

**SOCIO-ECONOMIC IMPACT ASSESSMENT  
FOR THE PROPOSED WILD COAST  
ABALONE WIND ENERGY FACILITY  
PROJECT**

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**Report prepared for:**

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## CONTENTS

1	INTRODUCTION.....	1
1.1	STUDY GOALS AND OBJECTIVES.....	1
1.2	PROJECT BACKGROUND AND LOCALITY.....	2
1.3	STUDY METHODOLOGY.....	3
1.4	STUDY AREA DELINEATION .....	5
2	POLICY AND PLANNING ENVIRONMENT.....	8
2.1	NATIONAL INFORMANTS .....	8
2.2	KEY PROVINCIAL DOCUMENTS.....	11
2.3	LOCAL GUIDANCE.....	13
2.4	SYNOPSIS.....	15
3	SOCIO-ECONOMIC PROFILE OF THE STUDY AREA.....	16
3.1	POPULATION, INCOME AND EMPLOYMENT PROFILE.....	16
3.2	LOCAL ECONOMIC PROFILE.....	19
3.3	SPATIAL PROFILE OF IMMEDIATELY AFFECTED ENVIRONMENT .....	22
4	IMPACT ASSESSMENT ASSUMPTIONS.....	25
4.1	WILD COAST ABALONE WEF ASSUMPTIONS.....	25
4.2	ASSUMPTIONS REGARDING POTENTIAL LOSSES IN THE AREA AFFECTED BY VISUAL IMPACTS.....	26
5	EVALUATION OF IMPACTS AS A RESULT OF THE PROPOSED WEF .....	27
5.1	DEFINING ECONOMIC IMPACTS.....	27
5.2	CONSTRUCTION PHASE IMPACTS .....	29
5.3	OPERATIONAL PHASE IMPACTS .....	38
5.4	DECOMMISSIONING PHASE IMPACTS.....	43
5.5	NO-GO OPTION .....	44
5.6	NET EFFECT AND TRADE-OFF ANALYSIS.....	44
6	CONCLUSION.....	55
6.1	BASELINE ASSESSMENT AND PRIMARY DATA REVIEW .....	55
6.2	KEY MODELLING ASSUMPTIONS.....	55
6.3	SUMMARY OF IMPACTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT .....	56

# 1 INTRODUCTION

Urban-Econ Development Economists were commissioned by Wild Coast Abalone to undertake a Socio-Economic Impact Assessment (SEIA) as part of an Environmental Impact Assessment to facilitate authorisation of a proposed Wind Farm Energy Facility. The facility's main purpose is to provide energy for the planned expansion of the Wild Coast Abalone production facility. The SEIA seeks to identify the various socio-economic impacts associated with the development as well as make high level recommendations on reducing the potential negative impacts of the project in order to enhance the benefits of the development. This SEIA is a specialist impact study that forms part of the full Environmental Impact Assessment (EIA) process in terms of the in National Environmental Management Act No 107 of 1998 (NEMA) as amended, and the associated EIA Regulations, 2014.

## 1.1 STUDY GOALS AND OBJECTIVES

The national guidelines for conducting Environmental Basic Assessment indicate that the overall aim of the process is to inter alia understand the current social and economic environment and use it to assess the impact of a proposed development (DEA, 2014). More specifically, this study seeks to determine and assess potential positive and negative socio-economic impacts of the proposed development in order to identify whether the proposed development will have a net positive or a net negative effect on the society and economy. Specific objectives of the SEIA as provided by Wild Coast Abalone include but are not limited to:

- Delineate the zone of influence in consultation with other specialists on the team.
- Describe the socio-economic character of the area to be directly affected by the proposed wind energy facility, and the general sensitivity of these components to change.
- Describe the likely scope, scale and significance of impacts (positive or negative) on the socio-economic character of the area to be affected by the proposal associated with the investment.
- Determine the affected economies and communities located in the zone of influence and identify sensitive receptors within the delineated study area, i.e. communities and economic activities that could be directly or indirectly positively/negatively affected by the proposed project.
- Create profiles for the communities representing the study areas and the affected zone, which would then represent a status of the "no-go" alternative and would be used to assess the potential changes ensued from the proposed activity.
- Quantify the potential positive and negative effects of the proposed development on the local communities and economic activities in the delineated study area (direct and indirect impacts).
- Evaluate the change in the size and composition of the local and regional economies that will be stimulated by the proposed development, as well as the state of local communities.

- Develop a management and mitigation plan by proposing mitigation measures for negative effects and enhancement measures for positive impacts.

## 1.2 PROJECT BACKGROUND AND LOCALITY

Wild Coast Abalone has proposed the expansion of their abalone production facility located at Haga Haga, under the Great Kei Local Municipality (GKLM), in the Eastern Cape. The company intends to significantly expand their production capacity from the current 360 tons per annum up to 1,500 tons per annum. The proposed 5 Wind Farm Facilities will provide energy to the abalone production facility. Currently, the production facility uses 800kWh to run, the proposed Wind Farm Facility will provide an additional 10mw. The project will have two phases, with phase 1 being 5mw and phase 2 adding the additional 5mw. The primary use of the energy generated will be for the operating of the abalone production facility, whilst any remaining electricity will be diverted back to the national grid. Map 1.1 below indicates the locality of the development and the nearest major features.

**Map 1.1:** Location of the Wild Coast Abalone Wind Energy Facility



### 1.3 STUDY METHODOLOGY

#### 1.3.1 *Socio-Economic Impact Assessment*

Socio-Economic Impact Assessment studies are undertaken to determine, evaluate, and where possible, quantify the effects of an intervention. This intervention could be either an existing activity within the economy or a new activity (i.e. the proposed Wild Coast Abalone WEF).

Socio-economic impacts generated by an intervention can be disaggregated in terms of the initial or direct impacts that occur when the intervention begins. Such impacts in turn trigger secondary and further flow-on rounds of impacts thereby creating a multiplier effect. This multiplier effect can be either positive or negative. In pure economic terms these impacts are expressed as indirect and induced effects, where:

- Indirect effects relate to the changes in economic indicators that are triggered along the upstream industries that supply goods and services to the intervention
- Induced effects refer to the changes in economic indicators that are stimulated by changes in consumption expenditure of households that were directly or indirectly affected by the intervention.

In addition to the above, two additional types of socio-economic impacts can be distinguished. These include:

- Secondary impacts that are caused by the intervention, but that are further removed in distance or take a greater amount of time to materialise but are still reasonably foreseeable. Secondary impacts generally relate to changes in land use patterns, economic performance, changes to the character of a community and property values in the vicinity of the interventions location.
- Cumulative effects are the results of incremental consequences of the intervention when added with other past, present and anticipated future interventions. Cumulative effects consider the manner in which the impacts of a project may affect or be affected by other projects. Such effects are generally difficult to identify as they require a complete knowledge of local conditions and development plans, and accordingly are sometimes even more difficult to quantify.

Projection of the initial impacts and multiplier effects are usually done by employing an input-output model or a General Equilibrium Model. The use of these models in socio-economic impact assessments allows for the quantification of potential impacts in terms of a number of economic indicators such as production, Gross Value Added (GVA), employment and income. The scale of these impacts is dependent on the size and diversification of the economy under analysis which in turn determines the leakage. Secondary and cumulative effects can be identified through an expert opinion technique, consultations, development matrices and interviews. Such impacts can be difficult to quantify.

Overall, a socio-economic impact analysis that includes the assessment of primary impacts, multiplier effects, secondary impacts and cumulative effects provides a comprehensive assessment of potential impacts. It furthermore assists in ranking the intervention using a methodology prescribed by the Department of Environmental Affairs.

The socio-economic impact assessment made use of the economic models based on the Eastern Cape Social Accounting Matrix (SAM) developed in 2006 and adjusted to represent 2019 figures. The SAM is a comprehensive, economy-wide database that contains information about the flow of resources that takes place between the different economic agents in this case the Eastern Cape economy. The selection of this model in the assessment is attributed to the expected spatial distribution of procurement during both the construction and operational phases of the project.

### **1.3.2 Impact Evaluation Model**

In line with the Regulation 31(2)(l) of the NEMA (Act 107 of 1998) each potential impact identified is clearly described (Annexure A) including whether the potential impact will have a positive or negative outcome on the biophysical and/or social environment (thereby providing the nature of the impact) and be assessed in terms of the following factors namely the:

- Overall nature of the impact (negative or positive)
- Type of impact (direct, indirect or cumulative)
- Spatial extent of the impact (site, local regional or national)
- Duration of impact (short, medium or long-term)
- Reversibility of the impact (completely reversible, partly reversible or irreversible)
- In the case of an irreplaceable loss (resource will not be lost, resource may be partly destroyed, or resource cannot be replaced)
- Probability of occurrence of impact (unlikely, possible, probable or definite)
- Mitigation potential of impact (highly mitigatable, moderately mitigatable or low/unmitigatable)
- Impact significance (negligible, low, moderate or substantial)

### **1.3.3 Data collection**

As part of the data collection process for the socio-economic impact assessment of the proposed development, the following activities were undertaken:

- **Review of Planning Documents**

In order to document the socio-economic context of the study area within the Great Kei Local Municipality, a number of important documents or sources of information were reviewed, referenced and used to inform the impact assessment. These documents included:

- Great Kei Municipality Integrated Development Plan (2017-22)
- Great Kei Municipality Local Economic Development Plan (2017-22)
- Amathole District Municipality Integrated Development Plan (2017-22)

- **Literature Review**

In order to substantiate the findings of the socio-economic impact assessment a number of secondary research documents have been considered as they relate to the proposed WEF.

These documents include academic journals and studies available on the internet or in print media. It is intended that these documents substantiate the baseline profile while at the same time providing context to the project.

- **A site visit**

A trip was made to the site on the 27<sup>th</sup> of August in order to gain insight into the socio-economic profile of the affected area as well as understanding how the WEF links to the expansion of the abalone facility.

- **Primary Data Collection – Interviews**

Interviews with stakeholders in the immediately affected area were not conducted as the EIA process is still in the early stages of planning. Once this process has reached the appropriate phase, interviews with interested and affected parties can be conducted.

## **1.4 STUDY AREA DELINEATION**

The study area delineation depends on the type of economic activity that is analysed and the perceived spread of economic impacts that are expected to be generated from the project during both the construction and operational phases. The municipal area where the site is located is likely to experience some direct, indirect and induced impacts resulting from the activities on the site; however, it is highly unlikely that the local economy can be sufficiently diversified to supply all materials and services and support construction and operational activities from start to finish. Economic impacts therefore tend to extend beyond municipal boundaries and spread throughout the entire provincial and national economy.

For the purpose of this study both a primary and secondary study area were delineated. These are discussed in more detail in the subsequent section.

### **1.4.1 Primary Study Area**

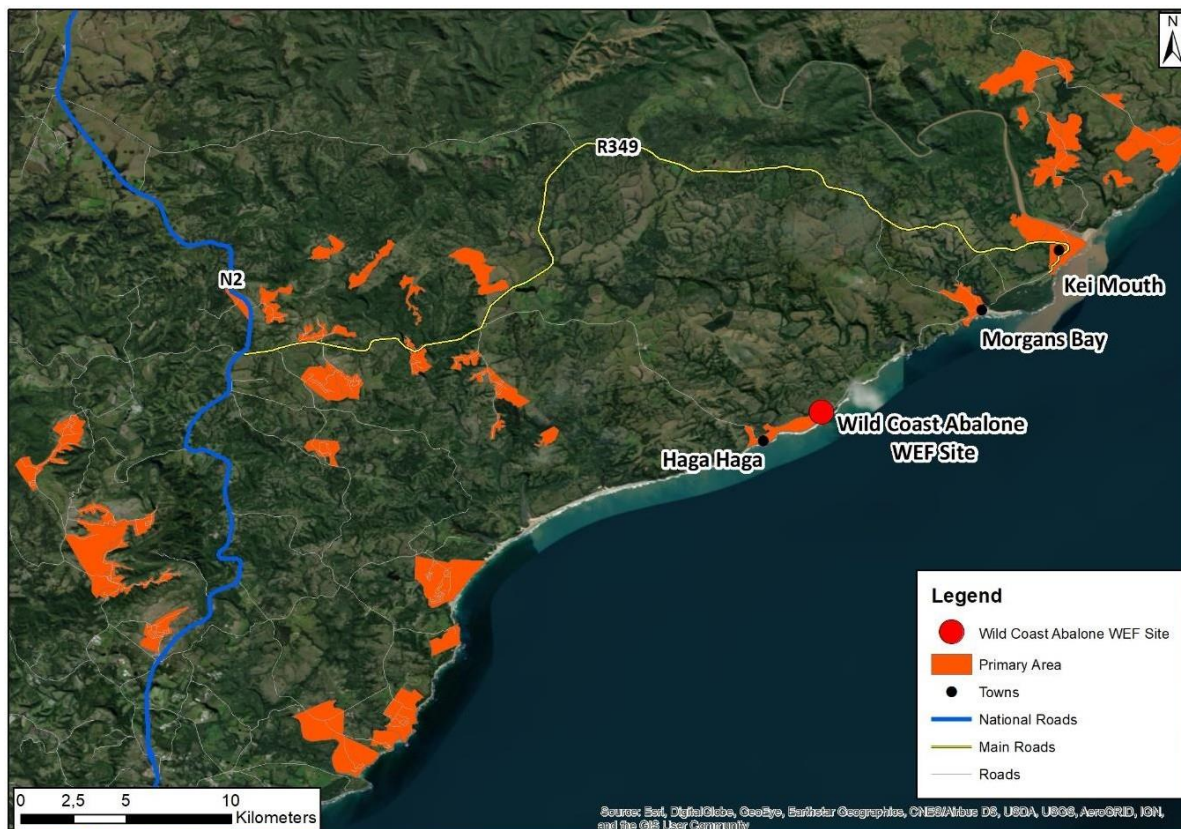
The primary study area (hereafter referred to as the local area) refers to the locality where the direct economic impacts of the proposed development will be primarily concentrated. The primary study



area is defined based on the actual location of the proposed development, proximity to skilled and unskilled labour, position relative to suppliers of products and data availability.

