itself and where to locate in the urban system without incurring inordinate premiums and » Creativity and innovation, ensuring that the province can adapt to change in constructive ways. <p>The Gauteng Spatial Development Framework identifies specific spatial structuring elements that were used in the development of the Sedibeng Spatial Development Framework, including the two corridors formed by the R59 and the N1.</p>
Gauteng 2055 development Vision	Gauteng Vision 2055 provides a long-term development agenda to guide all future initiatives of the province. It aims to ensure that in 2055 "...Gauteng is liveable, equitable, prosperous and united Global City Region. Vision 2055 is based on the ideals of equitable growth, social inclusivity and cohesion, sustainable development and infrastructure, and good governance.
Sedibeng District Municipality IDP	Sedibeng District Municipality outlines the municipal projects and plans for development, service delivery, and infrastructure improvement. The IDP reflects the vision and priorities of the municipality for the upcoming period, taking into account the needs and challenges of the community. Some of the challenges facing the municipality include high unemployment rates, insufficient public service delivery, a lack of education, and limited job opportunities, which the IDP aims to address.
Emfuleni Local municipality IDP	The Emfuleni Local Municipality's (ELM) Integrated Development Plan (IDP) sets its goals for growth, service provision, and infrastructure development. It considers the demands and difficulties faced by the neighborhood, such as the high unemployment rates, the inadequate provision of public services, the lack of education, and the scarcity of employment options. The IDP is built on stakeholder participation and input, and it is continually evaluated and revised to respond to shifting priorities and conditions. The municipality has a number of IDP review meetings and procedures, such as cluster visits and yearly reviews, to guarantee efficient implementation and advancement toward its objectives.

4. DESCRIPTION OF THE SOCIAL AND ECONOMIC ENVIRONMENT

4.1 INTRODUCTION

This section of the report provides an overview of the baseline socio-economic conditions in the area that are relevant to the social and economic assessment of the proposed ArcelorMittal South Africa Vanderbijlpark Solar Cluster Energy facility. The baseline was obtained through secondary data sources such as Statistics South Africa, 2020 National census, Integrated Development Plan, Sedibeng District Municipality, Emfuleni Local Municipality Data and Specialist studies.

The proposed AMSA Vanderbijlpark Cluster Energy Facility which is located on Portion 1 of the Farm Vanderbijlpark 550 IQ, located approximately ~5km to the north of the city Vanderbijlpark, in ward 8 and 25 within the Emfuleni Local municipality and the Sedibeng District Municipality, Gauteng Province (see Figure 4-1). Within ward 25 in the west of the region and Ward 8 in the centre of the region Emfuleni Local Municipality.

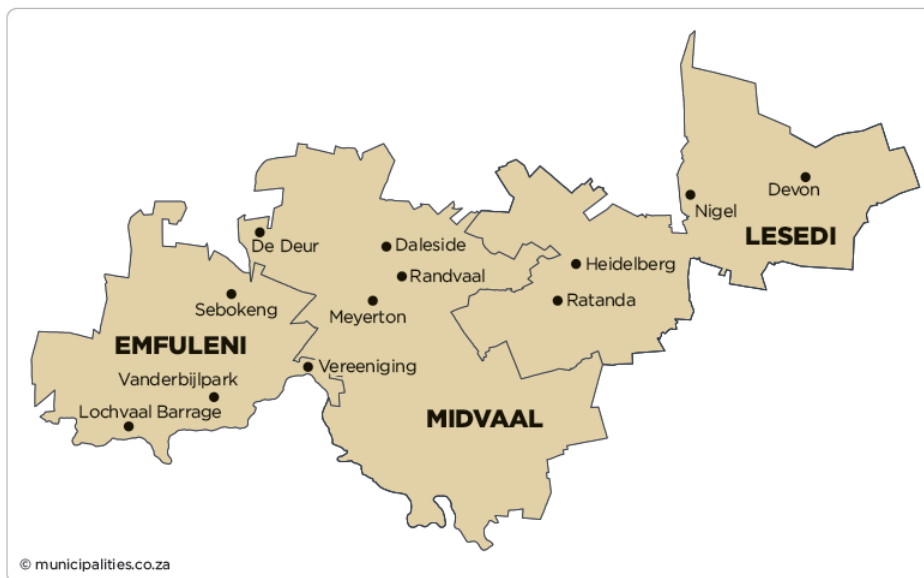


Figure 4-1 Maps indicating the location of the Sedibeng District Municipality and the Emfuleni Local Municipality (<https://municipalities.co.za/>)

