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Department of Trade and Industry

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List of Acronyms

AIS	Automotive Investment Scheme
AU	African Union
BAT	Best Available Technologies
BBBEE	Broad Based Black Economic Empowerment
BPO&O	Business Process Outsourcing and off shoring
BRU	Business Regulation Unit
CAIA	Chemical and Allied Industries Association
CCRD	Consumer and Corporate Regulation Division
CDM	Clean Development Mechanism
CEC	Committee for Environmental Coordination
CIP	Critical Infrastructure Programme
COMESA	Common Market of Eastern and Southern Africa
COTII	Council of Trade and Industry Institutions
CP	Cleaner Production
CSIR	Council for Scientific and Industrial Research
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DED	Department of Economic Development
DIRCO	Department of International Relations and Cooperation
DoE	Department of Energy
DOT	Department of Transport
DPE	Department of Public Enterprises
DST	Department of Science and Technology
DWCPD	Department of Women Children and People with Disabilities
EAC	East African Community
ECA	Environment Conservation Act
EDC	Experience Delivery Company
EDD	Economic Development Department
EEIP	Equity Equivalent Investment Programme
EIA	Environmental Impact Assessment
EEDD	Enterprise Empowerment Development Division

EIEC	Economic, Investment and Employment Cluster
EIP	Environnemental Implémentation Plan
EMP	Environnemental Management Plan
EMS	Environmental Management System
EMU	Executive Management Unit
EPR	Extended Producer Responsibility
ERPC	Economic Research and Policy Coordination
EWASA	Electronic Waste South Africa
EXBO	Executive Board
FABCOS	Foundation for African Business and Consumer Services
GCOO	Group Chief Operating Officer
GGND	Global Green New Deal
GSSSD	Group Systems and Support Systems Division
IAPs	Interested and Affected Parties
IDC	Industrial Development Corporation
IDD	Industry Development Division
IDZ	Industrial Development Zone
IEM	Integrated Environmental Management
IPAP	Industrial Policy Action Plan
ISO	International Organisation for Standard
ITAC	International Trade Administration Commission
ITED	International Trade and Economic Development
IWF	Isivande Women's Fund
MEA	Multilateral Environmental Agreement
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NCPC	National Cleaner Production Center
NDPW	National Department of Public Works
NEF	National Empowerment Fund
NEMA	National Environmental Management Act
NEPAD	New Economic Partnership for African development
NFSD	National Framework for Sustainable Development

NSSD	National Strategy for Sustainable Development
NIPF	National Industrial Policy Framework
OCIO	Office of the Chief Information Officer
ODG	Office of the Director General
OHS	Occupational Health and Safety
PPP	Preferential Public Procurement SADC
RCMASA	Responsible Container Management – SA
SADC	Southern African Development Community
SAWEN	South African Women Entrepreneurs Network
SAWIS	South African Waste Information System
SAR	Situation Assessment Report
SCP	Sustainable Consumption and Production
SDP	Spatial Development Programme
Seda	Small Enterprise Development Agency
SIP	Strategic Industrial Projects
SMEDP	Small and Medium Enterprise Development Programme
SMME	Small, Medium and Micro Enterprise
SPII	Support Programme for Industrial Innovation
SPP	Sustainable Public Procurement
TEO	The Enterprise Organisation
the dti	Department of Trade and Industry
THRIP	Technology and Human Resources for Industry Programme
TISA	Trade and Investment South Africa (we no longer have this division)
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organisation

Definitions and Key Concepts

The following definitions and concepts apply within the context of this document:

Activities

This refers to “activities” as defined in section 1(1) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and must be construed to reflect policies, programmes, plans and projects.

Accountability

This refers to the requirement for organs of the state to account for their conduct and decision-making in handling the responsibilities they are charged with. This is in accordance with section 33 of the Constitution, which ensures that anyone whose rights have been affected by administrative action has the right to be given written reasons therefore. This culminates in the right to administrative action that is lawful, reasonable and procedurally fair.

Capacity

Capacity implies **the dti’s** capacity in terms of people and budget to perform the priority functions to ensure effective implementation and functioning of the mechanisms, systems and procedures for coordination in accordance with the principles of cooperative governance as provided in the Constitution and the National Environmental Management Act. This means all resources required to and/or available to achieve the priority functions of cooperative environmental governance. They are the human and the budgetary resources, mechanisms, procedures, etc. to be applied to ensure effective cooperation. A projection of financial and personnel availability is to be made to facilitate the implementation of identified mechanisms, management systems and procedures for cooperative governance. Departments must realistically identify incapacities and inadequacies in resource availability.

Cooperation

Cooperation implies cooperative governance as provided in Chapter 3 of NEMA and sections 41 and 146(3) of the Constitution. It ensures that the environment is managed in an effective, transparent, accountable and coherent manner by all involved within **the dti** and its family of institutions. It ensures that all involved exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of the others but promotes mutual trust and good faith by informing one another and consulting one another on matters of common interest and adhering to agreed procedures to avoid duplication and non-performance.

Coordination

Coordination implies defining the requirements of effective cooperative governance to ensure clarity regarding environmental jurisdiction and elimination of duplication of functions in different spheres of government departments and all stakeholders in the provinces as envisaged in section 41(1)(h)(iv) and section 24(7)(g) of NEMA.

Impact

Impact in this document refers to the direct and/or indirect negative/detrimental effects on the environment of an action.

Benefit

Benefit in this document refers to the direct and/or indirect positive effects and spin-offs on the environment.