Based on these criteria an area (buffer) of 25 km surrounding the development was chosen as the primary study area. This area was chosen as it is likely that the impact of such a development would be most notably felt in this area. It is likely that this area will provide many of the additional employees required for the development. The map 1.2 below indicates the extent of the primary study area.

**Map 1.2:** Location of the Sub Places within the Primary Study Area



The selected subplaces cover all the major hamlets and villages that are present in the area. These are areas where the majority of the population live.

Table 1 below indicates the sub-places that fall in the 25 km buffer of the primary area. The subplaces in this scenario normally account for small villages or hamlets in the Great Kei Municipality. Sub-places are the lowest administrative level that information can be sourced for.

**Table 1:** Sub-places comprising the Primary Study Area.

Primary Area Subplace			
Arena SP	Kei Mouth SP	KwaVuka SP	Ncalukeni SP
Avalon Holiday Resort	KwaBola SP	Kwelera SP	Ngotsini SP
Chakatha SP	KwaDubulekwele SP	Kwenxura SP	Ngxingxolo SP

Chicargo SP	KwaJongilanga SP	Luphindweni SP	Nkonki SP
Cintsa East SP	KwaJuliwe SP	Lusasa SP	Nyara SP
Cwili SP	KwaMahomba SP	Mandela Park SP	Qolora Mouth SP
Dakeni A SP	KwaMazinyo SP	Mandela SP	Qolweni SP
Diphini SP	Kwane SP	Manqukela SP	Queensberry Bay SP
Glengariff SP	KwaNkola SP	Mceshe SP	Soto SP
Gubeni KwaSilatsha SP	KwaNokhala SP	Mgcogo SP	Tainton SP
Gwaba SP	KwaNontshinga A SP	Morgan's Bay SP	Yellowsands SP
Gxara SP	KwaSithungu SP	Mzwini SP	Ziphunzana SP
Haga-Haga SP	KwaThuba SP	Nantsana SP	Zwelitsha SP

Source: Quantec, 2018

#### **1.4.2 Secondary study area**

Given that some inputs that will be used during the construction and operational phases of the proposed development are likely be sourced from outside of the local area, it is probable that most of the indirect and induced effects resulting from the economic impact assessment will accrue to areas outside of the primary study area. Accordingly, the secondary study area was demarcated as Great Kei Local Municipality. A tertiary study area was also defined as being that of the Eastern Cape Province.

## 2 POLICY AND PLANNING ENVIRONMENT

This chapter examines the key legislation and policies relevant to the proposed development and includes a review of pertinent national, provincial and local policies that have a direct bearing on the development.

The overall aim of this review process is to provide insight into the government's priorities and plans in terms of renewable energies. This assists in determining the importance of the project with regard to the development objectives of the various spheres of government as well as in identifying potential developmental conflicts that the project might create. A brief review of the most relevant documents is provided in this section.

### 2.1 NATIONAL INFORMANTS

#### 2.1.1 *National Energy Act (2008)*

The National Energy Act seeks to, in its preamble; facilitate the increased generation and consumption of renewable resources while at the same time taking into account environmental management requirements and the interactions amongst economic sectors.

#### 2.1.2 *The White Paper on Renewable Energy (2003)*

The white paper sets a target of generating 10 000 GWh from renewable energy sources by 2013, which is equivalent to two units of a combined coal power plant with a capacity of 660 MW. The energy generated should come primarily from biomass, wind, solar and small-scale hydro. This renewable energy is to be utilised for power generation and non-electric technologies such as solar water heating systems and bio-fuels.

#### 2.1.3 *National Climate Change Response Paper Green Paper (2010)*

The NCCRP Green Paper focuses on making a fair contribution towards the stabilisation of greenhouse gas emissions and adapting and managing climate change impacts. The Paper proposes a number of approaches of dealing with climate change impacts with respect to selected sectors. Energy, in this context, is considered to be one of the key sectors that provides for possible mitigation to address climate change. Some of the responses proposed include:

- Diversifying the energy mix
- Using market-based measures such as a carbon tax, to motivate and drive diversification of the energy mix
- Establish a business environment for the successful development of renewable energy manufacturing industry in the country
- Design and roll out ambitious Research and Development Projects aimed at diversifying the energy mix

- Review and scale up the 2013 targets of generating 10 000 GWh of renewable energy

#### **2.1.4 The New Growth Path Framework (2010)**

The New Growth Path Framework is the government's programme of action that focuses firstly on the creation of decent employment opportunities through the support of labour-intensive sectors and secondly on ensuring long term growth through the support of advanced industries.

As a starting point, employment creation is planned to be stimulated in a few sectors including the green economy. Government plans to create 300 000 employment opportunities in the green economy alone by 2020, more than two thirds of which is intended to be created in construction, operation and maintenance of new environmentally friendly infrastructure.

#### **2.1.5 The Integrated Resource Plan 2010 – 2030 (2011)**

The IRP projected that an additional capacity of 56 539 MW will be required to support the country's economic development and ensure adequate reserves over the next 20 years. The required expansion is more than twice the size of the existing capacity of the system.

A significant component of the above-mentioned plan is the expansion of the use of renewable energy sources to reduce carbon emissions involved in generating electricity. Overall, the proposed plan implies a total generating capacity of 9 200 MW from wind by 2030.

#### **2.1.6 National Development Plan (NDP) 2030**

Vision 2030 was formulated by the National Planning Commission and released on 11 November 2011. The NDP proposes to create 11 million employment and grow the economy at an average rate of 5.4% per annum by 2030. The NDP also seeks to ensure that half of the new future generation capacity comes from renewable energy sources. It furthermore recognises the importance of the transition to a low carbon economy. As such the NDP suggests the following:

- Support carbon budgeting
- Establish an economy wide price for carbon by 2030 complemented by energy efficiency and demand management interventions
- Set a target of 5 million solar water heaters by 2030
- Implement zero emission building standards that promote energy efficacy
- Simplify regulatory regime to encourage renewable energy, regional hydroelectric initiative and independent power producers (IPPs)

#### **2.1.7 Renewable Energy Vision 2030 South Africa (2014)**

The renewable energy vision is a document developed by the World Wildlife Fund (WWF) and outlines South Africa's position, compared to other similarly developing countries, in terms of renewable energy development and energy generation. The document outlines goals and states that:

- Renewable energy as an exceptional source of flexible supply within the context of uncertain energy demand
- Comprehensive renewable energy base will support a resilient South African future
- A sustainable energy mix that excludes undue risks for the environment of society

### **2.1.8 Integrated Energy Plan (2016)**

The integrated energy plan is developed by the Department of Energy and outlines the South African Energy Generation Strategy and plan for the future. The document states that South Africa should continue to track a diversified energy mix which lessens reliance on a few primary energy sources. In addition to solar energy facilities, wind energy should continue to contribute in the generation of electricity. Other aspects the document outlines include:

- Allocations to safeguard the development of wind energy projects aligned with the Integrated Resource Plan 2010 should continue to be pursued
- Ensure energy security and supply
- Reduce environmental impacts
- Endorse job creation and localisation
- Lessen cost of energy
- Reduce water consumption
- Diversify supply sources
- Promote energy efficiency
- Promote energy access

### **2.1.9 Renewable Energy Independent Power Producer Procurement Programme (REI4P)**

The Department of Energy's (DoE) Independent Power Producers Procurement Programme was established at the end of 2010 as one of the South African government's urgent interventions to enhance South Africa's power generation capacity.

The DoE, National Treasury and the Development Bank of Southern Africa (DBSA) established the IPP Office for the specific purpose of delivering on the IPP procurement objectives. The primary mandate of this office is to secure electricity from renewable (REI4P) and non-renewable energy sources from the private sector. However, energy policy and supply is not only about technology, but also has a substantial influence on economic growth and socio-economic development. As such the IPPP has been designed to go beyond procurement of energy to also contribute to broader national development objectives such as job creation, social upliftment and the broadening of economic ownership.

At a national level the following commitments have been made for bid windows 1, 2, 3, 3.5 and 4 as of December 2017 (DoE, 2018):

- 6 422 MW of electricity had been procured from 112 RE Independent Power Producers (IPPs) in the seven bid rounds;
- 3 052 MW of electricity generation capacity from 56 IPP projects has been connected to the national grid;
- Investment (equity and debt) to the value of R201.8 billion, of which R48.8 billion (24%) is foreign investment, was attracted;
- Created 31 207 job years for South African citizens;
- Socio-economic development contributions of R357.4 million to date;
- Enterprise development contributions of R115.2 million to date;
- Carbon emission reductions of 15.4 MtonCO<sub>2</sub> has been realised by the programme from inception to date.

From an Eastern Cape perspective, the following commitments have been made across the aforementioned bid windows:

- Add 1 509 MW to the national grid from 17 REI4P projects;
- Incur R33.8 billion in project costs increasing the gross domestic product (GDP) of the province;
- Incur R4 489 million in social economic development expenditure;
- Contribute R7 434 million to community trusts established as part of the programme;
- Create 18 137 job years.

**The REI4P will not be applicable to the Wild Coast Wind Farm Facility with 10 MW generation capacity, as all the electricity generated will be used for the production facility not for commercial use. IRP (2010) Schedule 2 states that any generation plant that is constructed and operated for own use will be exempted from applying and holding a generation licence. Based on the Amended Electricity Regulation Act of 2006 (the ERA), a facility like this one, would only be required to register with NERSA. Should the energy generated be transferred to the national grid, then a generation licence would be required.**

## 2.2 KEY PROVINCIAL DOCUMENTS

### 2.2.1 *The Eastern Cape Industrial Development Strategy (2011)*

The EC IDS sets out a number of strategic goals which include positive economic growth, ensuring that economic growth leads to labour absorption and ensuring that existing employment are retained. In pursuit of these goals the Industrial Development Strategy identifies the need for:

- R&D and innovation
- Skills development
- Improving infrastructure and logistics
- Providing developmental finance
- Promoting investment, trade and exports

- Developing institutional structures

The achievement of these strategic goals is planned through the development of several key sectors including:

• Tourism	• Capital goods
• Chemicals and Petrochemicals	• Green industries
• Agriculture and agro-processing	• Automotive

The Industrial Development Strategy also seeks to develop an industrial base for the manufacturing of components required for the production of solar cells, solar panels and certain components of wind turbines.

### **2.2.2 The Eastern Cape Sustainable Energy Strategy (2012)**

The EC Sustainable Energy Strategy seeks to lay out the provinces strategic direction in terms of the renewable energy industry. The focus of the strategy is to encourage sustainable, affordable and environmentally friendly energy production by creating an enabling environment for energy production and sustainable technology, skills and industry development. This is to be achieved through several initiative including:

- An intensive training programme among relevant decision makers with respect to renewable energy project approvals
- The establishment of an implementation task team to provide potential investors with a one-stop-shop for renewable energy information in the province
- Development of a provincial locational perspective of renewable energy
- Lobbying Eskom to expedite and strengthen the transmission capacity of the former Transkei area
- Lobbying the Department of Energy to set out long-terms programme for the procurement of renewable energy generation

Through the purist of these initiatives the Eastern Cape Province seeks to become a leading and preferred destination for renewable energy investment in South Africa.

### **2.2.3 The Eastern Cape Provincial Economic Development Strategy (PEDS) (2017)**

The Eastern Cape PEDS seeks to create a clear, long-term vision and strategy for the growth and development of the Eastern Cape by building on the strength and opportunities of the province, while at the same time addressing its weaknesses and threats.

In pursuit of this goal, PEDS identifies six high potential economic sectors that can catalyse growth in the province. These sectors are:

- Agri-industry

- Sustainable energy
- Ocean economy
- Automotive
- Light manufacturing
- Tourism

With respect to sustainable energy, PEDS notes that it is imperative that the province aligns all its energy opportunities so as to:

- Create the optimal institutional environment for the location of sustainable energy projects in the Eastern Cape
- Harness the maximum possible value chain, localisation and industrialisation opportunities from sustainable energy projects
- Ensure adequate and aligned skills development
- Link innovation, entrepreneurial and small business opportunities to sustainable energy projects
- Link black industrialist opportunities to sustainable energy projects

## **2.3 LOCAL GUIDANCE**

### ***2.3.1 Amathole District IDP (2018-19)***

The Amathole District Municipality SDF aims to create a spatially based framework for the area to manage changes, needs and growth in a sustainable manner. The SDF is an indicative tool whereby identification of development potential areas, priorities in infrastructure investments and development spending that will in turn be reflected in the IDP sector plans. The IDP sector plans are therefore, required to respond to the spatial elements of the DSDP in their proposals regarding the land development and settlement development. Spatial dimensions of key strategic focus areas of the district as:

- Local Economic Development
- Land & Agrarian Reform
- Water & Services Development
- Environmental Management

Furthermore, based on the newly reviewed ADM SDF the above highlighted key focus areas have been consolidated and reflected within seven spatial pillars as proposed by Provincial Spatial Development Plan (2010). The Pillars are classified according to the following frameworks (Amathole, 2018).