The following description of the socioeconomic environment is based heavily on the most recent Stats SA demographic data for the Municipalities. Data for the Municipality as a whole and the directly affected Wards will be provided if possible. The following municipalities and their corresponding wards are listed in table 4.1:

Table 4-1 Affected Province, Municipality and Wards

Province	Municipality	Wards
Gauteng	Sedibeng District Municipality- Emfuleni Local Municipality	Ward 8 Ward 25

4.2 DESCRIPTION OF THE SOCIAL AND ECONOMIC ENVIRONMENT

This section describes Socio-economic conditions at three levels namely, provincial, district and local. Impacts can only be completely understood by knowing the distinctions and similarities between the various levels. The Gauteng Province, Sedibeng District Municipality, Emfuleni Local Municipality, Ward 8 and Ward 25 of the Emfuleni LM will be highlighted in the baseline description.

4.2.1 Gauteng Province

The Gauteng Province is the smallest, but most populous, of South Africa's provinces and it covers an area of 18 178 km². Gauteng is the heart of the country's commercial business and industrial sectors. Gold mining accounts for the greatest proportion of Gauteng's mineral production output. The province is divided into three metropolitan municipalities, namely City of Ekurhuleni, City of Johannesburg, and City of Tshwane, and two district municipalities, namely Sedibeng and West Rand.

The economic activities in Gauteng Province are diverse, with a strong focus on the finance, manufacturing, commerce, IT, and media sectors. Gauteng contributes more than a third to South Africa's economy and dominates nearly every sector except mining and agriculture. The province has a robust and rapidly growing economy, fuelled in part by its status as the country's economic hub and its position as a center of trade and commerce in the region. Gauteng is also home to several large and successful multinational corporations, as well as a thriving small business sector. The is at finance 23%, government services 19% and manufacturing 14%.

According to the Statssa Community Survey (2016), Gauteng Province has a population of 13 399 724 people and a population density of 737.0 people per m². 80% are black Africans, 14% are white, Indian or Asian 3 %and 3% are coloured. Sesotho (12%), Setswana (11%), Afrikaans (10%), English (11%) and Isizulu (23%) are the most widely spoken languages. Approximately 19% of the people in the area have relocated from other South African provinces.

The unemployment rate in Gauteng Province, is among the highest in the country. The official unemployment rate for the province stood at 37% as of the third quarter of 2021, according to Statistics South Africa. Furthermore, it is reported that the youth in Gauteng are particularly affected by unemployment, with an unemployment rate higher than the national average 1, regardless of their education. This is significantly greater and may be caused by in-migration of job seekers and high economic activity growth within the province.

In Gauteng Province, there are about 4 951 135 households. Of this, 17.7% are shacks or other unofficial structures, which is about 12.96% the rate in South Africa. 41% of households have a formal home as their primary residence. The district's average annual household income of R29 400 applies. However, 17% of households make no money at all, and 3% of households make less than this. More than half of households (63%) have piped water, while another 2% have access to shared water sources. A small fraction of homes (2%) relies on borehole water, which is lower than the average for the district as a whole. Almost a quarter of households (7.4%) have no access to electricity, which is the same as the rate in South Africa at 7.29%.

4.2.2 Sedibeng District Municipality

The Sedibeng District Municipality is situated on the southern tip of the Gauteng province and borders the Free State, Northwest, and Mpumalanga Provinces. The district covers the area formerly known as the Vaal Triangle and is 4 173 km² in size. The area offers a variety of cultural heritage and historical sites. The predominant economic sector in the area is the manufacturing of fabricated metal and chemicals. Main cities and towns in the district include De Deur/Walkerville, Devon, Eikenhof, Evaton, Heidelberg, Meyerton, Sebokeng, Vaal Marina, Vaal Oewer, Vanderbijlpark, Vereeniging and Vischkuil.