Environment

This refers to the definition of “environment” reflected in NEMA, and means the surroundings within which humans exist and that are made up of :

- (a) The land, water and atmosphere of the earth;
- (b) Micro-organisms, plant and animal life;
- (c) Any part or combination of (a) and (b) and the interrelationships among and between them; and
- (d) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Green economy

The definition of the green economy as adopted in the National Development Plan (NPC, 150), is in accordance with the definition originating from the United Nations Environment Programme (UNEP) which defines the green economy as “a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks and ecological scarcities”

Green jobs

The definition of the term 'green job' is still in development in South Africa via the Strategy Focus Group under the Economic Sectors & Employment Cluster. The term originated through the United Nations Environment Programme (UNEP) who called for the Global Green New Deal to encourage greener economies, jobs, sustainable growth and attainment of the Millennium Development Goals. Green jobs -

- include work in agriculture, manufacturing, research and development and services which significantly contributes to preserving or restoring environmental quality;
- bring about improved ecosystem and biodiversity protection, efficiency in energy and/or water use;
- decarbonise the economy;
- minimise or avoid generation of all waste and pollution; and
- are decent jobs which cover a wide array of skills, education backgrounds and occupations.

Institutional arrangements

This refers to a well-defined framework, which encompasses all spheres of government to ensure effective implementation of principles in the Environmental Implementation Plan (EIP). This pertains to both internal and external relationships. External relationships with other stakeholders such as civil society structures, commerce and industry and academia, should be established. The internal relationships within **the dti** and its family of institutions should be identified (section 13(1)(c) of NEMA).

Integrated Environmental Management

This refers to the provision of an integrated approach to environmental assessment, management and decision making, with the aim of promoting sustainable development and the equitable use of resources. Integrated Environmental Management provides for a democratic, participatory, holistic, sustainable, equitable and accountable approach.

The National Environmental Management: Biodiversity Act (10 of 2004), known as the NEM:BA and the National Environmental Management: Air Quality Act (39 of 2004), known as the NEM:AQA plans are required as part of the NEMA section 48(2) on coordination and alignment of plans provides that an organ of state that must prepare an environmental implementation or environmental management plan in terms of Chapter 3 of NEMA, and a municipality that must adopt an integrated development plan in terms of the Local Government: Municipal Systems Act, 2000, must –

Section 15(1) provides that each national department or province responsible for preparing an environmental implementation plan or environmental management plan in terms of Chapter 3 of the National Environmental Management Act must include in that plan an air quality management plan.

Section 16(1)(a) an air quality management plan must within the domain of the relevant national department, province or municipality, seek –

- i) to give effect, in respect of air quality, to Chapter 3 of the National Environmental Management Act to the extent that that Chapter is applicable to it.

the dti is therefore required to indicate its approach to these conditions. **the dti** will include a provision for air quality plans in the planning process for the SEZ and Industrial Development Zones. However, it should be noted that these interventions are subject to implementation by the specific entities.

1. Introduction

1.1 Background

The Department of Trade and Industry (**the dti**) and other departments listed in Schedule 1 of NEMA are required in terms of section 11(1) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) to develop EIPs every four years.

The purpose of the EIP is broadly to promote interdepartmental coordination and cooperative government and to secure the protection of the environment across the country as a whole. The completed EIP is submitted to the Committee for Environmental Coordination (CEC) in the Department of Environmental Affairs (DEA), whereafter it is gazetted. It provides the framework for the bi-annual (twice yearly) report to the CEC.

The core focus of the Department of Trade and Industry is to support growth in the manufacturing sector through industrial development, job creation, investment and exports promotion. The National Industrial Policy Framework (NIPF) and a number of Industrial Policy Action Plan's (IPAP) have guided the priorities for implementation by **the dti** since 2007.

The launch of the eighth (8th) edition of the Industrial Policy Action Plan (IPAP 2016/17 – 2018/19) took place in tough economic times, characterized by depressed global economic conditions and great uncertainty. The lingering effects of the great global recession continue to be felt worldwide; most obviously reflected by stagnant demand from developed and developing countries alike. The contraction and 'rebalancing' of the Chinese economy towards a greater focus on domestic demand has had significant and negative consequences for commodity exporting countries. Growth projections for many African countries will most likely fall below expectations, mainly as a result of the collapse of the oil price and the wider slump in primary commodity demand. These bleak projections are exacerbated by prolonged and severe droughts in many parts of the sub-region that severely impacted agricultural production of staple goods.

All of these adverse factors underline yet again the crucial point that the National Development Plan (NDP), the National Industrial Policy Framework (NIPF) and successive IPAP iterations have repeatedly emphasized (albeit with differing emphasis): namely the pressing need for structural change in the economy to break out of commodity dependence and move to a more diversified base in which increasing value-addition and export-intensity come to define South Africa's growth trajectory. Securing a sustainable growth trajectory will therefore require (amongst other things) intensely focused collaborative efforts by both government and business to redirect the strength of the financial sector to much more strongly support the productive (and especially the

manufacturing) sectors, in order to marshal domestic resources for increasing investment in the real economy.