Furthermore, pillars are classified according to some of the following frameworks:



- **Rural Development Programmes** - Institute a programme focusing on improving access to land for development; Obtain mapping of agro-ecological areas, to define and conserve natural resource areas for food security integrate Area Based Plan proposals into SDF.
- **Economic Programmes** - Identify, analyse and map livelihood zones; Identify and map optimal spatial locations of potential agro-industries
- **Infrastructure Programmes** - Obtain mapping of access road upgrading and maintenance programmes to underpin rural development; Identify and integrate strategic transport routes into SDFs; research alternative energy sources.

### **2.3.2 Amathole District IDP (2018-19)**

Renewable energy is one of Amathole District Municipality (ADM) initiatives that is aimed at raising awareness to ADM locals on the usage of alternative energy sources and also the identification of new opportunities for enterprises in the energy sector. This will be included in the ADM LED strategy under review. The District Municipality has a 200km of coastline which can be used for hydro-electricity, there is also potential for wind-farms, and solar panels farms, especially in high lying areas.

### **2.3.3 Great Kei Local Municipality IDP (2017-2022)**

The vision of the Great Kei IDP is to “To achieve a peaceful and sustainable environment, where all communities enjoy an improved quality of life through promotion of socio-economic development and ensure sustainable quality service for all.” The mission statement indicates that Great Kei wishes “To provide sustainable/ continuous services, good governance and employment opportunities through infrastructure development, thriving agriculture, commerce, SMME’s and tourism activities.”

The vision and mission statement align with the development of the facility in that they both indicate the development of sustainable economies and a sustainable environment that can benefit the local communities. Thus, the development of the WEF for the use at the abalone production facility aligns with the goals of the municipality.

Great Kei Municipality has a similar development called Haga Haga Wind Farms (Pty) Ltd which covers 9100 hectares that is currently at an Environmental Authorization stage and public comments. The wind farm will produce about 150 megawatts.

### **2.3.4 Great Kei LED Strategy (2014)**

The Great Kei LED indicates that one of its primary goals is to develop the rural economy by providing jobs and skills to the local population. Key anchor projects are predominantly pro-poor and appear to focus on developing the region. The development of the WEF aligns well with the stated goals in the Great Kei LED and can provide employment and skills development for the region.

## **2.4 SYNOPSIS**

The review of the policy environment suggests that utilisation of renewable energy sources in South Africa is considered to be an integral means of reducing the carbon footprint of the country, diversifying the national economy and reducing poverty. Any project contributing to the above-mentioned objectives can therefore be considered strategically important to South Africa. The REI4P will not apply to the Wild Coast Wind Farm Facility as all the electricity generated will be used for the production facility not for commercial use. Based on the Amended Electricity Regulation Act of 2006 (the ERA), the Wind Farm Facility would be required to register with NERSA for electricity generation. In a case where, the electricity is brought back into the national grid, a generation licence would be required.

From a provincial and municipal policy perspective the facilitation of renewable energy projects and interventions that related to the broader green economy are seen as a priority. The Eastern Cape Provincial Industrial Development Strategy makes particular reference to the need to develop green industries which includes renewable energies. Likewise, the Great Kei municipality has noted the importance of wind energy in its IDP and is actively seeking to promote such developments.

### 3 SOCIO-ECONOMIC PROFILE OF THE STUDY AREA

This chapter documents various aspects of the primary study area including population and household data, income levels and employment profiles. In addition, the chapter also reviews the economic structure and performance of the local economy.

The intention of this review is to provide an overview of the socio-economic context of the area so as to better understand the dynamics of the area and to inform the socio-economic impact assessment process.

#### 3.1 POPULATION, INCOME AND EMPLOYMENT PROFILE

##### 3.1.1 Population Profile

The primary study area falls within the Great Kei Local Municipality which is in the Eastern Cape and collectively accounts for 71% of the municipal population, and 70% of the households in the municipality. The table below presents an overview of the primary study areas' population structure.

**Table 2:** Overview of the study areas population structure

INDICATOR	PRIMARY AREA	GREAT KEI	EASTERN CAPE
Area (km <sup>2</sup> )	57.1	1 736	168 962
Population	27 723	38 991	6 562 051
Population density (km <sup>2</sup> )	484.7	22.4	38.8
Number of Households	8 029	11 496	1 732 420
Household density (HH per km <sup>2</sup> )	140.4	6.6	10.3
Average Household size	3.5	3.4	3.7
Average monthly household income	R 3 759	R 7 783	R 8 372

Source: Quantec (2018)

The population of the primary study area is 27 723 with approximately 8 029 households. The population density is relatively high in this area (484.7 km<sup>2</sup>) but is also higher than the Great Kei density (22.4 km<sup>2</sup>). The average household size is 3.5 which is close to that of Great Kei at 3.4 persons per household. This is higher than the Eastern Cape average of 3.7.

In the primary study area, the average monthly household income is approximately R 3 759 which is lower than the rest of Great Kei which has an average of R 7 783. These figures are notably lower than those of the Eastern Cape (R 8 372).

Any new development that will occur in the area, will improve the standards of living of the local through job creation.

### **3.1.2 Employment Profile**

The review of the employment profile of the area indicates that only 19% of the population in primary study area is employed which is marginally lower than the 25% municipal average for Great Kei.

Unemployment in the primary area is exceptionally high at 38% while the municipal unemployment rate is 29%. Unemployment area of the primary area is in line with the Eastern Cape unemployment rate of 37%. This indicates that a large number of the working age population are not employed primarily as a result of the lack of opportunities in the area. The “not economically active” rate for the primary area is 58% while Great Kei is 54% which indicates a large number of people are employed and rely on others in the household to earn an income or rely on remittances and grants.

**Table 3:** Employment profile of the study area

<b>Indicator</b>	<b>Primary Area</b>	<b>Great Kei</b>	<b>Eastern Cape</b>
Employment Rate	19%	25%	24%
Unemployment Rate	38%	29%	37%
Not Economically Active	58%	54%	55%

**Source:** StatsSA Census (2011)

Relatively the primary and secondary study area are poorer areas with higher unemployment rates and less employed inhabitants than the rest of the province. The implication of employment statistics presented in Table 3 are that:

- There is likely to be a high rate of worker discouragement (people that have given up looking for work) in the area as a result of opportunities for employment being very limited
- The local labour force is likely to be under-skilled as a result of limited working opportunities

Thus, development that will create jobs or improve the employment of the local population will have positive effects on the community. Such a development will have positive impacts on employment for the area and which is desperately needed.

### **3.1.3 Education Profile**

The education levels are stated in the table below. It is important to note that the primary and secondary area have a large proportion of the population who have some secondary schooling, followed by little to no primary school. Approximately 33% and 34% of the primary study area and

Great Kei have some secondary education, this is well in line with the Eastern Cape rate of 36%. In the primary area, only 14% of the population have completed secondary while only 4% have a higher qualification. This indicates that the population is largely poorly educated with few transferable skills available to perform more technical vocations. The construction of the Wild Coast Abalone production facility will likely require a large number of semi-skilled and unskilled workers which can be provided by the surrounding community.

**Table 4:** Education profile of the study area

Indicator	Primary Area	Great Kei	Eastern Cape
No schooling	21%	19%	11%
Some primary	21%	20%	18%
Complete primary	7%	7%	6%
Some secondary	33%	34%	36%
Completed Secondary (Matric)	14%	15%	20%
Higher	4%	5%	8%

**Source:** StatsSA Census (2011)

Despite the limited education levels found in the area, there will be a pool of potential employees to service the development. On the job training will be required to capacitate the staff in order to operate the facility given the shortage of skills in the area.

### **3.1.4 Access to Electricity**

The table below indicates access to electricity for the study areas. The data provided indicates that 87% of households utilise electricity for lighting in the primary area, 81% households in Great Kei, followed by Eastern Cape at 75%. The second highest form of energy for lighting is that of paraffin at 15% by households in Great Kei, 10% by those in the primary area and Eastern Cape. The development of any additional electricity generating capacity will be a boon for the national grid. While not the primary goal of the WEF it will benefit the national grid for any energy not utilised at the production facility.

**Table 5:** Energy for lighting for the study area

Energy for Lighting	Primary Area	Great Kei	Eastern Cape
Electricity	87%	81%	75%
Candles	2%	4%	14%
Paraffin	10%	15%	10%

Solar	0%	0%	0%
Gas	0%	0%	0%
None	0%	0%	0%

Source: StatsSA Census (2011)

### 3.2 LOCAL ECONOMIC PROFILE

The Gross Value Added (GVA) of the Great Kei Municipality was R 1.4 billion in 2018 (constant prices), which collectively account for just over 1.4% of the Eastern Cape's economy (Quantec, 2018).

**Table 6:** GVA structure of the Great Kei Municipality between 2008 and 2018 in Constant 2010 Prices

Sector	2008	2018	CAGR 2008-2018
<b>Primary Sector</b>	<b>6.14%</b>	<b>6.18%</b>	<b>1.10%</b>
Agriculture, forestry and fisheries	5.91%	5.98%	1.17%
Mining and quarrying	0.24%	0.20%	-0.79%
<b>Secondary Sector</b>	<b>15.37%</b>	<b>16.00%</b>	<b>1.45%</b>
Manufacturing	0.94%	9.84%	3.23%
Electricity, gas and water	0.94%	0.55%	-4.27%
Construction	6.48%	5.61%	-0.40%
<b>Tertiary Sector</b>	<b>78.49%</b>	<b>77.83%</b>	<b>0.96%</b>
Trade	26.30%	23.71%	0.01%
Transport and communication	5.89%	5.80%	0.89%
Finance and business services	21.31%	21.78%	1.27%
General government	16.66%	18.65%	2.19%
Community and personal services	8.33%	7.89%	0.51%
<b>TOTAL REAL GVA</b>	<b>815.47</b>	<b>904.47</b>	<b>1.05%</b>

Source: Quantec, Standardised Regional (2018)

Over the last 10 years, the Compounded Annual Growth Rate (CAGR) of the Great Kei Municipality was 1.05% (Quantec, 2018). The sectors that contributed the most to the GVA are the trade (23.71%), and finance and business services (21.78%) and general government (18.65%). This distribution indicates that a large proportion of the GVA in the region relies on the tertiary sector (77.83%).

The primary sector experienced positive marginal growth of 1.10% whilst the secondary sector has grown by 1.45%. The growth in primary sector is supported by marginal growths in agricultural, forestry and fisheries sector has grown by 1.17% while mining and quarrying contracted by -0.79%. Secondary sectors performed better but growth was slowed on the back of weakened growth in the construction sector of -0.40%, and the -4.27% contraction in electricity, gas and water sector, despite the 3.23% positive growth in manufacturing. As stated previously, the tertiary sector has contributed the highest proportion to the GVA of the region and as of 2018 contributes 77.83% (R1 087 million) to the GVA.

General government has seen the largest growth of 2.19%, growing from R 103 million in 2008 to R 271 million in 2018.

**Table 7:** GVA per sector for the Great Kei Municipality in current prices (in R' millions)

<b>Sectors</b>	<b>2008</b>	<b>2018</b>
<b>Primary Sectors</b>	<b>R57.82</b>	<b>R115.287</b>
Agriculture, forestry and fisheries	R55.815	R113.777
Mining and quarrying	R2.005	R1.51
<b>Secondary Sectors</b>	<b>R109.894</b>	<b>R236.676</b>
Manufacturing	R55.143	R135.203
Electricity, gas and water	R3.961	R17.68
Construction	R50.79	R83.793
<b>Tertiary Sectors</b>	<b>R518.962</b>	<b>R1 087.289</b>
Trade	R156.654	R350.62
Transport and communication	R46.042	R86.985
Finance and business services	R155.077	R271.58
General government	R103.482	R271.321
Community services	R57.707	R106.783
<b>Total Real GVA</b>	<b>R 686.676</b>	<b>R 1 439.252</b>

**Source:** Quantec, Standardised Regional (2018)

Table 8 below shows the employment structure of the Great Kei Municipality between 2008 and 2018 by sector. In all the sectors growth stagnated in terms of employment levels, with primary and tertiary

sector having experienced no growth at all, secondary sector contracted by -1% per annum over the 10-year period. The primary sector is the 2<sup>nd</sup> largest employer employing about 21.94% of total workforce in Great Kei, this has seen little or no growth in employment levels in both agriculture, forestry and fishing and mining and quarrying.

The secondary sector performance contracted by -1%, with little or no growth over the 10 year period per annum. Both construction and mining grew by 1% per annum. Whilst electricity, gas and water contracted by -3%. The tertiary sector remains the largest employer and this sector has experienced significant growth between 2008 and 2018. This industry alone accounts for 65.01% of those employed in the municipality. The two largest employers are those of the trade (23.34%), and community services (21.44%).