The Sedibeng District Municipality is known for some local economic activity in its residential sections and is the southernmost Category C municipality in Gauteng province, South Africa. The municipality has a diverse economy with a focus on the manufacturing and trade sectors, which provide income and employment for more than 40% of the municipality's labour force. The municipality has also implemented initiatives to revitalize economic activity, such as the Sedibeng Economic Recovery Plan. The plan aims to expand business activities and create an enabling environment for economic growth in the Sedibeng district. Specific economic activities in the local municipality depend on the specific area of the district, but may include agriculture, manufacturing, mining, and services.

According to the Statssa Community Survey (2016), SDM has a population of 957,528 people and a population density of 227.6 people per m². 81% are black Africans, 17% are white, Indian or Asian 1% and 1% are coloured. Sesotho (52%), Afrikaans (14%), isiXhosa (16%), English (5%) and Isizulu (15%) are the most widely spoken languages. Approximately 19% of the people in the area have relocated from other South African provinces.

Due to the loss of the steel sector, one of the district's largest employees, Sedibeng District has undergone a severe deindustrialization. With a high unemployment rate of 50.7% and a backlog of 120,218 open positions, this and other economic issues have had a significant negative impact on the region's rate of economic growth. Sedibeng region has some of the greatest poverty levels in the province of Gauteng, with unemployment rates ranging from 34.2% to 56.2% in 2017. The employment rate in Sedibeng is 42.6% (271 398).

There are 149 elementary schools, 82 secondary schools, 3 intermediate schools, and 9 combination schools in the Sedibeng Local Municipality. The area is home to 18 (other) colleges and 8 tertiary institutions. 75.5% (480 664) of students completed Grade 9 or higher, while 47.3% (300 895) of students finished Matric. 4% of district residents do not have any formal education, yet only 44% have completed elementary school and 39% have completed matric. Only 4% of residents in the district have a bachelor's degree. Overall, the district has poor skill levels with most residents simply possessing primary education.

There are about 330 826 households. of this, 12.3% are shacks or other unofficial structures, which is about 17.74% the rate in South Africa. 52% of households have a formal home as their primary residence. The district's average annual household income of R29 400 applies. However, 17% of households make no money at all, and 5% of households make less than this. More than half of households (73%) have piped water, while another 2% have access to shared water sources. A small fraction of homes (2%) relies on borehole water, which is lower than the average for the district as a whole. Almost a three-fifths of households (4.4%) have no access to electricity, which is the same as the rate in South Africa at 7.36%.

4.2.3 Emfuleni Local Municipality

The Emfuleni Local Municipality is in the western part of the Sedibeng district and covers an area of 966 km². The municipal area is rich in history as it includes the Anglo-Boer War sites and contains heritage assets such as the Sharpeville monument (www.municipalities.co.za). The municipality is strategically located with access to a well-maintained road network. The area is known for its contribution to the steel and iron industry in South Africa and its location allows many opportunities for tourism and other forms of economic development. Manufacturing, community services and finance are the key economic sectors in the area. Main towns and cities in the area include Evaton, Sebokeng, Vaal Oewer, Vanderbijlpark and Vereeniging.

According to the Statssa Community Survey (2016), SDM has a population of 733 445 people and a population density of 758.0 people per m². 85% are black Africans, 12% are white, Indian or Asian 1% and 1% are coloured. Sesotho (59%), Afrikaans (11%), isiXhosa (6%), English (4%) and Isizulu (12%) are the most widely spoken languages. Approximately 17% of the people in the area have relocated from other South African provinces.

There are about 253 488 households. of this, 12.3% are shacks or other unofficial structures, which is about 12.33% the rate in Sedibeng District Municipality and 17.74% of Gauteng Province. 75 % of households have a formal home as their primary residence. The local municipality average annual household income of R29 400 applies. However, 18% of households make no money at all, and 5% of households make less than this. More than half of households (97%) have piped water, while another 1% have access to shared water sources. A small fraction of homes (2%) relies on borehole water, which is lower than the average for the district as a whole. Almost a three-fifths of households (4.4%) have no access to electricity, which is the same as the rate in South Africa at 7.36%.

4.2.4 Ward 8

Ward 8 is one of the two wards in the Emfuleni Local municipality directly affected by the proposed project. According to the Statssa Census (2011), ward 8 has a population of 13749 people and a population density of 1690.2 people per m². 94% are black Africans, 5% are white, and 0% are coloured. Sesotho (45%), Afrikaans (7%), isiXhosa (12%), and Sepedi (5%) are the most widely spoken languages. Approximately 35% of the people in the area have relocated from other South African provinces.