Further, the commitment to 'higher impact' requires an intensified focus on using the transversal (cross-cutting) policy levers that are already in place to fully support both the critical 'spill-over' sectors and the manufacturing sector in general with a strong focus on labour intensive sectors and sub-sectors. In pursuit of its core growth and employment objectives, IPAP deploys a broad range of cross-cutting policy and support instruments e.g. procurement; industrial financing, incentives and SEZs. These are complemented by targeted, sector specific support measures which are being continuously refined and strengthened. Making all the instruments work effectively in tandem with one another requires focused inter-departmental and institutional effort to build the linkages between the primary (agriculture and mining) sectors and the services and manufacturing sectors. In addition, enabling economic and transport infrastructure must be deployed to support these labour intensive sectors and to achieve a higher degree of economic and industrial decentralisation.

The relationship between climate change policy and industrial development in South Africa is however not straightforward. Both South Africa's industrial policy and climate change policy envision a structural shift in the domestic economy. The NIPF aims to "facilitate the diversification of the South African economy beyond the current reliance on traditional commodities and non-tradable services" (**the dti**, 2007), while the National Climate Change Response White Paper targets "the transition to a climate-resilient, equitable and internationally competitive lower-carbon economy" (DEA, 2011a, p. 11).

However, the definition (in terms of scale, width and speed) of the transition required does not necessarily align at this point in time.

1.2 Purpose and objectives of the EIP

NEMA outlines the following purposes and objectives for an EIP:

- To co-ordinate and ensure the equilibrium of environmental policy, plans, programmes and decisions made by significant government departments responsible for promoting and maintaining a sustainable environment;
- To identify areas of duplication and promote consistency of functions that may affect the environment;
- Secure environmental protection on a national level;
- Prevent unnecessary provincial action against and within the environment;
- Consolidate current integrated environmental management processes;
- Improve the level of provincial government co-operation;

- Allow the Minister of Environmental and Water Affairs to facilitate and track the progress, promotion and protection of a sustainable environment; and
- Align IPAP iterations to actively drive sustainability as the tool to coordinate industrial, economic development and environmental protection concurrently.

1.2.1 Means of information gathering

The content of this EIP has been informed by:

- Key framework and policy documentation, namely the NIPF as well as previous and current iterations of the Industrial Policy Action Plan;
- **the dti** Annual Reports and Annual Performance Plans;
- EIPs for other Schedule 1 departments;
- A review of the mandates and strategic objectives of the various divisions of **the dti**; and
- The EIP impact, objectives, timeframes and indicators as indicated in the attached table were approved by **the dti** OPSCOM on 26th April 2016.

1.2.2 Impact assessment

The focus of **the dti** will be to broadly support “Green Procurement”; resource efficiency, cleaner production; waste management; energy efficiency; Environmental Management Plans for Special Economic Zones; participation in UNFCCC discussions on climate change; alignment of Industrial and Environmental Policies; and support the growth of the Green economy

1.2.3 Monitoring and Evaluation

The EIP activities will be included in divisional business plans and monitored and evaluated accordingly.

2. the dti mandate, environmental obligations and EIP related activities

2.1 Vision of the dti

A dynamic industrial, globally competitive South African economy, characterised by inclusive growth and development, decent employment and equity, built on the full potential of all citizens.

2.2 Mission of the dti

- Promote structural transformation, towards a dynamic industrial and globally competitive economy;
- Provide a predictable, competitive, equitable and socially responsible environment, conducive to investment, trade and enterprise development;
- Broaden participation in the economy to strengthen economic development; and
- Continually improve the skills and capabilities of **the dti** to effectively deliver on its mandate and respond to the needs of South Africa's economic citizens.

2.3 Values of the dti

- Operational excellence – service delivery standards, international best practice, Batho Pele Principles, continuous improvement;
- Intellectual excellence – continuous shared learning, innovation, relevant knowledge and skills improvement; and
- Quality relationships – improved and continuous communication, honesty, respect, integrity, transparency, professionalism, ownership, leadership, teamwork.

2.4 Strategic Outcome-Oriented Goals of the dti

- Facilitate the transformation of the economy to promote industrial development, investment, competitiveness and employment creation;
- Build mutually beneficial regional and global relations to advance South Africa's trade, industrial policy and economic development objectives;
- Facilitate broad-based economic participation through targeted interventions to achieve more inclusive growth;
- Create a fair regulatory environment that enables investment, trade and enterprise development in an equitable and socially responsible manner; and
- Promote a professional, ethical, dynamic, competitive and customer-focused working environment that ensures effective and efficient service delivery.

2.5 Strategic Objectives of the dti

- Grow the manufacturing sector to promote industrial development, job creation, investment and exports;
- Improved conditions for consumers, artists and opening up of markets for new patents players; and
- Strengthened capacity to deliver on **the dti** mandate.

2.6 Core Themes of the dti

the dti has clustered its work on the basis of core themes, which collectively seek to promote a more effective and co-ordinated approach to implementation of **the dti**'s strategic objectives:

Industrial Development –	Focuses on the development and implementation of the Industrial Policy Action Plan, which seeks to promote long-term industrialisation and industrial diversification. It further aims to expand production in value-added sectors, places emphasis on more labour-absorbing production and services sectors and the increased participation of historically disadvantaged individuals in the economy
Trade, Export and Investment –	Focuses on increasing levels of international trade, foreign direct investment and economic co-operation on regional, continental and international levels. This thematic area also aims to encourage global competitiveness of exports and beneficiation of products, expand market access and develop programmes to encourage trade and investment activities.
Broadening Participation –	<p>It further seeks to provide strategic direction in terms of South Africa's trade position in multilateral fora, such as the Southern African Customs Union (SACU), Southern African Development Community (SADC) and World Trade Organisation (WTO).</p> <p>Focuses on developing interventions and strategies that broaden the participation of previously marginalised groups in the mainstream economy.</p> <p>This thematic area also aims to align the Broad-Based Black Economic Empowerment (B-BBEE) policy with the country's industrial policy and legislative frameworks, upscale and accelerate delivery of programmes to bolster economic empowerment among previously disadvantaged individuals, the women and the youth.</p>
Regulation –	<p>It further seeks to transform the largely informal economy via Small, Medium and Micro-sized Enterprise (SMME) development and the channelling of support measures to the Co-operatives sector.</p> <p>Focuses on the development and implementation of a coherent, predictable and transparent legislative and regulatory framework, which facilitates easy access to redress and creates a fair and competitive business environment in South Africa.</p>
Administration and Co-ordination –	Focuses on the effective co-ordination and implementation of the Department and its group of specialised agencies' programmes, as well as integration of the dti 's work into government's broader targets

3. Obligations in respect of environmental management and governance

3.1 Constitution

There is an overarching suite of legislation in place in South Africa that supports the implementation of sustainable development underpinned by the Constitution. The Constitution of South Africa (Act 108 of 1996) enshrines human rights, including human dignity, justice and fairness, and democratic governance. It also guarantees the right to an environment that is not harmful to health or well-being, and the right to have the environment protected while promoting justifiable economic and social development.

3.2 NEMA

The Department of Trade and Industry (**the dti**) and other departments listed in Schedule 1 of NEMA are required in terms of section 11(1) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) to develop EIPs every four years.

3.3 King Code of Governance for South Africa

The King Code of Governance for South Africa deals with the duty of care, skills and diligence, as well as fiduciary duties which make for good governance of organisational structures and processes. It also deals with the establishment of structures and processes along with appropriate checks and balances to strengthen compliance with legislation. This applies to all aspects of governance of **the dti** and its agencies, including environmental governance. The King III Report on Corporate Governance incorporates changes to the new Companies Act No. 71 of 2008 as well as international governance trends applicable to the operation of **the dti**. The King Code of Governance incorporates the need for sustainability reporting by organisational structures.

3.4 International obligations and processes

South Africa has taken a firm position under the Copenhagen Accord by pledging a 36% reduction in carbon emissions by 2020, and 42% reduction by 2025, contingent on receiving finance and technology from developed countries.

3.5 Sustainable Development Goals

South Africa has adopted Sustainable Development Goals (SDG) and reports its achievements to the UN via the Department of Environmental Affairs.

4. the dti EIP Activities

Environmentally related activities for **the dti** broadly fall into the following themes which are outlined further below:

- Industrial development and investment in the Green Economy. This is mainly driven by the Industrial Development Division and Investment South Africa through policy instruments that include public procurement, industrial finance, incentives, investment promotion and facilitation and Special Economic Zones;
- Alignment of industrial policy and environmental policy to support a long term structural change in the economy to break out of commodity dependence and move to a more diversified base with increasing value-addition and export-intensity and a lower carbon and energy intensity. This will be expanded on in a separate section below'
- Assistance to industries through the National Cleaner Production Centre (NCPC) to improve resource efficiency and cleaner production. This also includes energy and water efficiency. This will be expanded on in a separate section below'
- Participation in the inter-governmental policy development process to improve the environmental performance of the South African economy i.e. Carbon tax debate and the implementation of Climate Change Mitigation Measures;
- Financial assistance to companies that invest in new cleaner production processes and equipment;
- Participation in UNFCCC discussions on climate change;
- Internal procurement and environmental management practices such as waste management, water and energy efficiency; and
- In terms of the National Environmental Management and Waste Act, the Minister of Trade and Industry is consulted by the Minister of Environmental Affairs on a number of issues as per the Act.

4.1 Alignment of industrial policy and environmental Policy

In spite of having been an active stakeholder to both the Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC) for more than two decades, South Africa – on account of its reliance on the minerals-energy complex (MEC) – remains amongst the highest contributors to global carbon emissions. However, in line with the positions of the Africa Group and the Group of 77 (G77 and China), South Africa has pledged to peak its GHG emissions between 2020 and 2025 at 34% and 42% respectively, below a business-as-usual trajectory, then plateau

for approximately a decade and decline in absolute terms thereafter; subject to the adequate provision of financial resources, technology transfer and capacity building support provided by developed countries (UNFCCC, 2011).

South Africa's GHG emissions are heavily driven by the energy and industry sectors. In 2010, these two sectors accounted for 61% and 19% of the country's total emissions respectively, with the share of heavy industries expected to rise if no intervention are implemented (while the share of the energy sector is expected to remain largely constant at 60%). Moreover, if electricity emissions are allocated to end use sectors, industries then account for 67% (13% for energy) of total emissions; anticipated to climb to 76% by 2050 (9% for energy) (DEA, 2013). Reducing South Africa's GHG emissions is therefore deeply linked to mitigating emissions from local industries.

The relationship between climate change policy and industrial development in South Africa is not straightforward, particularly in the short to medium term, and include a series of potential trade-offs. As the world increasingly moves towards pricing carbon and/or capping emissions, de facto making GHGs an additional factor of production, the integration of both approaches is however ineluctable and vital. Fundamentally, industrial policy is at the core of economic, social and environmental sustainability, and the main channel to achieve inclusive green growth. As such, industrial policy is at the cornerstone of any successful climate change mitigation policy (Naudé, 2011). Additionally, maintaining the international competitiveness of domestic companies is deeply intertwined with mainstreaming low-carbon technologies.