**Table 8:** Employment structure of the Great Kei Municipality between 2008 and 2018

Industry	2008	2018	CAGR
<b>Primary Sector</b>	<b>21.57%</b>	<b>21.94%</b>	<b>0%</b>
Agriculture, forestry and fishing	21.44%	21.85%	0%
Mining and quarrying	1.04%	0.09%	-4%
<b>Secondary Sector</b>	<b>12.34%</b>	<b>13.06%</b>	<b>-1%</b>
Manufacturing	4.72%	4.98%	1%
Electricity, gas and water	0.14%	0.10%	-3%
Construction	7.35%	7.88%	1%
<b>Tertiary Sector</b>	<b>66.10%</b>	<b>65.01%</b>	<b>0%</b>
Trade	22.52%	23.34%	1%
Transport, storage and communication	1.73%	2.01%	2%
Finance, insurance, real estate and business services	8.89%	7.94%	-1%
General government	8.62%	7.94%	2%
Community and personal services	24.33%	21.44%	-1%
<b>Total Employed</b>	<b>7 771</b>	<b>7 898</b>	<b>0%</b>

Source: Quantec, Standardised Regional (2018)



During the construction phase of the proposed development, employment is likely to be created in the construction sector (albeit temporarily), and during the operational phase many jobs will be created in the fishing industry. This is expected to boost growth in the primary sector.

### **3.3 SPATIAL PROFILE OF IMMEDIATELY AFFECTED ENVIRONMENT**

#### ***3.3.1 Land use profile***

It must be noted that the WEFs will be located on a land that is not currently economically active. The area surrounding the proposed Wild Coast WEF is to a large extent utilised for agricultural purposes. Livestock farming (sheep, goats and cattle), and to a lesser extent crop farming is also undertaken on some properties. There are some properties that operate in the tourism sector that surround the proposed facility. These include:

- Club Wild Coast Resort
- Haga Haga Country Club
- Haga Haga Hotel
- Haga Haga Holiday Accommodation
- Double Mouth
- Commercial Cattle farming
- Firefly House
- Miarestate Hotel and Spa

The majority of tourism products that are in the area are accommodation establishments, which provide accommodation to domestic and international visitors. These visitors come in when visiting family and friends (VFR) or on holiday. The impact of Wind Farm facilities on tourism activities will be discussed extensively in section 3.3.2 weighing in, on the costs and benefits.

It is important to point out that no interviews were yet done with the Interested and Affected Parties (I&APs) this section was informed by the site visit and information received from Wild Coast Abalone. This stage will be completed once the EIA process has introduced the local community to the project after which interviews with I&APs can be conducted.

#### ***3.3.2 Wind Farm Facilities and Tourism***

Tourism, in particular eco, nature and adventure tourism, has previously been viewed as being incompatible with the presence of renewable energy facilities. This view has largely softened in South Africa since the beginning of RE4IP process in South Africa. There are, however, still concerns over the impact of local tourism by some locals. Literature across the world has indicated that WEFs either do not have a significant impact on tourism or there is a small but noticeable difference in revenue or visitors.

The potential negative effects on the local tourism and game farming industry are expected to be created during the construction phase of the development. Such negative impacts are expected to

ensue as a result of noise and visual disturbance, which may alter the natural and cultural landscape features of the environment and subsequently the experience of visitors to local tourism destinations and game farms. The full extent of the negative impact will however, most probably be achieved during the operational phase of the project when the word about the proximity of the project to local game farms spread amongst potential tourists and repeat visitors.

Proposals for WEF developments commonly receive resistance from the tourism and game farming industry, who believe such developments are likely to adversely affect the tourism potential of an area. Several issues are raised by these stakeholders including the visual impact of the wind turbines on the scenery; the cumulative effect of providing bad publicity to an area; and the detrimental effects on birds and other wildlife (especially for companies offering outdoor activities) (NFO World Group, 2003). The visual impact of WEFs causes the greatest concern for local tourist companies – especially in countries known for their natural environment (NFO System Three, 2002). Tourism companies, who in addition to being concerned about the actual turbines, also express concern about additional infrastructure linked to the proposed WEF i.e. roads and cabling (NFO System Three, 2002). This supporting infrastructure is also seen as having a negative visual affect. A number of these concerned tourism stakeholders, however, believe that these adverse visual impacts can be mitigated through having WEFs “sensitively site” so as to avoid important tourism sites (NFO System Three, 2002).

Determining how WEFs directly affect the tourism industry is therefore very difficult, and thus many authors and organisations are of the opinion that it is not possible to draw conclusions. As a result, many surveys have been conducted with tourists to determine how the sight of WEFs affected their visit to the area. It should be noted that most of these surveys bear out the finding that a significant number of tourists (between 70% and 91%) are not overly concerned by the presence of WEFs (NFO System Three, 2002; NFO WorldGroup, 2003; BWEA, 2006).

Tourism, in particular those activities that are related to eco-tourism, game farming and cultural tourism were identified as some of the economic development priorities in the primary study area. Tourism is a vital industry in South Africa so it's important for Wind Power to work in harmony with our natural landscapes. Given that wind farms are a relatively new industry in South Africa, it's important that they are in harmony with the environment. This is supported by international literature, as there is lack of evidence in South Africa, based on international example from a UK survey: 80% of UK residents indicated that they wouldn't be put off holidaying in the UK by wind farms, and 40% would like to visit a wind farm on holiday according to a recent Visit Scotland report (Visit Scotland, 2015). It is said that about 35,000 people take trips to Scroby Sands Windfarm in Great Yarmouth each year and nearly 250,000 people have visited Whitelee Wind Farm near Glasgow since it opened in September 2009 (Whitelee Windfarm, 2015). This is to show that wind farm facilities can align or even compliment local tourism activities. Other studies conducted internationally have also indicated a very small number of tourists being dissuaded from areas with windfarms but there exist far more complicated reasons for a drop in tourism numbers.

Besides direct effects, business activities generate production and consumption induced effects. Any decline in business sales then, would lead to a decrease in demand through backward linkages that stimulate production-induced impacts. This could potentially stimulate a decline in the consumption effect through salaries and wages earned by employees.

*This aspect will be further expanded upon when the EIA is at a more developed stage and I&APs have been introduced to the project.*

## 4 IMPACT ASSESSMENT ASSUMPTIONS

This chapter of the report describes the assumptions used in the socio-economic impact assessment study and specifically in the economic modelling exercise which aims to quantify the economic impact of the project. The assumptions presented in this section are provided by CES Environmental and Social Advisory Services and Abalone Wild Coast as well as based on primary and secondary research.

The assumptions presented in this chapter refer to:

- Construction, operation and decommissioning assumptions applicable to the project as provided by Wild Coast Abalone.
- Assumptions associated with the visual impacts resulting from the project and the related potential losses of affected businesses

### 4.1 WILD COAST ABALONE WEF ASSUMPTIONS

The proposed facility is to have a maximum installed capacity of approximately 10 MW. The assumptions specific to the phases of the project's lifespan are provided in the following paragraphs.

#### 4.1.1 *Construction phase assumptions*

The following assumptions regarding the construction phase of the proposed development are made:<sup>1</sup>

- The construction of the facility is planned to commence in 2021 contingent on the project EIA Authorisation approval.
- The total investment into the establishment of the facility is valued at R 150 000,000 in 2019 prices, of which all will be spent into the South African economy.
- The total value of the investment is informed by renewable energy market industry standards for setting up a wind farm facility.
- Only local expenditure is considered in this analysis.
- The construction of the facility is planned to commence in 2021 with phase 1 which will be 5mw and phase 2 will be 5mw.
- The construction of the facility will create an estimated 100 project specific personnel of which 80 employment positions will be created for local labour. These employment positions will comprise of the following occupations:
  - 5 managers and highly skilled professionals
  - 25 skilled artisans and supervisors
  - 65 low skilled individuals (security and general labourers)

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<sup>1</sup> Data obtained through the assistance of Wild Coast Abalone, information said to be correct at the time of drafting this report. It is likely that some of these figures will change as more detailed planning is conducted

#### **4.1.2 Operational phase assumptions**

- Operational and maintenance costs are 2.5% of total CAPEX, which is R3 750 000
- Operations are expected to reach full capacity in 2022 after construction commences in 2021
- The required workforce of the entire facility includes 1 highly skilled position (i.e. engineers, programmes), 1 skilled position and 3 positions for other general personnel. South African residents will fill all of these positions and most will come from the local area.

#### **4.1.3 Decommissioning phase assumptions**

The costs of decommissioning the plant are not yet known. It is uncertain as to whether the facility will exist beyond the normal 20-year period of wind farm facilities.

#### **4.2 ASSUMPTIONS REGARDING POTENTIAL LOSSES IN THE AREA AFFECTED BY VISUAL IMPACTS**

During the operation of the WEF, there will not be any effect on future economic activities such as farming operations as the land has no activities going on. It is not envisaged that significant changes will occur to land use once the WEF has been built, and animals will be free to graze across the site with landowner(s) being able to continue to use the land in the same manner as they did prior to the establishment of the WEF. Similarly, cultivation of crops will still be possible on the remaining extent of the farm on which the turbines will be installed.

## 5 EVALUATION OF IMPACTS AS A RESULT OF THE PROPOSED WEF

This chapter of the report seeks to describe and evaluate the economic and social impacts that are expected to occur as a result of the development of the Wild Coast Abalone WEF. This chapter also provides a net effect and trade off analysis of the development of the WEF in order to determine the preference of one option over another. This chapter has separated the assessment of the Wild Coast Abalone WEF into the projects three lifecycle phases namely construction, operation, decommissioning. A no-go option has also been assessed in this subsection.

### 5.1 DEFINING ECONOMIC IMPACTS

Economic impacts can be defined as the effects (positive or negative) on the level of economic activity in a given area(s). The net economic impact is usually measured as the expansion or contraction of an area's economy, resulting from the changes in (i.e. opening, closing, expansion or contraction of) a facility, project or programme.

#### 5.1.1 *Temporal Nature of Impacts*

All new projects/interventions have two basic types of investments namely an initial capital injection/expenditure (CAPEX) which can take the form of either a greenfield development (i.e. new construction project on vacant land) or brownfield development (i.e. a modification of an existing structure and there is an annual investment made to maintain/operate the investment).

The economic impacts created by a capital injection (CAPEX) are once-off impacts that will occur for the duration of construction. Thus, economic impacts associated with the construction phase are not sustainable economic impacts. Operational economic impacts, unlike capital expenditure economic impacts are sustainable and thus are calculated as an annual impact based on operational expenditure (OPEX) for a given year.

**It is important to note that because of this temporal nature CAPEX and OPEX impacts cannot be added together to determine the 'total' economic impact.**

#### 5.1.2 *Types of economic impacts*

The net economic impact of an exogenous change in the economy will be translated according to various direct and indirect economic effects, as are defined below:

- **Direct economic impacts** are the changes in local business activity occurring as a direct consequence of public or private activities in the economy, or public programmes and policies. Furthermore, increased user benefits lead to monetary benefits for some users and non-users (individuals and businesses) within the geographical area:

- For affected businesses, there may be economic efficiency benefits in terms of product cost, product quality or product availability, stemming from changes in labour market access, cost of obtaining production inputs and/or cost of supplying finished products to customers. For affected residents, benefits may include reduced costs for obtaining goods and services, increased income from selling goods and services to outsiders, and/or increased variety of work and recreational opportunities associated with greater location accessibility.
- **Indirect and induced impacts:** The direct benefits to business and the residents of communities and regions may also have broader impacts, including:
  - Indirect business impacts – business growth for suppliers to the directly affected businesses and potential growth of municipal revenue due to raised taxes and service levies.
  - Induced business impacts – business growth as the additional workers (created by direct and indirect economic impacts/effects) spend their income on food, clothing, shelter and other local goods and services.

### **5.1.3 Economic impacts considered**

The direct and indirect economic impacts listed are measured according to the following broad economic variable categories:

- **Production/Business Sales:** refers to the value of all inter- and intra-sectoral business sales generated in the economy as a consequence of the introduction of an exogenous change in the economy. Explained more simply, new business sales equate to additional business turnover as a result of the introduction of an exogenous change in the economy (e.g. the construction of wind turbines).
- **Contribution to GVA:** GVA is a broader measure of the full income effect. This measure essentially reflects the sum of wage income and corporate profit generated in the study area as a result of an exogenous change in the economy.
- **Employment:** Refers to the employment resulting from the construction or operation of the project under investigation.

Using the Input/ Output model methodology, various anticipated direct and indirect economic impacts of construction and operational phases of the proposed development have been quantified. These economic impacts have been derived using an understanding of economic cause-effect relationships.

The principle of cause-effect is that for any economic action, there can be a multitude of different economic reactions (effects).

## 5.2 CONSTRUCTION PHASE IMPACTS

The following sections indicate the positive and negative impacts that are likely to occur during the construction phase of the proposed estate development.