There are about 16157 households. of this, 64% are shacks or other unofficial structures, which is about more than double at 17.77% the rate in Gauteng Province. 26% of households have a formal home as their primary residence. The Ward average annual household income of R14 600 applies. However, 19% of households make no money at all, and 5% of households make less than this. More than half of households (92%) have piped water, while another 2% have access to shared water sources. A small fraction of homes (1%) relies on borehole water, which is lower than the average for the district as a whole. Almost a three-fifths of households

4.2.5 Ward 25

Ward 25 is also directly affected by the proposed development. According to the Statssa Census (2011), ward 25 has a population of 20570 people and a population density of 39.0 people per m². 74% are black Africans, 25% are white, and 1% are coloured. Sesotho (49%), Afrikaans (25%), isiXhosa (8%), and Isizulu (7%), English (4%) and other (1%) are the most widely spoken languages. Approximately 29% of the people in the area have relocated from other South African provinces.

There are about 6 166 households. of this, 12.2% are shacks or other unofficial structures, which is about 47.41% the rate in Sedibeng District Municipality and 41.59% of Gauteng Province. 75 % of households have a formal home as their primary residence. The local municipality average annual household income of R29 400 applies. However, 14% of households make no money at all, and 5% of households make less than this. More than half of households (66%) have piped water, while another 1% have access to shared water sources. A small fraction of homes (29%) relies on borehole water.

5. IDENTIFICATION AND EVALUATION OF KEY ISSUES

5.1 INTRODUCTION

This section focuses on the identification of the key social issues associated with the construction, operation and decommissioning of the proposed AMSA Solar Cluster Energy Facility. The identification of these key issues was identified based on the following:

- » The review of project baseline information and other specialist studies.
- » Interviews with interested and affected parties; and
- » Experience with similar projects

5.2 Social Impacts during the Construction Phase

The positive and negative social impacts identified and evaluated for the **construction phase** include:

- » Creation of employment opportunities
- » Potential risks to livestock and farming infrastructure and the presence of workers on site
- » In- migration or potential influx of job seekers
- » Potential impacts of heavy and construction related activities
- » Increase Traffic

5.2.1 Potential Positive Impact: Creation of local employment and business opportunities, skill development and training

According to the information provided, the construction phase of the proposed AMSA Solar Cluster Energy Facility will extend over a period of 18 months. A total of 250 people is expected to be employed during construction phase. This will provide a social benefit to the community. The construction phase will also be beneficial for the local service industry. The possible employment prospects would be related to transportation, security, cleaning, catering, and accommodation needs for the construction workers. The availability of lodging will also help the region's hospitality economy.

Table 5-1 Scoping evaluation of creation of local employment and business opportunities, skills development and training

Impact			
Creation of local employment and business opportunities, skill development and training			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Creation of local employment and business opportunities, skill development and training associated with construction phase	<u>Direct impacts:</u> <ul style="list-style-type: none"> » Creation of temporary employment opportunities » Creation of business procurement opportunities <u>Indirect impacts:</u> <ul style="list-style-type: none"> » Creation of skill and development opportunities » Support the local economy 	Local - Regional	N/A
Description of expected significance of impact			

The AMSA Solar Cluster Energy Facility construction phase will extend over a period of 18 months. A total of 250 people are expected to be employed during construction phase. They will be sourced from the local communities, but this is dependent to a skill survey conducted by the Economic Development Consultant that will be appointed closer to the construction or bidding process. The surrounding areas, would be in a position to qualify for most of the low skilled and semi-skilled opportunities. The business-related opportunities will be linked to hospitality (accommodation) and services sector (catering, security, transport etc.). This will result in a benefit to the local communities, the significance of which is expected to be medium in the short-term.

Gaps in knowledge & recommendations for further study

- » Collection of information on local skills, educational levels and service sectors

Recommendations with regards to general field surveys

- » Site visit and further interviews with Landowners and other relevant stakeholders

5.2.2 Potential Negative Impact: The Potential risks to safety of local communities associated with the presence of construction workers on site.

During the construction phase of the AMSA Solar Cluster Energy Facility the presence of construction workers on the project site poses potential risks to the local communities. These possible risks could include theft and break ins.

Table 5-2 Scoping evaluation of potential risk to safety of local communities associated with the presence of construction workers on site.