South Africa's current climate change and industrial policies have been developed in separate fora over the last decades and understandingly differ in their entry point, prism of analysis and areas of interest, leading to varying interpretations and priorities, and ultimately to a lack of coherence and alignment between implementing agencies and policies.

On the one hand, South Africa's industrial policy is encapsulated in the National Industrial Policy Framework (NIPF), the rolling Industrial Policy Action Plan (IPAP) and indirect and/or hidden industrial policies by other stakeholders at the national, provincial and municipal levels. These include: national departments (such as the National Treasury, the Economic Development Department, the Department of Science and Technology and the Department of Public Enterprises); state-owned enterprises (such as national electricity utility Eskom and rail, port and pipeline company Transnet); development finance institutions (such as the Industrial Development Corporation and the Development Bank of Southern Africa); provincial entities (such as the Gauteng Department of Economic Development); and municipalities (such as eThekweni Municipality's Economic Development Unit).

On the other hand, the development of a green growth strategy for the country is driven by the Department of Environmental Affairs (DEA), notably through the National Climate Change

Response Policy White Paper (NCCRP) and the National Strategy for Sustainable Development and Action Plan 2011-2014 (NSSD1). Policy interventions are however scattered between various departments. South Africa's main two development finance institutions which provide a large share of the financial requirements for the transition to a greener economy – the Industrial Development Corporation (IDC) and the Development Bank of Southern Africa (DBSA) – are respectively governed by the Economic Development Department and the National Treasury. Currently roles and responsibilities are apportioned as follows - Direct support for industries providing green goods and services falls under **the dti**, while fiscal incentives (i.e. taxes and subsidies, such as the introduction of a carbon tax) aimed at promoting green growth, are under the mandate of the National Treasury. Then, the Department of Science and Technology is responsible for technology policy and fostering research and development in all sectors of the green economy. Last but not least, at the sectoral level, most departments, such as the Department of Energy and the Department of Mineral Resources, all have to include (at least in theory) the drive for sustainable development within their mandate and operations.

Ultimately, South Africa's frameworks for industrial development and climate change mitigation vastly overlap, both in terms of policy and institutional arrangements. The same entities are tasked with implementing and merging both national frameworks and their respective objectives. The origin of this misalignment between climate change and industrial policy resides primarily in their individual complexity that arises from competing priorities of each department. Nevertheless, opportunities exist to address areas of misalignment, acknowledge the highly intertwined nature of the two frameworks and coherently align them in order to achieve their respective long-term objectives.

Both South Africa's industrial policy and climate change policy envision a structural shift in the domestic economy. The NIPF aims to "facilitate the diversification of the South African economy beyond the current reliance on traditional commodities and non-tradable services" (the dti, 2007), while the National Climate Change Response White Paper targets "the transition to a climate-resilient, equitable and internationally competitive lower-carbon economy" (DEA, 2011a, p. 11).

However, the definition (in terms of scale, width and speed) of the transition required does not necessarily align at this point in time.

A self-discovery process, which is positioned at the core of South Africa's industrial policy, could in this respect be a useful tool to align the expectations of both policy frameworks. Self-discovery could result in the development of new, innovative products, and even the redefinition of business models and strategies. Based on the global growth of green industries and services, positioning South Africa as a pioneer in the supply of cutting-edge green goods and services could potentially lead to increased employment creation, output and exports. South Africa could aim to reach a

position of competitive advantage, thus complementing its natural comparative advantage in some low-carbon technologies. In this light, opportunities are presented – particularly in terms of making headway in the knowledge economy – by changes that will have to occur as part of transitioning to more sustainable production and consumption practices.

Ultimately, the implementation of climate change mitigation measures does not require a move away from the MEC, but does suggest the need to substantially alter its structure and operations. The ability of the economy to deeply transform is limited in the short to medium term, due to asset lock-in, the shortage of skills, the need to retrain the workforce, etc. The energy sector will have to undertake the most drastic transformation, with the substitution of coal-based electricity by cleaner sources of energy, such as natural gas, solar and wind energy, and biomass. Industrial sectors, including non-coal mining, will retain their core role in the economy but will be commanded to significantly improve their carbon footprint, essentially through investments in energy efficiency, smart grids, cogeneration and renewable energy. While this transition will require substantial investment, it is expected to increase the strength of the various subsectors in the long run.

On a competitiveness front, the transition to more sustainable production may reduce the competitiveness of South Africa firms in the short run. That said, not making the transition may also negatively impact such competitiveness on account of South Africa's trading partners potentially using 'green protectionism' against South Africa, particularly given that exports account for 45% of South Africa's GHG emissions.

At present, both South Africa's government and business sectors do not interpret green protectionism as a significant threat. The need to understand the cumulative impact of climate change measures and the qualitative shifts and pressures on a country like South Africa is however critical. Creeping protectionist measures that are not as obvious as tariff barriers, such as private labelling schemes and the greening of value chains, can ultimately have a significant impact. An in-depth threat analyses at sectoral level related to trade and climate change is needed, as preparation is key to dealing with the associated risks. Instead of focussing on the threats around green protectionism, the focus should be on being prepared to deal with potential threats, which should essentially be factored as issues of risk. The importance of keeping track of how South Africa's trading partners respond to climate change issues, and how this could impact the economy, should not be underestimated.