### 5.2.1 Positive impacts during construction

#### a) Temporary stimulation of the national and local economy

The proposed Wild Coast Abalone WEF is expected to require R 150 million (2019 prices) to establish during construction. All of the funds will be invested into the local economy. Aspects such as aggregate, civil works for the substation and electrical infrastructure and fuel will be procured predominantly from Great Kei suppliers. Equipment and plant which is not available in Great Kei and other towns within the Amathole DM region will be procured from suppliers within the province. The localised expenditure on the project will stimulate the local and national economies. The availability of materials within South Africa will dictate where inputs are sourced from and which company will be awarded the tender, with closely proximity to site and BBBEE status given as preference.

As indicated in Table 13 it is estimated that the construction of the project will increase the production in the country (i.e. new business sales) by R 375.6 million, which will translate into an additional R 70.5 million of GVA. Besides the value added that could be generated by local construction businesses through sub-contracting agreements and employment of free-lancers, the sectors that are expected to benefit the most from the production and consumption induced effects are tertiary services such as trade, accommodation, and transport services.

**Table 13: Estimated impact on the national and local economies in 2019 (R' million, 2019 prices)**

Direct	Indirect	Induced	TOTAL
<b>Impact on Production</b>			
R 150	R 162.4	R 63.2	R 375.6
<b>Impact on Gross Value Added</b>			
R 44.7	R 18.7	R 7.1	R 70.5

The greatest effects on production and GVA stimulated during construction activities will be created through the multiplier effects, specifically through a combination of production and consumption induced effects. The former refers to the impact generated along backwards linkages when the project creates demand for goods and services required for construction and subsequently stimulates the business sales of the suppliers of inputs that are required to produce these goods and services. The



latter refers to the effects of household spending which is derived from an increase in salaries and wages directly and indirectly stimulated by the project's expenditure.

Sectors and industries that will experience the greatest stimulus from this indirect and induced impacts include:

- Basic metals, structural metal products and other fabricated metal products industries
- Trade
- Insurance
- Transport services
- Electrical machinery and apparatus

<b>Impact: Temporary increase in the GVA and production of the national and local economies during construction</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Medium term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Moderate
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource lost once construction completed
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>MODERATE</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>• The developer should be encouraged by the EPC contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies.</li> <li>• The developer should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods and products from local suppliers were feasible.</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>• A WEF has been built in the municipality (Chaba WEF) and another one under EIA Authorisation process is the Haga Haga Wind Farms (Pty) Ltd. In the province, some are already have already been constructed. This could provide sufficient economies of scale and thus open up opportunities for the establishment of new industries in the country and new businesses in the local area, specifically in the sectors that are not well represented in the economy. This has already occurred to a certain extent with the manufacturing of WEF components in the country.</li> </ul>	

b) Temporary increase employment in the national and local economies

The proposed facility will create 100 Full Time Equivalent (FTE) employment positions during construction. About 80% of the employment positions involve skilled and semi-skilled construction workers, with the remaining being managers, professional engineers and supervisors. It is anticipated that 80% of the employment will be filled by people from local communities. The table below also indicates the 2019 values.

Given the size of the local construction sector it is anticipated that there will be sufficient local labour to satisfy the demand for unskilled workers.

**Table 14:** Estimated Full Time Equivalent positions to be created during construction (2019 values)

2019 Values			
Direct	Indirect	Induced	Total
100	344	267	711

Beyond the direct employment opportunities that will be created by the project during the construction phase the development will also have a positive spin-off effect on the employment situation in other sectors of the national and local economies as shown in Table 13. Most of these positions will be in sectors such as construction, business services and trade. Given that a significant portion of the multiplier effects will be generated through backward linkages, more than half of these FTE employment positions will be created along the supply chain and amongst industries providing inputs to the businesses in the supply chain.

Based on these figures the total contribution of the project towards employment creation in South Africa is estimated at 711 FTE employment positions throughout the construction phase. It is recommended that the developer encourage the EPC contractor to fill as many local positions as possible.

<b>Impact: Temporary increase in employment in local and national economies</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource lost once construction completed
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	

MITIGATION MEASURES:	
<ul style="list-style-type: none"> <li>Organise local community meetings to advise the local labour force about the project that is planned to be established and the employment that can potentially applied for</li> <li>Establish a local skills desk (in Great Kei) to determine the potential skills that could be sourced in the area</li> <li>Recruit local labour as far as feasible</li> <li>Employ labour-intensive methods in construction where feasible</li> <li>Sub-contract to local construction companies particularly SMMEs and BBBEE compliant enterprises where possible</li> <li>Use local suppliers where feasible and arrange with the local SMMEs to provide transport, catering and other services to the construction crews.</li> </ul>	
SIGNIFICANCE OF IMPACT WITH MITIGATION	<b>MODERATE</b>
CUMULATIVE IMPACTS:	
<ul style="list-style-type: none"> <li>None foreseen given the nature of employment</li> </ul>	

c) Contribution to skills development in the country and local economy

The construction of the proposed Wild Coast Abalone WEF is likely to have a positive impact on the skills development in South Africa particularly given the limited number of such facilities currently operating in the country. Since there are a limited number of operational wind energy facilities in South Africa, the local expertise in the construction of such facilities is very limited. During the turbine component assembly and tower manufacturing period which is included as part of the construction phase and is planned to be conducted in the Eastern Cape, it is likely that foreign technical experts will be involved. This will present an opportunity for skills and knowledge transfer between these technical experts and local manufactures.

It is also expected that the construction crew involved in the project will gain knowledge and experience in respect of the development of wind energy facilities. This will be highly beneficial given South Africa's target of generating 9 200 MW from wind energy by 2030 (Department Energy, 2011).

In addition to the direct effects of the project on skills development in the country and the local economy, the project could contribute to the development of the local R&D and manufacturing industries associated with wind technology. This could be achieved through partnerships with Rhodes University (situated in Makhanda) or the Nelson Mandela University (NMU) in Port Elizabeth. Partnerships of this nature could further enhance the development of new skills and expertise.

<b>Impact: Contribution to skills development in the country and in the local economy</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	Regional
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable

<b>REVERSIBILITY</b>	Reversible, skills can be lost if not practiced
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>Facilitate knowledge and skills transfer between foreign technical experts and South African professionals during the pre-establishment and construction phases</li> <li>Set up apprenticeship programmes to build onto existing skill levels or develop new skills amongst construction workers especially those from local communities</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Improved labour productivity and employability of construction workers for similar projects</li> <li>Possible development of local skills and expertise in R&amp;D and manufacturing industries related to wind technology through partnerships with Rhodes University and NMU</li> </ul>	

d) Temporary increase in household earnings

The proposed WEF will create a total of 711 FTE employment positions (direct, indirect and induced) during construction generating R 246 million of revenue for the affected households in the country through direct, indirect and induced effects. Of this figure R 19 million will be paid out in the form of salaries and wages to those individuals directly employed during the construction phase. The remaining R 227 million in households' earnings will be generated through indirect and induced effects resulting from project expenditure.

Although temporary, this increase in household earnings will have a positive effect on the standard of living these households. This is especially applicable to the households benefiting from the project that reside in the Great Kei Local Municipality.

<b><i>Impact: Temporary improvement of the standard of living of the positively affected households</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource lost once construction completed
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	

<ul style="list-style-type: none"> <li>Recruit local labour as far as feasible to increase the benefits to the local households</li> <li>Employ labour intensive methods in construction where feasible</li> <li>Sub-contract to local construction companies where possible</li> <li>Use local suppliers where feasible and arrange with local SMMEs and BBBEE compliant enterprises to provide transport, catering and other services to the construction crews</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Improved standard of living of the affected households</li> </ul>	

e) Temporary increase in government revenue

The investment in the Wild Coast Abalone Wind Farm will generate revenue for the government during the construction period through a combination of personal income tax, VAT, companies' tax etc. Government earnings will be distributed by national government to cover public spending which includes amongst others the provision and maintenance of transport infrastructure, health and education services as well as other public goods.

<b><i>Nature: Temporary increase in government revenue</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Moderate
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource lost once construction completed
<b>MITIGATION POTENTIAL</b>	Not Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>MODERATE</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>None suggested</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Lower government debt and servicing costs</li> </ul>	

### ***5.2.2 Potential negative impacts during construction***

a) Negative changes to the sense of place

A community's sense of place is developed over time as it embraces the surrounding environment, becomes familiar with its physical properties and creates its own history. The sense of place is created through the interaction of a number of different factors such as the areas visual resources, its aesthetics, climate, culture and heritage as well as the lifestyle of individuals that live in and visit the

area. Most importantly, it is a highly subjective matter and dependent on the demographics of the population that resides in the area and their perceptions regarding trade-offs.

For example, a community living in poverty is generally more likely to be accepting of industrial development that promises employment opportunities while a more affluent residential area is more likely to oppose such a development on the grounds that the development is not likely to generate gains for the community.

The area proposed for the development as well as its surrounds does not currently have any large-scale industries or high-rise buildings. Noise and light intrusion during the night in the area is also very low. Given the above characteristics the area can be defined as being largely rural. Any rapid changes that alter the characteristics that define the areas sense of place could potentially have a negative impact.

It is important to note that noise in this discussion refers to the construction period of the project and does not refer to the operation phase of the WEF. During the construction of the proposed WEF there are likely to be noise impacts caused by the movement of vehicles as well as construction activities on site. These impacts are anticipated to occur primarily during the day with illumination from the site being experienced during the night. The presence of this noise is likely to alter the way the surrounding environment is experienced by households in the area.

Visual impacts associated with the sense of place will initially be very limited as the site will only be visible to a few individuals in the early stages of construction. In the early stages of construction, the equipment, machinery and changes to the site will not be visible from a distance as road building and digging of foundations will take place at this stage. As construction activities progress and the footprint of the facility grows, the visual impact will also become more apparent and the sense of place experienced by households residing within the visually affected area will altered further. This will happen when the towers, nacelles and blades are being erected. While it is recognised that much of the local natural environment has been transformed by agricultural activities in the past, some farms that are involved in tourism related activities have undertaken activities to rehabilitate the land. As such, the sense of place in some properties will be a notable factor while this will be less of a concern on other properties.

It is anticipated that households residing on the farm(s) on which wind turbines are proposed to be established will experience the greatest disruption in their sense of place during the construction period. Individuals living on the properties, as well as tourists to the area staying in hospitality facilities will over the course of the construction phase of the project, be subjected to either visual or noise disruptions that are currently not present in the area.

The sense of place at the farms located adjacent to or beyond the site of the proposed WEF will also be affected to some extent. The visual exposure on all these farms during the construction phase will not be continuous given the proximity of some of the farms from the proposed WEF. Nevertheless, the knowledge of the facility near the farm and the fact that it could be seen from some parts will still have a negative connotation and will alter the sense of place experienced by the households residing on these farms. This, however, may be limited as a result of the presence of other WEFs in the Eastern Cape as well as WEFs located within Great Kei Municipality itself (Chiba WEF).

It is important to provide a caveat that some households in the affected area may consider the changes to the area's sense of place during construction as positive. Such sentiments may emanate from perceptions about the construction project facilitating a shift towards a greener or more sustainable future (through increased use of renewable energy production).

It is also important to note that only construction aspects of the sense of place will cease once construction is over at the site. It is likely that the sense of place change as a result of the construction will continue into the operation of the facility (these impacts discussed in the sub-section below).

<b><i>Impact: Impact on the sense of place experienced by the local community as a result of visual and noise effects that appear during the construction phase</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Negative
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	Study area
<b>CONSEQUENCE</b>	Moderate
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Difficult
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>MODERATE</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>The mitigation measures proposed by the visual and noise specialists should be adhered to</li> <li>Natural areas that are not affected by the footprint should remain as such. Efforts should also be made to avoid disturbing such sites during construction</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Change in perception of the area due to the construction of other wind turbine developments in the surrounding area albeit temporarily</li> </ul>	

**b) Temporary increase in social conflicts associated with the influx of people**

The Great Kei economy is not sufficiently diversified to supply the entire workforce for the construction of the proposed WEF, particularly in terms of skilled positions. A significant number of the unskilled and semi-skilled workers required during the construction phase will, however, be sourced locally. It is estimated that 70-80% of employment that will be created during the construction phase could be filled by labour coming from the local municipality. Migrant workers will therefore comprise just over half of the total work force.

The migration of people to the area is not likely to result in social conflicts between the local population and the migrant work force from the local population perceiving the migrant workers as “stealing” their employment opportunities. Given the low reliance on labour sourced externally, the potential of the influx of people into the area leading to a temporary increase in level of crime, illicit activity and possibly a deterioration of the health of the local community through the spread of infectious diseases is low. Semi-skilled and unskilled construction workers are unlikely to choose to remain in the area following the completion of the construction phase given the rural nature of the project site (with limited human settlements in the surrounding area). The risk of such individuals exacerbating the level of poverty within the Great Kei Local Municipality from living in the area without a source of income is thus low.

During the construction phase none of the workforce (excluding security personnel) will live on site as they will be transported on a daily basis from surrounding towns. Access control will restrict access to the construction site. Furthermore, a community liaison officer (approved by the Local Municipality) will be appointed prior to the commencement of the construction.

Addressing the challenges related to potential social impacts is best done in partnership with all stakeholders in the area, specifically the affected and adjacent property owners, local communities, ward communities and municipalities. This would promote transparency; information sharing and help build good relationships between all affected parties. In addition, all opportunities that would could include the community in the project should be explored and where possible implemented. Employment opportunities, including the provision of ancillary services, are particularly relevant in this incidence as the creation of employment opportunities for locals could eliminate the potential alienation between the community and the project as well as migrant workers.