Impact			
The potential risks to safety of local communities associated with the presence of construction workers on site			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
The potential risks to safety of local communities associated with the presence of construction workers on site	<u>Direct impacts:</u> » <u>Break -ins and theft of livestock</u> » <u>Harm to local community or potential attacks</u> <u>Indirect impacts:</u> » <u>Resentment of outsiders and tension with local communities</u> » <u>Increase in risk of theft</u>	Local	N/A
Description of expected significance of impact			
According to data from the previous energy projects, movements and activities of construction workers can have an impact on the host communities. This is typically related to projects in rural areas and the risks are to the local farmers. Impacts are potentially of moderate significance but could be effectively reduced to low with the implementation of mitigation measures.			
Gaps in knowledge & recommendations for further study			
» Collection of data on the existing farming operations and activities			
Recommendations with regards to general field surveys			
» Site visit and further interviews with the local farmers			

5.2.3 Potential Negative Impact- In-migration or potential influx of job seekers

In the case of large construction projects, job seekers tend to migrate to the development area in search of work. In some cases, the job seekers' families accompany them. Whether or not the job seekers find work, they and their families may become economically stranded in the surrounding area. The influx of job seekers has no direct social impact, but their presence and behaviours can have an impact on community structures and social networks, competition for housing and jobs, which can lead to xenophobia and crime.

Table 5-3- Scoping evaluation of potential in migration or potential of job seekers

Impact			
Potential impacts on family structures, social networks and community services associated with the influx of job seekers			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
The potential risks to livestock and farming infrastructure and the presence of workers on site	<u>Direct impacts:</u> » Anti -Social behaviour of construction workers » Disruption of social networks <u>Indirect impacts:</u> » Resentment of outsiders and tension with local communities	Local	N/A
Description of expected significance of impact			
Evidence from other renewable energy projects indicates that the construction phase can result in the influx of jobseekers to the area and that this has the potential to impact negatively on local communities. Impacts can be of Moderate significance but can be reduced with the implementation of mitigation measures.			
Gaps in knowledge & recommendations for further study			
» Gathering of data on the existing community and needs			
Recommendations with regards to general field surveys			
» Site visit and interviews with representatives from the local municipality, community representatives and landowners.			

5.2.4 Potential Negative Impact: Potential impacts of heavy construction vehicles and increase in traffic

The movement of heavy construction vehicles during the construction phase are expected to be significant given the peripheral location of the site. The road surface of the gravel road may deteriorate and will have to be maintained. The contractor should thus repair all the damages to the gravel road before the end of construction phase.

Table 5-4- Scoping evaluation of potential impacts of heavy vehicles associated with construction activities

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Potential, traffic, noise, dust and safety impacts associated with construction related activities	<p><u>Direct impacts:</u></p> <ul style="list-style-type: none"> » Dust impacts, and impact on the local communities living closer to the construction site » Noise impacts caused by moving construction vehicles » Damage on the gravel road that is leading to the project site <p><u>Indirect impacts:</u></p> <ul style="list-style-type: none"> » Limited indirect impacts 	Local	N/A
<p>Description of expected significance of impact</p> <p>Evidence from other renewable energy projects suggests that the construction-related activities do have an impact on the local communities in terms of dust, noise, and safety. Impacts could be of moderate significance in the short-term but can be effectively reduced through the implementation of appropriate management measures. Traffic impacts are expected during the construction phase. This can result in impacts on local roads and daily movement patterns. Impacts could be of moderate significance in the short term but could be effectively reduced through appropriate management measures.</p>			
<p>Gaps in knowledge & recommendations for further study</p> <ul style="list-style-type: none"> » Gathering of information on existing farming activities and operations <p>Recommendations with regards to general field surveys</p> <ul style="list-style-type: none"> » Site visit and interviews with community representatives and farmers 			

5.3 Social Impacts during the Operation Phase

The positive and negative social impacts identified and evaluated for the **operational phase** include:

- » Creation of local employment and business opportunities, skills development, and training
- » The development of infrastructure for the generation of renewable energy
- » Visual impacts and associated impacts on the sense of place

5.3.1 Potential Positive Impact: Creation of local employment and business opportunities, skill development and training.