4.2 Proposed Key Action Programme for the IPAP 2017/18 – 2018/19

4.2.1 Fostering Industrial Development in a South African Green Economy

Industrial emissions (including energy), which result from material processing, constitute the main driver of greenhouse gas emissions in the world. This is further exacerbated in South Africa (and other resource-based economies) through the reliance on energy- and carbon-intensive industries. Faced with the challenge of sustainability, policies and instruments have emerged to incentivise local industries to reduce their greenhouse gas emissions and support the development of new green sectors. This is primarily due to the absence of alignment between various policy instruments, and particularly between industrial policy and the green economy agenda. Over the last few decades, this notably found its expression in the historically low electricity prices and the strategic industrial policy decisions around energy-intensive industries.

As the role of industries, and industrial development, has not been sufficiently considered in the transition to a green economy in South Africa, this project plays an important role by re-positioning industrial development at the core of the transition to a green economy in South Africa investigating the associated trade-offs and setting an adequate, balanced way-forward.

The programme deals specifically with the cross-cutting interplay between industrial development and climate change in South Africa. It aims at informing the role of the dti in assisting local industries in factoring climate change considerations, coping with climate change-related regulations and embarking on the transition to a low-carbon development path. This project is particularly timely due to the on-going discussion around the possible introduction of a carbon tax and other instruments (carbon budget, energy management plans, etc.) by a number of national departments. The Department of Trade and Industry ought to be part of the process by providing mechanisms which will complement the package of existing and planned measures. The Department of Trade and Industry plays an essential role in incentivising the transition of industries to low-carbon practices as well as providing support to hard-hit firms to cope with climate change-related regulations.

The transition to a low-carbon economy is not an environmental issue, but primarily a socio-economic question with core implications for economic policy (notably trade and industry) A one size fits all approach will fail in South Africa due to substantial firm and sector heterogeneity in the economy. Furthermore, a multitude of upcoming and potential threats as well as opportunities exist in the Green economy space, and these are mostly sector specific.

The programme will identify:

What is the most adequate/ optimal/appropriate mix of measures in the short term (1-5 years' medium term (up to 30 years) and long term (30 – 50 years)?). In other words: how can the

transition to low-carbon industrial development be supported by government in the current economic and policy context.

This will be informed by a number of interrogations:

- What are the objectives of and requirements for low-carbon industrial development (i.t.o. emissions reduction and timeframes)?
- What instruments are available to achieve low-carbon industrial development?
- What are the costs and benefits of the transition to low-carbon industrial development? Who would reap the benefits / bear the costs?
- What is the response of companies to climate change mitigation measures and the mix of measures?
- How can a mix of measures be selected/designed/implemented by government to support the goal of low-carbon industrial development? / How can trade-offs be weighted and apprehended?
- What should be considered when assessing the mix of measures?
- How can the mix of measures be implemented (and M&E) in order to best support low-carbon industrial development?

It is the view that no “one-size-fits-all” exists due to substantial firm and sector heterogeneity and that two main variables define the transition to low carbon industrial development at the firm/sector level as indicated in figure 1 below:

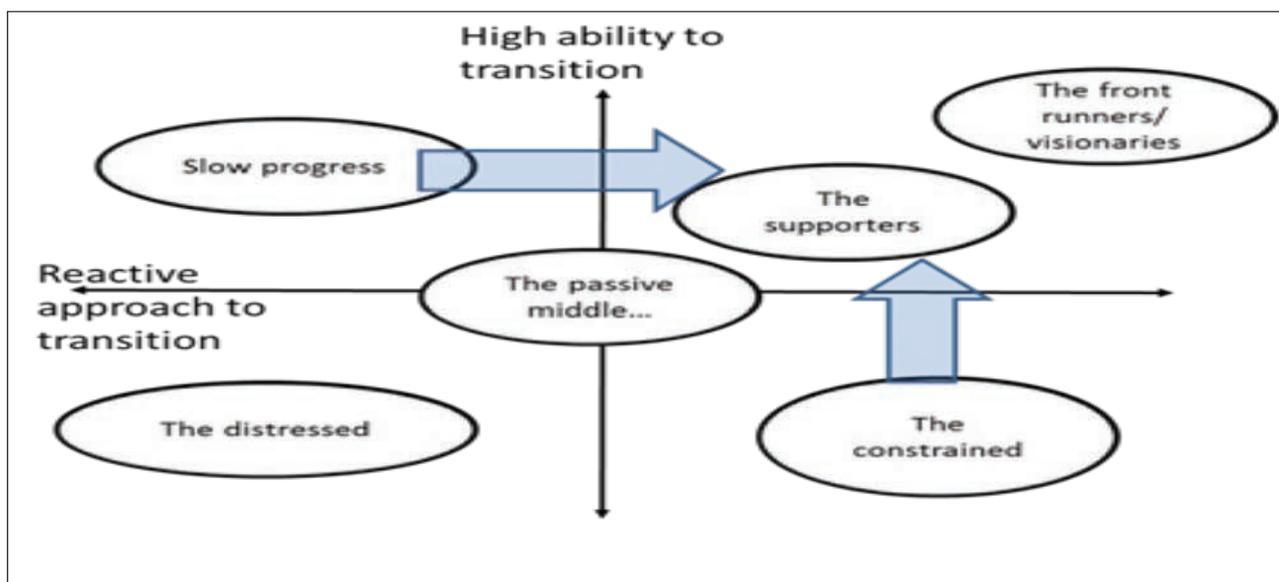


Figure 1: The transition to a low carbon industrial development at firm and sector level – Source TIPS 2016

This taxonomy is useful and relevant in many respects since it will:

- Provide a South African wide economy understanding of the current state of play;
- Provide a useful tool to understand the concept of 'transition';
- Allow for a dynamic understanding of firms' positioning, which changes over the years; and
- Facilitate the development of tailor-made responses for different situations and the role that government and **the dti** can play for each group of firms will be identified, and quadrant specific solutions will be developed.