<b><i>Impact: Temporary increase in social conflicts associated with the influx of construction workers and employment seekers to the area</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Negative
<b>TYPE</b>	Direct
<b>DURATION</b>	Short term
<b>EXTENT</b>	Study area



<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource lost once construction completed
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>• Adhere to strict labour recruitment practices that would reduce the desire of potential employment seekers to loiter around the properties in the hope of finding temporary employment</li> <li>• Control the movement of workers between the site and areas of residence to minimise loitering around the facility. This should be achieved through the provision of scheduled transportation services between the construction site and area of residence</li> <li>• Employ locals as far as feasible through the creation of a local skills database</li> <li>• Establish a management forum comprising key stakeholders to monitor and identify potential problems that may arise due to the influx of employment seekers to the area</li> <li>• Ensure that any damages or losses to nearby affected farms that can be linked to the conduct of construction workers are adequately reimbursed</li> <li>• Assign a dedicated person to deal with complaints and concerns of affected parties</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>LOW</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>• None foreseen</li> </ul>	

### 5.3 OPERATIONAL PHASE IMPACTS

The following section describes the anticipated impact that the proposed development will have once it is operational. The proposed development is anticipated to be permanent which means that the impacts observed during this phase, regardless of whether the impacts are positive or negative, will be long-lasting.

#### 5.3.1 *Positive impacts during operations*

##### a) Sustainable increase in production and GDP nationally, regionally and locally

The proposed development will require annual operational expenditure of R 3.75 million per annum for a long-term period (of greater than 30 years). This operational cost will largely cater for the operations of the wind farm operations and includes labour for maintenance of the development and the associated infrastructure.

The total impact on production in the country as a result of the developments operations will equate to R 79.8 million in 2019 prices per annum. Industries that will experience the greatest stimulus from the project will include real estate and business services, manufacturing, transport and storage and trade and accommodation.

**Table 15:** Estimated impact on the national and local economies – OPEX (R' millions, 2019 prices)

Indicator	Direct	Indirect	Induced	TOTAL
<b>Impact on Production (R million)</b>				
Wind Farm Facility	R 41.3	R 24.4	R 12.6	R 78.2
<b>Impact on Gross Domestic Product per Region (R million)</b>				
Wind Farm Facility	R 1.9	R 504	R 326	R 2.7

Due to the annual spending on labour and procurement of local goods and services required in the maintenance of the proposed development, much of these new business sales will be generated on an annual basis in Great Kei Local Municipality. Some of the direct spend in operations especially for specialised items will, however, be from outside the local municipality.

It is estimated that the project will directly generate R 1.9 million of value add per annum. Through indirect and induced effects, an additional R 830 966 of GVA will be generated per annum, which means that the total impact of the project on the national GVA will equate to R 2.7 million per annum in 2019 prices.

<b>Impact: Temporary increase in the GVA and production of the national and local economies during construction</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Medium term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Reversible
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>The developer should be encouraged by the EPC contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies.</li> <li>The developer should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods and products from local suppliers where feasible.</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>A WEF has been built in the municipality (Chaba WEF) and another one under EIA Authorisation process is the Haga Haga Wind Farms (Pty) Ltd. In the province, some are already have already been constructed. This could provide sufficient economies of scale and thus open up opportunities for the establishment of new industries in the country and new businesses in the</li> </ul>	

local area, specifically in the sectors that are not well represented in the economy. This has already occurred to a certain extent with the manufacturing of WEF components in the country.

b) Creation of sustainable employment positions nationally and locally

The proposed facility is anticipated to create new 12 permanent employment positions once fully operational throughout the country. This figure includes approximately 3-4 direct employment opportunities on site, and 3 indirect translating into the creation of a total of 12 new employment positions within Great Kei Local Municipality. Of the direct employment position created, 20% to 40% will be semi-skilled and unskilled labourers, the remainder being skilled and highly skilled. The skilled positions will comprise facilities managers, technicians and environmental engineers. Unskilled and low skilled staff will include positions such as security personnel.

Due to the spatial allocation of procurement spending and direct employment created, most of the indirect and induced positions will also be created within the local Great Kei area. The trade, agriculture and community and personal services sectors will benefit the most from these new employment opportunities.

<b>Impact: Creation of sustainable employment positions nationally and locally</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Long term
<b>EXTENT</b>	Regional
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Benefits are sustained only over project's lifespan
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>Where possible, local labour should be considered for employment so as to increase the positive impact on the local economy</li> <li>As far as possible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the facility</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>LOW</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Improved living standards of the directly and indirectly affected households</li> </ul>	

c) Skills development of permanently employed workers

It is likely that the majority of the highly and semi-skilled employees required for the operation of the facility will likely to be recruited from larger Metropolitan areas and trained by the manufacturer.

These employees will undertake a variety of maintenance activities throughout the lifetime of the turbines. A maintenance schedule usually involves an initial inspection after commissioning, semi-annual inspection, an annual inspection and two- and five-year inspections but this varies according to the turbine. Typical activities during maintenance include changing of oil, replacement of brake lining and cleaning of components. The continual development of these employees will add valuable skills to the municipality which is in desperate need throughout the country.

<b>Nature: Skills development of permanently employed workers</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Long term
<b>EXTENT</b>	Regional
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Reversible, due to skills fading
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>The developer should consider establishing vocational training programmes for the local labour force to promote the development of skills required by the wind energy facility and thus provide for the opportunities for these people to be employed in other similar facilities elsewhere</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Development of new skills and expertise in the country to support the development of the wind energy industry</li> </ul>	

d) Improved standards of living for benefitting households

The creation of approximately 5 FTE employment positions throughout the country will generate between about R 1.4 million of personal income (2019 prices) (direct), which will be sustained for the entire duration of the project's lifespan. The sustainable income generated as a result of the project's operation will positively affect the standard of living of all benefitting households. This is specifically applicable to the Great Kei Municipality as the average income per employee at the facility would far exceed the average household income within the region currently. In Great Kei Local Municipality alone, it is anticipated that total worker income to the region will increase by R 1.6 million on an annual basis.

<b>Impact: Improved standard of living for benefitting households</b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Long term

<b>EXTENT</b>	Regional
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Probable
<b>REVERSIBILITY</b>	Benefits are sustainable only over project's lifespan
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>Where possible, the local labour supply should be considered for employment opportunities to increase the positive impact on the area's economy</li> <li>As far as feasible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the facility</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>MODERATE</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Improved productivity of workers</li> <li>Improved health and living conditions of the affected households</li> </ul>	

e) Sustainable increase in national and local government revenue

The annual operation and related expenditure of the proposed facility will through property taxes and salaries and wages payments (PAYE) contribute towards both local and national government revenue in the form of a variety of tax payments i.e. to SARS and to the Local Municipality.

On a national level, the revenue derived by the project during its operations, as well as the payment of salaries and wages to permanent employees will contribute to the national fiscus. Although it is impossible to trace exactly how such revenue is allocated, any additional revenue generated means that national governments can increase its spending on public goods and services.

<b><i>Impact: Sustainable increase in national and local government revenue</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Positive
<b>TYPE</b>	Direct
<b>DURATION</b>	Long term
<b>EXTENT</b>	National
<b>CONSEQUENCE</b>	Low
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Benefits are sustainable only over project's lifespan
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Very Difficult
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>LOW</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	

<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>None suggested</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>LOW</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Possible improvement in local service delivery</li> </ul>	

### 5.3.2 Negative impacts during operations

#### a) Negative changes to the sense of place

The effects on the community's sense of place will initially be felt during the construction period and will continue into the operational phase.

<b><i>Nature: Impact on the sense of place experienced by the local community as a result of visual and noise effects that appear during the operation phase</i></b>	
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	
<b>NATURE</b>	Negative
<b>TYPE</b>	Direct
<b>DURATION</b>	Long term
<b>EXTENT</b>	Study area
<b>CONSEQUENCE</b>	Moderate
<b>PROBABILITY</b>	Definite
<b>REVERSIBILITY</b>	Possible to reverse but with only decommissioning
<b>IRREPLACEABLE LOSS OF RESOURCES?</b>	Resource will not be lost
<b>MITIGATION POTENTIAL</b>	Achievable
<b>SIGNIFICANCE WITHOUT MITIGATION</b>	<b>MODERATE</b>
<b>SIGNIFICANCE WITH MITIGATION</b>	
<b>MITIGATION MEASURES:</b>	
<ul style="list-style-type: none"> <li>The mitigation measures proposed by the visual and noise specialists should be adhered to</li> <li>Natural areas that are not affected by the footprint should remain as such. Efforts should also be made to avoid disturbing such sites during construction</li> </ul>	
<b>SIGNIFICANCE OF IMPACT WITH MITIGATION</b>	<b>LOW</b>
<b>CUMULATIVE IMPACTS:</b>	
<ul style="list-style-type: none"> <li>Change in perception of the area due to the operation of other wind turbine developments in the surrounding area</li> </ul>	

### 5.4 DECOMMISSIONING PHASE IMPACTS

Upon the expiry of the Wild Coast WEFs lifespan, the facility would need to be disbanded, although the developer has indicated that ideally the facility would be upgraded in order to maintain and prolong the lifespan of the facility.

If the facility is decommissioned, the land will be rehabilitated in order to return it to pre-project conditions. This also means that all impacts whether positive or negative, which take place during the operational phase will cease to exist. At the same time spending on the disassembly of the components and rehabilitation of land will increase the demand for construction services and other industries, thus stimulating economic activity in the local area, albeit over a temporary period.

Socio-economic impacts stimulated during the decommissioning phase are expected to be similar to those that took place during the construction phase. They will also be temporary in nature, but most likely will take a much shorter time than the construction phase. They will also be associated with some expenditure, although it will be considerably less than the investment required during the development phase. Besides the positive impacts on production, employment, household income and government revenue that could ensue from the project, some negative impacts could also occur. These would largely be related to a slight increase in noise in the area surrounding the site, increase in traffic congestion and concerns over local safety and security due to a greater number of people accessing the area.

All of the positive impacts can be enhanced to increase the benefits to the local communities, while the negative impacts could be mitigated. Mitigations and enhancement measures suggested for the construction phase would apply.

## **5.5 NO-GO OPTION**

The No-Go option is presented below. It is anticipated that if the development of the WC Abalone WEF does not go ahead then the construction operational and decommissioning phase impacts will not be experienced. It is expected that the status quo will prevail, and no socio-economic impacts will be experienced from the construction of the WEF and no changes to sense of place will occur.

## **5.6 NET EFFECT AND TRADE-OFF ANALYSIS**

The construction of the proposed Wild Coast WEF is associated with both positive and negative socio-economic impacts. In order to assess whether the project is beneficial, the additions to the environment brought about by the project need to be evaluated. The additional benefits of the intervention are the difference between the reference case position (i.e. the no-go option) and the position if the intervention is implemented. It involves the evaluation of the net effect and trade-offs associated with the proposed intervention.

Tables 16 and 17 provide summaries of the construction and operational phase socio-economic gains and losses that are expected to ensue from the project.

**Construction**

**Table 16: Construction phase impact assessment**

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
Temporary stimulation of the national and local economy	Temporary increase in the GVA and production of the national and local economies during construction	Positive	Direct	Moderate	1 National	Medium term	Definite	Reversible	Resource lost once construction completed	Achievable	<b>MODERATE</b>	<ul style="list-style-type: none"> <li>The developer should be encouraged by the EPC contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies.</li> <li>The developer should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods and products from local suppliers were feasible.</li> </ul>	<b>MODERATE</b>



<p><b>Temporary increase in employment in local and national economies</b></p>	<p>Workers will be employed during construction</p>	<p>Positive</p>	<p>Direct</p>	<p>Low</p>	<p>National</p>	<p>Short-term</p>	<p>Definite</p>	<p>Reversible</p>	<p>Resource lost once construction completed</p>	<p>Achievable</p>	<p><b>LOW</b></p>	<ul style="list-style-type: none"> <li>Organise local community meetings to advise the local labour force about the project that is planned to be established and the employment that can potentially applied for</li> <li>Establish a local skills desk (in Great Kei) to determine the potential skills that could be sourced in the area</li> <li>Recruit local labour as far as feasible</li> <li>Employ labour-intensive methods in construction where feasible</li> <li>Sub-contract to local construction companies particularly SMMEs and BBEE compliant enterprises where possible</li> <li>Use local suppliers where feasible and arrange with the local SMMEs to provide transport, catering and other services to the construction crews.</li> </ul>	<p><b>MODERATE</b></p>
<p><b>Contribution to skills development in the country and in the local economy</b></p>	<p>Due to limited skills, there will be an opportunity for skills and knowledge transfer</p>	<p>Positive</p>	<p>Direct</p>	<p>Low</p>	<p>Regional</p>	<p>Short term</p>	<p>Probable</p>	<p>Reversible</p>	<p>Resource will not be lost</p>	<p>Achievable</p>	<p><b>LOW</b></p>	<ul style="list-style-type: none"> <li>Facilitate knowledge and skills transfer between foreign technical experts and South African professionals during the pre-establishment and construction phases</li> </ul>	<p><b>MODERATE</b></p>