Low educational levels in the Emfuleni Municipality make it beneficial for the community in the long run to execute a capacity building and skills development training program. As people receive training, their income will rise, and their material and economic well-being will advance. The majority of individuals in the area work in mining, agriculture, and then community services. Since the energy industry is new to the area,

the available talent pool is small. Members of the community will be able to work at other similar projects in the region with the help of their acquired skills.

Table 5-5- Scoping evaluation of potential impacts of Creation of local employment and business opportunities, skill development and training.

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Creation of local employment and business opportunities, skill development and training associated with construction phase	<u>Direct impacts:</u> » Creation of employment opportunities. » Creation of business and procurement opportunities. <u>Indirect impacts:</u> » Creation of training and skills development opportunities. » Support for local economy.	Local- Regional	N/A
Description of expected significance of impact The operational phase of renewable energy projects offers a comparatively small number of direct employment possibilities. Reviewing the REIPPPP, however, reveals that there are other advantages to operating renewable energy plants that go beyond just creating employment opportunities. Although limited in number, the job opportunities provided will have a high positive impact for those individuals affected.			
Gaps in knowledge & recommendations for further study » Collection of information on local skills, educational levels and service sectors Recommendations with regards to general field surveys » Site visit and interviews with community representatives and other relevant stakeholders			

5.3.2 Potential Positive Impact: The development of infrastructure for the generation of renewable energy

Most South Africa's energy requirements are now satisfied by coal, according to an analysis of prior projects. Although the projected AMSA Solar Cluster Energy Facility will only make a relatively small contribution to South Africa's overall electricity grid, it will help offset the country's overall carbon emissions from the energy generation sector. The projected AMSA Solar Cluster Energy Facility will benefit the energy sector in this regard as an Independent Power Provider (IPP) for renewable energy.

Table 5-6- Scoping evaluation of potential impacts of development of infrastructure for the generation of renewable energy

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Enhance the security of SA's energy supply and decrease coal dependence	<u>Direct impacts:</u> » Improve energy security » Support renewable energy » Reduce reliance on coal. <u>Indirect impacts:</u> » Limited indirect impacts	Local - International	N/A
Description of expected significance of impact Due to supply shortages, South Africa's prolonged energy crisis, which began in 2007, has led to widespread rolling blackouts (also known as load shedding). The load shedding has significantly affected investor confidence as well as other economic sectors. In addition to addressing environmental problems related to climate change and the consumption of finite water resources, renewable energy facilities also create significant socio-economic			

opportunities and benefits, particularly for historically underprivileged rural communities. Although the project will only contribute up to 270Mwac to the electricity grid, this will aid in achieving government's planned shift in the energy mix to include renewable energy.

Gaps in knowledge & recommendations for further study

- » collection and reviewing of information from previous similar projects.

Recommendations with regards to general field surveys

- » Desktop review on previous similar projects

5.3.3 Potential Negative Impact: Visual impact and impact on sense of place.

The proposed development is located near Vanderbijlpark, a densely populated industrial area which will absorb the visual change that the proposed project brings about. The visual exposure for the AMSA Solar Cluster energy facility would largely be concentrated on the site itself and extend to the west, North and Northeast.

Table 5-7- Scoping evaluation of potential visual impact and impact on sense of place

Impact			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Impact on rural sense of place	<u>Direct impacts:</u> » Change in rural sense of place <u>Indirect impacts:</u> » Limited indirect impacts	Local	N/A
Description of expected significance of impact Renewable energy projects do have the potential to impact on an area's sense of place in some instances, this can impact on the landscape of the surroundings. The findings of Visual Impact Assessment scoping report indicates that the impacts will be on primarily observers situated within a 3km radius of the facility and are expected to be moderate to high significance and can be mitigated.			
Gaps in knowledge & recommendations for further study » Collection of data on potential sensitive land uses and activities. » Review of Visual Impact Assessment Recommendations with regards to general field surveys » Site visit and interviews with local farmers, officials from the municipality and landowners in the area.			

5.4 Social Impacts during the Decommissioning Phase

The key potential negative impact which is associated with the decommissioning phase of the proposed AMSA Solar Cluster Energy Facility relates to the loss of employment and income for those people employed at the facility.

5.4.1 Potential Negative Impact: Loss of local employment and income

The most likely negative impact of the decommissioning phase is the loss of employment and income, which has a direct impact on the employees' households and the communities in which they live. The identified impacts associated with the decommissioning phase can be managed through the implementation of downscaling programs and retrenchment packages.