4.3 National Cleaner Production Centre of South Africa (NCPC-SA)

Mandate

The NCPC-SA is the national resource efficiency programme of **the dti** that is mandated to, through appropriate resource efficiency service offering and competences, contribute to building the manufacturing industry's competitive capability in pursuit of a low carbon economy in South Africa.

Vision

The NCPC-SA's vision is to be South Africa's leading national catalyst and thought leader in the provision of relevant services and best practices to a diverse economic sector that will enhance its competitive capability and thus contribute to economic growth, environmental responsibility and human development.

Mission

The NCPC-SA's mission is to foster the efficient utilization of resources, reduce tangible and intangible costs and improve industry competitiveness in a sustainable manner to participating companies.

Strategic Objectives

The mission is achieved through the following four strategic objectives:

- Awareness raising, advocacy and demonstration of the benefits of RECP;
- Technical support to industry through RECP methodologies and tools;
- Facilitating implementation of RECP in industry; and
- Capacity building and development of RECP skills.

the dti EIP table: Environmental impact, objectives, timeframes and indicators

Table 1: Office of the Director General (ODG)

Sub-programme / project	Potential environmental impact	Environmental objective	Expected outcomes	Responsibility	Performance indicator / measure	2016/17 Target	Monitoring / Control Mechanism
Supply Chain Management	Reduction in vehicle emissions	Promote the use of one electric vehicle	Improved environmental performance	D:SCM	Pursue the sponsorship for the 1 (one) electric vehicle	Q4 2017	Business plan

Table 2: Group Systems and Support Systems Division (GSSSD)

Sub-programme/ project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/measure
AMS	Inefficient use of resources (water)	Continue to implement water-saving measures in the dti's national offices	National Water Act.	Improved water use efficiency on the dti premises	D:AMS	ECM Training and awareness sessions.	Review market and identify water saving bathroom taps and flush masters in toilets and attain funding for 2017/18	Install water saving taps and flush masters devices	Investigate feasibility of storm water harvesting the dti and provide a proposal including attaining budget	Monitoring of water consumption in place. Metering and reading and meter reading database development and analysis
Information technology services	Waste generation and minimisation	Promote avoidance and minimisation of waste including on-going use of a paperless system in the dti's national and international offices. Disposal of IT equipment and products		Improved natural resource use efficiency on the dti. Establish the process to dispose obsolete IT equipment and	OClO	ECM Training and awareness sessions. Introduce and monitor paper less policy to reduce Datacentre energy and resource consumption	10 ECM Training and awareness sessions. Print Smart – Awareness	10 ECM Training and awareness sessions. Introduce and monitor paper less policy to reduce Datacentre Energy and resources consumption.	10 ECM Training and awareness sessions. Establish the process and plan to reduced Datacentre energy consumption	Number of staff trained and increased usage of ECM Reduction in Energy Consumption of the Datacentre Reduction in printing / copying

Waste Management tracking of dti waste streams	Reduction in waste volumes	Waste Management tracking of dti waste streams	Reduction in waste volumes	Project Plan	Q4 2016/17	Waste baseline report and recommended solutions	D:AMS	Establish the dti 6 months waste Q1-Q2 baseline and recommend interventions to reduce	Improved natural resource use efficiency on the dti	Promote avoidance and minimisation of waste including ongoing use of a paperless system in the dti's national and international offices	Promote avoidance and minimisation of waste including ongoing use of a paperless system in the dti's national and international offices
Information technology services	Waste generation and minimisation	Information technology services	Waste generation and minimisation	ECM Training and awareness Print Smart Awareness Executive instruction to use the ECM system	ECM Training and awareness. Rollout the plan for a reduction of energy and resources from the Datacentre energy consumption. Print Smart – Awareness. Executive instruction to use the ECM system.	Increased number of staff using the ECM Develop a plan for a reduction in energy consumption of the Datacentre Reduction in printing / copying Governance Fora to fully use ECM for documentation	OCIO				

Table 3: SEZ&ET

Sub-programme /project	Potential environmental/ Energy impacts	Environmental / Energy objective	Applicable legislative requirement	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/ measure
Special Economic Zones (SEZ) Programme	N Negative impact on the environment from unsustainable practices by Special Economic Zones	Development of Environmental Management Plans	NEMA	Well managed Environmental Impact in SEZ	CD:SEZ	Environmental Management plans from SEZs/IDZs	All SEZ to have Environmental Management plans from SEZs/IDZs	Review data on EMP for SEZ/IDZs	Re- view existing EMP SEZs/IDZs	Number of Environmental Management Plans developed for SEZs/IDZs
Special Economic Zones (SEZ) Programme	Negative impact on the environment from unsustainable practices by Special Economic Zones	Development of Environmental Management Plans	National Energy Act	Optimise the use of other energy sources i.e. Renewable and energy efficiency. Development of Energy Management Plans for SEZ/ IDZs.	CD:SEZ	Develop energy use reduction plan and process and 3 Energy Management plans from SEZs/IDZs	All SEZ to have Energy Management plans from SEZs/IDZs	Review data on EMP for SEZ/IDZs	Review existing EMP from SEZs/IDZs	Number of Energy Management plans developed for SEZs/IDZs
Black Industrialist (BI)	Green Industry Practices and standards by enterprises that could green black industrialist operations and products.	Promote and Encourage projects that are greener and cleaner operations and products promote green economy. Develop a criteria on environmental compliance for approval of projects.	NEMA Act, NIPF and IPAP.	Green and sustainable Industry and greener operations compliance by BI projects.	CD :BEE	2 Green economy BIs support	Green economy BIs support	4 Green economy BIs	Green economy BIs support	Number of BIs projects that complies to the Green Industry principles aimed promoting green economy.