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
	<b>(SIGNIFICANCE WITHOUT MITIGATION)</b>										<b>(SIGNIFICANCE WITH MITIGATION)</b>		
												<ul style="list-style-type: none"> <li>Set up apprenticeship programmes to build onto existing skill levels or develop new skills amongst construction workers especially those from local communities</li> </ul>	
<b>Temporary increase in household earnings</b>	Those employed during construction will take income home	Positive	Direct	Low	National	Short term	Probable	Reversible	Resource lost once construction completed	Achievable	<b>LOW</b>	<ul style="list-style-type: none"> <li>Recruit local labour as far as feasible to increase the benefits to the local households</li> <li>Employ labour intensive methods in construction where feasible</li> <li>Sub-contract to local construction companies where possible</li> <li>Use local suppliers where feasible and arrange with local SMMEs and BBEE compliant enterprises to provide transport, catering and other services to the construction crews</li> </ul>	<b>MODERATE</b>

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
<b>Temporary increase in government revenue</b>	Investment will generate government revenue through taxation	Positive	Direct	Moderate	National	Short term	Definite	Reversible	Resource lost once construction completed	Not Achievable	<b>MODERATE</b>	<ul style="list-style-type: none"> <li>None suggested</li> </ul>	<b>MODERATE</b>
<b>Negative changes to the sense of place</b>	Wind turbines will change the outlook of the environment	Negative	Direct	Moderate	Study Area	Short term	Definite	Reversible	Resource will not be lost	Difficult	<b>MODERATE</b>	<ul style="list-style-type: none"> <li>The mitigation measures proposed by the visual and noise specialists should be adhered to</li> <li>Natural areas that are not affected by the footprint should remain as such. Efforts should also be made to avoid disturbing such sites during construction</li> </ul>	<b>MODERATE</b>

<p><b>Temporary increase in social conflicts associated with the influx of people</b></p>	<p>Migration of workers from outside into the area</p>	<p>Negative</p>	<p>Direct</p>	<p>Low</p>	<p>Study area</p>	<p>Short term</p>	<p>Probable</p>	<p>Reversible</p>	<p>Resource lost once construction completed</p>	<p>Achievable</p>	<p><b>LOW</b></p>	<ul style="list-style-type: none"> <li>Adhere to strict labour recruitment practices that would reduce the desire of potential employment seekers to loiter around the properties in the hope of finding temporary employment</li> <li>Control the movement of workers between the site and areas of residence to minimise loitering around the facility. This should be achieved through the provision of scheduled transportation services between the construction site and area of residence</li> <li>Employ locals as far as feasible through the creation of a local skills database</li> <li>Establish a management forum comprising key stakeholders to monitor and identify potential problems that may arise due to the influx of employment seekers to the area</li> <li>Ensure that any damages or losses to nearby affected farms that can be linked to the conduct of construction workers</li> </ul>	<p><b>LOW</b></p>
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POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
												are adequately reimbursed • Assign a dedicated person to deal with complaints and concerns of affected parties	

**5.6.2 Operation phase impacts**

**Table 17: Operation phase impact assessment**

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
Sustainable increase in production and GDP nationally, regionally and locally	Operational expenditure to maintain the facility	Positive	Direct	Low	National	Medium term	Probable	Reversible	Resource will not be lost	Achievable	LOW	<ul style="list-style-type: none"> <li>The developer should be encouraged by the EPC contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies.</li> <li>The developer should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods and products from local suppliers where feasible.</li> </ul>	MODERATE

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
<b>Creation of sustainable employment positions nationally and locally</b>	Permanent jobs will be created	Positive	Direct	Low	Regional	Long term	Probable	Benefits limited to project life span	Resource will not be lost	Achievable	<b>LOW</b>	<ul style="list-style-type: none"> <li>Where possible, local labour should be considered for employment so as to increase the positive impact on the local economy</li> <li>As far as possible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the facility</li> </ul>	<b>LOW</b>
<b>Skills development of permanently employed workers</b>	Skills training for maintenance activities	Positive	Direct	Moderate	Regional	Long term	Probable	Reversible, due to skills fading	Resource will not be lost	Achievable	<b>LOW</b>	<ul style="list-style-type: none"> <li>The developer should consider establishing vocational training programmes for the local labour force to promote the development of skills required by the wind energy facility and thus provide for the opportunities for these people to be employed in other similar facilities elsewhere</li> </ul>	<b>MODERATE</b>

POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
<b>Improved standard of living for benefitting households</b>	Workers permanently employed will take income home	Positive	Direct	Low	Regional	Long term	Probable	Benefits limited to project life span	Resource will not be lost	Achievable	<b>LOW</b>	<ul style="list-style-type: none"> <li>Where possible, the local labour supply should be considered for employment opportunities to increase the positive impact on the area's economy</li> <li>As far as feasible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the facility</li> </ul>	<b>MODERATE</b>
<b>Sustainable increase in national and local government revenue</b>	Tax will be paid on annual operational expenditure	Positive	Direct	Low	National	Long term	Definite	Benefits are limited to project life span	Resource will not be	Very Difficult	<b>LOW</b>	<ul style="list-style-type: none"> <li>None Suggested</li> </ul>	<b>LOW</b>



POTENTIAL ISSUE	SOURCE OF ISSUE	NATURE	TYPE	CONSEQUENCE OF IMPACT	EXTENT OF IMPACT	DURATION OF IMPACT	PROBABILITY OF IMPACT	REVERSIBILITY	IRREPLACEABLE LOSS	MITIGATION POTENTIAL	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURES	SIGNIFICANCE OF IMPACT WITH MITIGATION
(SIGNIFICANCE WITHOUT MITIGATION)											(SIGNIFICANCE WITH MITIGATION)		
Negative changes to the sense of place	Visual and noise effects during operational phase	Negative	Direct	Moderate	Study area	Long term	Definite	Can only reverse through decommissioning	Resource will not be lost	Achievable	<b>MODERATE</b>	<ul style="list-style-type: none"> <li>The mitigation measures proposed by the visual and noise specialists should be adhered to</li> <li>Natural areas that are not affected by the footprint should remain as such. Efforts should also be made to avoid disturbing such sites during construction</li> </ul>	<b>LOW</b>

## **6 CONCLUSION**

This report contains the analysis of the socio-economic impact assessment for the proposed Wild Coast Abalone Wind Farm Facility. The proposed development involves the construction of 5 Wind Farm Facilities which will provide energy to the abalone production facility. Any remaining energy will be channelled to the national grid. Once construction is completed the development will begin operation and will likely be permanent.

The purpose of the socio-economic impact assessment is to determine, and where possible, quantify the potential socio-economic impacts that can result from the proposed development. It compares various scenarios and, based on these, provides recommendation in respect of the most beneficial option. The study made use of the economic modelling technique based on the Social Accounting Matrix to quantify the potential positive and negative impacts of the project where feasible and applicable.

### **6.1 BASELINE ASSESSMENT AND PRIMARY DATA REVIEW**

The study includes an overview of the socio-economic characteristic of the study area to understand the context within which the proposed development is to be established.

The primary and secondary study areas have a population of approximately 27 723 and 38 991 respectively. The average household size for the area is relatively low for the primary (3.4) and secondary areas (3.7) compared to that of the Eastern Cape (3.7). The household income for both areas are also relatively high at R 3 759 for the primary area and R 7 783 for the secondary area. These figures suggest that households in the primary and secondary area have a relatively better standard of living and are better off, on average, than households in other parts of the province.

The economic data for the municipality indicates that it is heavily reliant on the government and community services sectors for both employment and GVA. This indicates the area relies on government grants and jobs for the municipal area to operate effectively. The trade, and business services are growing sectors which indicates a slow transition to a healthier economy. There is definite need for new industries and key employment generators in the municipality.

### **6.2 KEY MODELLING ASSUMPTIONS**

For the purpose of the study, the following key assumptions were used:

- Project-related assumptions:

- Construction phase: The proposed development will cost R 150 million to build, all of which will be spent in South Africa. It is estimated that a total of between 711 Full Time Equivalent employment positions will be created during construction (Direct + Indirect + Induced).
- Operational phases: The operational and maintenance cost of the Wind Farm Facility will cost R 3.75 million per annum to operate and maintain. The ongoing operation of the Wind Coast Abalone Wind Farm Facility will create 5 direct permanent employment positions with a total of 12 FTE positions being created as a result of direct, indirect and induced multipliers.

### **6.3 SUMMARY OF IMPACTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT**

The proposed Wind Farm Facility will generate both positive and negative impacts starting from the construction period and continuing into the operational phase. The following paragraphs summarise the key socio-economic impacts that were identified to have the potential to occur during the different phases.

#### ***6.3.1 Impacts during construction***

During the construction phase, the proposed development will have both positive and negative effects on the socio-economic environment.

The project is anticipated to make a contribution towards the national and local economy. It is estimated positions will be generated by the project in the national economy through multiplier effects. Aside from the above positive effects, the Wind Farm Facility will also increase household earnings for those individuals working on the project. The increase in household earnings is also likely to improve the standards of living of the affected households albeit temporarily.

Aside from the positive impacts though, the proposed development will be creating negative direct, secondary and cumulative impacts on the local community, specifically areas surrounding the sites where the proposed development is to be built. The main factors that will cause this negative impact are (1) the influx of workers and (2) visual/noise disturbances that would be created by the construction activities. Potential negative impacts can be mitigated, although some more successfully than others.

#### ***6.3.2 Impacts during operations***

During the operation of the proposed Wind Farm Facility the socio-economic impacts will last longer when compared to those observed during the construction phase. This is the case for both positive and negative effects.

The operation and maintenance of the Wind Farm Facility will directly generate R 3 750 million of new business sales and directly create 5 sustainable FTE employment positions due to ongoing operations and maintenance. An additional R 1.9 million of new business will be generated and an additional 4-3 employment positions through indirect and induced multipliers.

Aside from the stimulation of the local and national economy, the project could lead to some negative perceived changes to the sense of place. This is related to the potential changes to the aesthetics and visual resources of the area which could negatively influence the area although this is likely to be balanced by the positive impacts of reducing unemployment and providing improved infrastructure to the area.

As in the case with the impacts observed during construction, negative effects can be mitigated, and positive impacts enhanced. Mitigation of the negative impacts though will not result in their complete elimination as visual disturbance of the nature inherent to the project are difficult to eradicate entirely.

Nevertheless, the significance ratings of the negative impacts are expected to be somewhat reduced.

### ***6.3.3 Net effect and trade off analysis***

The assessment of the proposed development, or its net effect from a socio-economic perspective, indicates that the project would generate greater socio-economic benefits during both the construction and operational phases than the potential losses that could occur as a result of its establishment.

Stimulation of production, employment, government revenue and household income as a result of the investment in the project and its subsequent operations will outweigh possible negative socio-economic aspects. This means that when compared with the no-go option, the proposed development is associated with greater socio-economic benefits.

**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST IN TERMS OF REGULATIONS 12 AND 13 OF THE AMENDMENTS TO THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 AS AMENDED.**

	(For official use only)
File Reference Number:	
NEAS Reference Number:	
Date Received:	

Application for environmental authorization in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Amendments to the Environmental Impact Assessment Regulations, 2014. This form is valid as of 6 January 2021.

**PROJECT TITLE**

LATRODEX (PTY) LTD WIND ENERGY FACILITY AND OVERHEAD POWERLINE, MARSHSTRAND, GREAT KEI LOCAL MUNICIPALITY

SPECIALIST 1			
Contact person:	Matthew Keeley		
Postal address:	109 Cape Road, Mount Croix, Port Elizabeth		
Postal code:	6001	Cell:	083 470 0088
Telephone:	041 585 6640	Fax:	086 665 0150
E-mail:	<a href="mailto:matthew@urban-econ.com">matthew@urban-econ.com</a>		
Professional affiliation(s) (if any)			

Project Consultant:  
Contact person:  
Postal address:

Coastal and Environmental Services		
Dr Alan Carter		
PO Box 8145, Nahoon, East London		
5210	Cell:	0827393419
	Fax:	
0437267809		
E-mail: a.carter@cesnet.co.za		

Postal code:

Telephone:

E-mail:

#### 4.2 The SPECIALIST

I, Matthew Keely, declare that –

General declaration:

- I act as the independent Specialist in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by

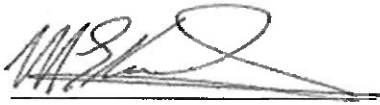
interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;

- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence and is punishable in terms of section 24F of the Act.

**Disclosure of Vested Interest (delete whichever is not applicable)**

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Amendments to Environmental Impact Assessment Regulations, 2014 as amended.
- I have a vested interest in the proposed activity proceeding, such vested interest being:

\_\_\_\_\_  
\_\_\_\_\_



Signature of the environmental assessment practitioner:

Urban Econ  
Name of company:

1 August 2022

Date:

Signature of the Commissioner of Oaths:

Date:

Commissioner of Oaths  
Designation:

1 Curriculum Vitae (CV) attached

Official stamp (below).