Table 5-8-Impact assessment of Loss of income and employment

Impact: Decommissioning may result in the layoff of the people who worked during the operational phase.

Issue	Nature of Impact	Extent of Impact	No-Go Areas
Impact of loss of employment and income	<u>Direct impacts:</u> » Loss of employment and income <u>Indirect impacts:</u> » impact on the local economy and other business	Local - Regional	N/A
Description of expected significance of impact Given the relatively small number of people expected to be employed during the operation phase, the social impacts associated with decommissioning are likely to be limited/minimal. Impacts on individuals are however expected to be of high significance but can be managed through the implementation of downscaling programs and retrenchment packages.			
Gaps in knowledge & recommendations for further study » N/A Recommendations » N/A			

5.5 Cumulative Impacts

There are a number of proposed and authorised projects in the broader area, which result in the potential for cumulative impacts on the social environment.

5.5.2 Cumulative Impact on Local Economy

The development of renewable energy facilities and associated infrastructure, such as the proposed solar energy facility, will also create a number of socioeconomic opportunities for the Emfuleni Local municipality. Positive cumulative opportunities include job creation, skill development and training, and downstream business opportunities. The potential cumulative benefits for the local and regional economies are thus associated with both the construction and operational phases of renewable energy projects and associated infrastructure and span a 25-year period. However, steps must be taken to increase employment opportunities for members of the surrounding communities and to support skill development and training programs.

Table 5-9- Cumulative impacts on Local economy

Impact: The establishment of renewable energy facilities and associated projects, such as the solar energy facility, in the Emfuleni Local Municipality will generate jobs, opportunities for skill development and training, and the creation of downstream business opportunities.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Cumulative benefits in terms of creating employment, business, and skill development opportunities for the local municipality	<u>Direct impacts:</u> » opportunities for employment, business and skill development for the local municipality <u>Indirect impacts:</u> » Promote local economic development	Local	N/A
Description of expected significance of impact The establishment of the proposed AMSA solar cluster energy facility has the potential to create a number of socio economic opportunities for the Emfuleni Local Municipality which in turn will result in a positive social benefit. The			

cumulative impact includes the creation of employment, skills development, training opportunities and creation of downstream business opportunities.
Gaps in knowledge & recommendations for further study
» Collection of data on the number of solar energy facilities proposed and the timing of construction phase and likely job opportunities.
Recommendations with regards to general field surveys
» interviews with local municipality and site visit

5.5.1 Potential Negative Impact: Cumulative Impact on Sense of Place

The potential cumulative impacts on the area's sense of place will be largely linked to potential visual impacts. The proposed Solar Energy Facility and associated infrastructure is unlikely to have a significant impact on the area's sense of place. The cumulative effects are also likely to be minimal. This will be confirmed during the assessment phase.

Table 5-10- Cumulative impacts on sense of place and the landscape

Impact: Visual impacts associated with the establishment of more than one solar energy facility and the potential impact on the area's rural sense of place and character of the landscape			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Cumulative impact on rural sense of place	<u>Direct impacts:</u> » Change in rural sense of place. <u>Indirect impacts:</u> » Limited indirect impacts	Local	N/A
Description of expected significance of impact			
Renewable energy projects have the potential to have a cumulative impact on a community's sense of place. The potential sensitive visual receptors include the observers travelling along the secondary road traversing near the proposed development and residents of homesteads and farm dwellings within the 3km radius.			
Gaps in knowledge & recommendations for further study			
» Collection of data on location of sensitive visual receptors			
» Visual impact assessment to inform impact of sense of place.			
Recommendations with regards to general field surveys			
» Site visit and interviews with local farmers, officials from the municipality and landowners in the area.			

5.7 “No Development” Alternative

The option of no-development poses a lost opportunity for South Africa to provide its consumers with renewable energy. This has a negative social cost for the nation. At a local level, this alternative would result in a lost opportunity in terms of job creation and socio-economic upliftment. However, it should be emphasized that the development of the suggested AMSA Solar Cluster Energy Facility is not a unique development. A significant number of renewable energy facilities are proposed in the Northern Cape Province and already established renewable energy facilities are already operational in certain parts of South Africa. Therefore, adopting the no development alternative would comprise the renewable energy development across the Gauteng Province and South Africa, but the socio-economic benefits to the Emfuleni Local Municipality and the communities will be lost. The impacts associated with this alternative will be assessed in the EIA Phase of the process.