**LYNN SMIT**  
COMMISSIONER OF OATHS  
REFERENCE NUMBER: 9/1/8/2 EAST LONDON  
25 TECOMA STREET, BEREA  
EAST LONDON, 5214  
Page 3 of 4

**Annexure 1**

**CV**



## Matthew Keeley

Date of Birth:	25 February 1985
Designation:	Director/Manager -Eastern Cape
Profession:	Senior Development Economist
Specialisation:	Economic Impact Assessments, Property Market Analysis
Years within Firm:	14 Years
Nationality:	RSA
Years of Experience:	14 Years
HDI Status:	White Male



### Education:

Rhodes University	Bachelor Degree in Geography and Economics
Rhodes University & University West (Sweden)	Post Graduate Honours Degree in Economic Geography
University of South Africa (UNISA)	Masters of Science in Geography

### Professional Membership:

SAPOA Urban-Econ Development Economists (Pty) Ltd
Society of South African Geographers - Membership # 05/15

Language Proficiency:	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Fair	Fair	Fair

### Work Experience:

2008 - Current	Urban-Econ Development Economists
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### Key Qualification:

Matthew Keeley is the Eastern Cape Regional Manager of Urban-Econ Development Economists and oversees all the company's provincial research projects. He has served in this position since 2010, and in this time managed in excess of 200 economic planning studies. Matthew obtained his Bachelor's degree majoring in Geography and Economics from Rhodes University; this was followed by an Honours degree in Economic Geography (Spatial Development), part of which was studied at University West, Sweden. He holds a Master of Science (MSc) through dissertation in Geography, with a focus on human settlement socio-economic planning. Matthew's fields of professional interest include Local Economic Development & Scenario Planning, Economic Property Market Analysis and Socio-Economic and Impact Assessments. Matthew's professional experience has involved the project management of a number of high-profile economic planning projects in the province, these include studies such as the Eastern Cape Provincial Industrial Strategy Implementation Plan, Nelson Mandela Bay Iconic Landmark Precinct Business Plan, NMBM Integrated Public Transport System (IPTS) SMME Strategy, to name just a few.

### Experience Record:

Project:	Wild Coast SEZ: Cannabis Feasibility study
Year:	2021
Location:	Eastern Cape
Client:	Coega Development Corporation
Project Features:	Urban-Econ Development Economists (hereafter referred to as Urban-Econ) was appointed by the Coega Development Corporation (CDC), to investigate the feasibility of establishing a Cannabis production and processing facility within the proposed Wild Coast SEZ in Mthatha.
Position held:	Project Manager
Project:	Eastern Cape Gambling Board Revenue Generation Benchmarking
Year:	2020
Location:	Eastern Cape
Client:	Eastern Cape Gambling Board
Project Features:	Urban-Econ Development Economists was appointed by the Eastern Cape Gambling Board (ECGB) to undertake primary research in order to benchmark revenue generation models and opportunities that could potentially be implemented by ECGB in future.

**Celebrate Development Diversity**

<b>Position held:</b>	<b>Project Manager</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>Eastern Cape Business Incubation Strategy</b> <b>2019</b> <b>Eastern Cape</b> <b>DEDEAT</b> Urban-Econ Development Economists was appointed by the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT) to develop a provincial business incubation implementation framework in order to guide and better coordinate efforts amongst role-players and service providers within the Province.
<b>Position held:</b> <b>Activities Performed:</b>	<b>Project Manager</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>Nelson Mandela Bay Iconic Landmark Precinct- Business Plan</b> <b>2019/20</b> <b>Eastern Cape</b> <b>Mandela Bay Development Agency (MBDA)</b> Urban-Econ Development Economists in partnership with Makeka Design Lab (as sub-consultants) was appointed by the Mandela Bay Development Agency to undertake an extensive economic and market feasibility and associated business plan for the planned Nelson Mandela Bay Iconic Landmark Precinct, also known as the Nelson Mandela Tower of Light.
<b>Position held:</b> <b>Activities Performed:</b>	<b>Team Project Manager</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>Coega Infrastructure and Investor Economic Impact Assessment</b> <b>2008-2009</b> <b>Nelson Mandela Bay, Eastern Cape</b> <b>Coega Development Corporation</b> Urban-Econ Eastern Cape were appointed by the Coega Development Corporation (CDC) to assist in conducting an Economic Impact Assessment for the Coega IDZ. The main objectives for the project included the quantifying of the economic impact of infrastructure and investors within the Coega IDZ to date. It also included a component of developing the capacity of the CDC to assess impacts of potential investors and providing the CDC with guidelines on how to improve positive impacts associated with investments in future.
<b>Position held:</b> <b>Activities Performed:</b>	<b>Project Manager / Project Economist</b> <b>Project management; Economic Impact Assessment; Training and capacity building; report writing.</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>MBDA Stadium Precinct Development Plan</b> <b>2011</b> <b>Nelson Mandela Bay, Eastern Cape</b> <b>Mandela Bay Development Agency (MBDA)</b> Urban-Econ project managed a multi-disciplinary team which investigated the viability of establishing additional commercial and leisure property/activities in the immediate surrounds of the new Nelson Mandela Bay Stadium in Port Elizabeth. Investigated the viability of establishing additional commercial and leisure property/activities.
<b>Position held:</b>	<b>Team Project Manager</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>Lesotho Renewable Energy Master Plan</b> <b>2010 – 2011</b> <b>Kingdom of Lesotho</b> <b>Lesotho Electricity Company</b> Urban-Econ was appointed to undertake detailed economic analysis of potential power generation plants identified throughout Lesotho culminating in a comprehensive prioritisation analysis of various projects and their potential contributions to the Kingdom's economy.
<b>Position held:</b> <b>Activities Performed:</b>	<b>Project Economist</b> <b>Detailed economic analysis of potential power generation plants; Country Analysis; RE Sector Analysis.</b>
<b>Project:</b> <b>Year:</b> <b>Location:</b> <b>Client:</b> <b>Project Features:</b>	<b>EPWP Phase 2 Economic and Social Impact Assessment</b> <b>2014</b> <b>Eastern Cape</b> <b>Department of Public Works</b> Urban-Econ was appointed to undertake an Impact Assessment on the Implementation of the Expanded Public Works Programme Phase 2 (2009-2014) in the Province of the Eastern Cape. The EPWP is a nationwide programme covering all spheres of government and state-owned enterprises.
	<b>Project Manager</b>

**Celebrate Development Diversity**

Position held:	
Project:	Eastern Cape Tourism Database and Geospatial Profile
Year:	2013
Location:	Eastern Cape
Client:	Department of Economic Affairs
Project Features:	The project involved the collation, consolidation and spatial representation of tourism product information for the Eastern Cape using GIS as an analysis tool. The project was hailed as the first provincial database of its kind in RSA and will be soon integrated as a web-based platform.
Position held:	Project Manager

#### Other Projects:

- Evaluation of Eastern Cape Cooperative funding: Urban-Econ Development Economists was appointed by the Eastern Cape Provincial Treasury to verify the objectives and scope of work required by the Eastern Cape Provincial Treasury to evaluate the effectiveness of co-operative funding in the Eastern Cape Provincial Government.
- Mnquma Co-operative Development Centre: Urban-Econ Development Economists was appointed by the Mnquma Local Municipality to develop a comprehensive business plan for the establishment of a co-operative development centre.
- NMB Arts Database: Urban-Econ Development Economists was appointed to undertake the task of compiling the Nelson Mandela Bay Municipality (NMBM) Arts Database. This involved the cleaning and combining of several databases held by different departments. Then analysing the data to provide trends in creative industries to the municipality.
- Review of the Knysna Municipality Economic Development Strategy: Urban-Econ Development Economists was appointed by the Knysna Municipality to assist in the review and the Knysna Municipality Draft Economic Development Strategy (EDS).
- Stellenbosch Food-to-Waste Feasibility: Urban-Econ Development Economists in association with Toma-Now undertook a full feasibility study on the potential of implementing a waste-to-food system in the Devon Valley landfill site in Stellenbosch Municipality. The study looked at opportunities for waste pickers to be involved in a hydroponics scheme on municipal land.
- Engcobo LM Agriculture Strategy: Urban-Econ Development Economists was appointed by the Engcobo Local Municipality to develop and formulate an Agricultural Strategy for the Municipality. The focus of the study was to investigate the potential for economic growth and development within the Engcobo rural and agricultural sectors
- ECDC Amathole and Cacadu profiling: Urban-Econ was appointed by the Eastern Cape Development Corporation (ECDC) to undertake economic profiling of the Amathole and Sarah Baartman District Municipalities. The economic profiling entails analysing the potential of economic sectors in both district municipalities, the performance of these sectors in the past year and their importance to the economy of the district municipalities. The economic profiling is vital in seeing in which direction the district municipalities should be heading to ensure economic growth.
- Amathole District Municipality Impact Assessment: Urban-Econ Development Economists was appointed to undertake a socio-economic impact evaluation for 15 projects in the Amathole District Municipality. This involved the evaluation and rating of projects based on agreed upon economic and socio-economic criteria. Site visits to the project were undertaken to assess the projects and to meet with project co-ordinators. The result of the project is a report to guide the selection, implementation and monitoring of future LED activities in the district.
- Amathole District Municipality – Local Municipalities Capacity Building Programme for LED: The Amathole District Municipality (ADM) local municipalities Capacity Building Programme entailed the development of a training manual on LED processes and concepts including economic assessments, strategic planning and partnerships, implementing LED and monitoring and evaluation of LED.
- ECDC Regional Profiles of BCMM and NMBM: Urban-Econ Development Economists were appointed by the Eastern Cape Development Corporation (ECDC) to develop an up-to-date, comprehensive Economic Profile and Opportunity Analysis for Nelson Mandela Bay and Buffalo City. This included undertaking and providing an analysis of the Eastern Cape priority industrial sectors and infrastructure network. Special focus included the township economy.



- ECDC USA Export Market Research: Urban-Econ was appointed by the Eastern Cape Development Corporation (ECDC) to conduct research into export opportunities for the Eastern Cape in the USA. The overall aim of this study was to provide a comprehensive export market analysis of the United States of America.
- Socio-Economic Impact of selected ECDC Projects in the Amathole District: Urban-Econ Development Economists was commissioned by the ECDC to undertake a socio-economic impact assessment of three ECDC supported projects in order to establish how successful these development projects were at meeting the ECDC mandate. Included in this assessment was a broad-spectrum analysis of the Eastern Cape priority industrial sectors in order to contextualise the ECDC project interventions.
- Spitzkop Wind Energy Facility: Urban-Econ Development Economists was contracted to undertake an economic impact assessment and a community needs analysis for a proposed Wind energy project in Makana and Blue Crane Route Local Municipalities. This project formed part of the official Environmental Impact Assessment process. This report was updated in 2014 to include the economic impact of several transmission line routes.
- Industrial Implementation Plan for the Eastern Cape (EC PIDS): Urban-Econ was commissioned as part of a consortium of industrial specialists; to project manage and develop an Industrial Implementation Plan for the Eastern Cape, on behalf of the Eastern Cape Department of Economic Development and Environmental Affairs (DEDAET). The aim of the study was to provide an action-orientated implementation plan to implement the existing Eastern Cape Industrial Strategy; as well as to fill information gaps with regards to key sectors in the Eastern Cape. Thus, a team of sector specialists in agro-processing, petro-chemicals, automotive, green energy, tourism and capital goods was assembled. Urban-Econ's role was in the overall project management, implementation action framework development and workshop facilitation. The study included the development of a situation analysis for the province, sector potential analysis, opportunity assessment and clustering identification. The outcome of the strategy was an Implementation Framework and Capital Investment Framework.

#### List of other Projects:

- ECPTA Reserves as Products
- Sterkspruit Urban Regeneration Plan
- uBuntu Wool Washing Business Plan
- Ludeke Dam Feasibility Study
- Ntenetyana Dam Feasibility Study
- Provincial Rural Development Plans
- Coffee Bay Town Promulgation Plan
- NMBM Integrated Public Transport System (IPTS) SMME Strategy
- DEDEAT Sustainable Energy and Greenhouse Gas Mitigation Initiatives Database
- Mount Fletcher Property Feasibility Study
- Elundini Local Municipality Local Business Enabling Environment
- Regional Economic Profiling for OR Tambo and Joe Gqabi DM
- ECDC Regional Profiles Alfred Nzo and Chris Hani District Municipalities
- ECDC PG Bison Investment Impact Assessment
- Eastern Cape Assessment of Potential Limited Payment Machine (LPM) Gross Gambling Revenue (GGR)
- iDutywa Precinct Development
- Mthatha Casino Development
- Alicedale Social Housing Impact Analysis
- Impact Assessment of LED Projects within the Amathole District Municipality
- Tsolo and Qumbu Urban Development Framework
- Eastern Cape Government Planning and Capacity Assessment
- Spitzkop Wind Energy Project Economic Impact Assessment
- Caba Cultural Village Feasibility Study
- Chatty Conservation Development Framework
- Eastern Cape Community Residential Units Feasibility Study
- MBDA Economic Impact Assessment

- Eastern Cape Academy of Sports
- OR Tambo District Municipality Regional Industrial Roadmap
- Umzimvubu Investment Plan
- Environmental upgrading concept for Strand Street in the Nelson Mandela Bay CBD
- Lower Baakens River Valley Re-development

#### Countries of Work Experience:

- South Africa
- Lesotho

#### References:

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