Table 5-11- Scoping evaluation of potential impacts of the do nothing alternative

Impact: The no-development option would result in the lost opportunity for South Africa to improve energy security and assist to support with the development of clean, renewable energy.			
Issue	Nature of Impact	Extent of Impact	No-Go Areas
Lost opportunity to produce clean, renewable energy and enhance energy security	<u>Direct impacts:</u> » No creation of employment business and skill development for the local municipality. » Potential impact on energy security <u>Indirect impacts:</u> » Limited indirect impacts	Local - National	N/A
Description of expected significance of impact			
The development of renewable energy project will increase energy security and have positive effects on the economy, employment, and chances for skill development. If AMSA solar cluster energy Ffacility is not developed these benefits will be lost.			
Gaps in knowledge & recommendations for further study			
» Assessment of impacts associated with the proposed development of the project in order to inform the significance of the do nothing alternative.			
Recommendations with regards to general field surveys			
» None			

6. CONCLUSION AND RECOMMENDATIONS

6.1 Key findings and Recommendations

This section presents the final key findings and recommendations of the SIA. The key findings and recommendations are based on a review of the basic information identified during the EIA Scoping process, as well as a review of the policy and planning documents relating to the proposed AMSA Solar Cluster Energy Facility. A review of selected specialist studies, as well as similar projects and literature, was conducted, and face to face interviews with adjacent and affected landowners. This section was compiled based on the results of the tasks that were completed during this study.

6.2 Key Findings

The main findings of the review of policy documents at all levels of government indicated that renewable energy, specifically solar energy, received strong support. The Republic of South Africa's White Paper on Energy Policy of 1998 stated that because renewable energy resources operate from an infinite resource base, such as the sun, renewable energy can increasingly contribute to long-term sustainable energy for future generations. This policy also emphasizes that, due to South Africa's unlimited renewable energy resource base, renewable energy applications such as solar and wind energy are more sustainable in terms of social and environmental costs.

Renewable energy applications are supported by policy documents at the provincial, district, and local levels. The use of renewable energies is not explicitly addressed in policy documents at the provincial, district, and local levels; however, the transition to low-carbon economies and the reduction of municipal areas' carbon footprint, as well as their support for alternative energies as an LED program, are mentioned. More employment opportunities are being created to reduce community vulnerabilities in order to ensure more resilient communities and a more sustainable economy.

According to a review of relevant policies and documents related to the energy sector, renewables such as solar energy and the establishment of these facilities are supported at all levels of government. The author of this SIA report believes that the establishment of the AMSA Solar Cluster Energy Facility is supported by the policies and planning documents reviewed in this section at all levels of government.

6.3 Recommendations

The Social Impact Assessment conducted as part of the Scoping phase of the EIA process led to the following recommendations. To minimize the negative effects and maximize the beneficial effects, the suggested mitigation actions should be put into practice. The recommendations below are provided in light of the social assessment:

- » In terms of the impacts on employment, it is important to consider that there are not many chances for unskilled and semi-skilled workers in the project area, which could lead to rivalry among the local unemployed. Therefore, bringing in outside labour is likely to make it harder for locals to find work, cause unrest, and put demand on the services that are already provided. To maximize the beneficial effects of job development in the area, local labour should be used. Wherever possible, local firms should be involved in the construction process. To make sure that the local communities benefit, it is essential to

use local workers as far as possible. Thus, it is preferable to engage local labour whenever possible during the project's construction and operation phases.

- » The environmental authorities should take into account the potential visual consequences of the project, which were covered in the Visual Impact Assessment (VIA).
- » Identified impacts should be assessed in detail in the EIA Phase of the process and appropriate mitigation and enhancement measures recommended.

6.3 Conclusion

This SIA Scoping level study was focused on gathering information to help understand the current social environment related to the proposed AMSA solar cluster energy facility, as well as identifying and evaluating social issues and potential social impacts related to the development of such a nature. The environmental assessment methodology for impacts evaluation at the scoping phase and pertinent criteria were utilized to assess the importance of the potential impacts and identify suitable mitigation and enhancement strategies for the detected impacts. In the EIA phase of the process, it is also recommended that further research be done in order to fill in knowledge gaps.

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