Sub-programme/project	Potential environmental/Energy impacts	Environmental / Energy objective	Applicable legislative requirement	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/measure
Regional Industrial Clusters (RIC)	Negative impact on the environment from unsustainable practices by enterprises, industries and industrial parks	Clusters Management Organisations to report on environmental impact of the respective projects and programs	NEMA S 2 (4) (a) i-viii; (b); (i); (j)	Projected outputs for RIC projects and industrial parks. Regional Industrial Cluster energy and environmental management framework.	CD: Regional Industrial Clusters	Development of the RIC energy and environment framework and pilot it in 5 parks/ clusters	20 parks/ clusters	30 parks/ clusters	30 parks/ clusters	Number of projects Number of Industrial Parks/clusters with E and E framework.
Black Economic Empowerment	Practices and standards by enterprises that could impact negatively on the environment	B-BBEE policy support initiatives that comply with environmental requirements	NEMA Act	Environmentally sustainable and compliance B-BBEE initiatives	CD: BEE	BEE M&E report with environmental aspect	2 BEE M&E report with environmental aspect	3 BEE M&E report with environmental aspect	4 BEE M&E report with environmental aspect	Number of BEE initiatives that complies to the environmental requirements
Economic Infrastructure and Logistics)	Land degradation; Pollution; burden on the national energy grid	Promotion of green architecture in the construction of industrial infrastructure	National Building Regulations and Building Standards Act	Energy-efficient building design and construction	CD: Economic Infrastructure	1 Construction sector programmes to include an environmental component	2 Construction sector programmes to include an environmental component	2 Construction sector programmes to include an environmental component	4 Construction sector programmes to include an environmental component	Compulsory compliance of projects with the SANS 10400 XA standard
Technology and Human Resources for Industry Programme (THRIP)	Environmentally unsustainable practices by enterprises and industries will result in impacts on the environment	Implementation of THRIP to include green jobs and cleaner technology	NEMA S 2 (4)(a) i-viii; (b); (i); (j)	Projected outputs for THRIP environmental projects	CD: Innovation & Technology	8 projects	10 projects	15 projects	20 projects	Number of projects
Technology and Human Resources for Industry Programme (THRIP)	Environmentally unsustainable practices by enterprises and industries will result in impacts on the environment	Implementation of THRIP to include green jobs and cleaner technology		Projected outputs for THRIP environmental projects	CD: Innovation & Technology	80 students	100 students	150 students	200 students	Number of students

Sub-programme /project	Potential environmental/ Energy impacts	Environmental / Energy objective	Applicable legislative requirement	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/measure
Workplace Challenge Programme	Environmentally unsustainable practices by industries will result in impacts on the environment	Expansion of Workplace Challenge (WPC) Transformation Toolkits to include a toolkit on Green Productivity		Expansion of Workplace Challenge (WPC) Transformation Toolkits to include a toolkit on Green Productivity	CD: Skills for the Economy	Implementation and monitoring of a Green Productivity toolkit to improve company productivity through environmentally sound manufacturing practices and management activities	Implementation and monitoring of a Green Productivity toolkit to improve company productivity through environmentally sound manufacturing practices and management activities	Implementation and monitoring of a Green Productivity toolkit to improve company productivity through environmentally sound manufacturing practices and management activities	Implementation and monitoring of a Green Productivity toolkit to improve company productivity through environmentally sound manufacturing practices and management activities	Progress and Monitoring Report on Implementation of Green Productivity Toolkit

Table 4: ITED

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/ measure
International Trade Development	Unless appropriately regulated, international trade can be a major driver of climate change	Stabilisation and reduction of anthropogenic greenhouse gasses contributing to climate change	An effective and operational UNFCCC multilateral regime	COO/DDG	Participate in UNFCCC processes to advance the negotiations on trade and climate change. 15% adherence to NDC by the dti programmes' activities.	Participate in UNFCCC processes to advance the negotiations on trade and climate change. 25% adherence to NDC by the dti.	Participate in UNFCCC processes to advance the negotiations on trade and climate change	Participate in UNFCCC processes to advance the negotiations on trade and climate change	Report on participation in UNFCCC

Table 5: IDAD

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/measure
Industrial Development Zones & Special Economic Zones, Critical Infrastructure Program, Manufacturing Competitiveness Enhancement Program	Environmental impacts could result from IDZs/SEZs, CIP, MCEP being developed without proper environmental planning and assessment No Green House Gas reduction	Ensure that the funding model for IDZs/SEZs, CIP, MCEP factors in environmental risk management	Management of environmental risk	IDAD COO/DDG	Conceptualise framework for the IDZ/SEZ funding model to integrate environmental risk	2 Business plan analysis	3 Business plan analysis	2 Business plan analysis	Quarterly reports or annual financial statement
Evaluation report to include status of EIA, and EMP implementation for IDZ/SEZ	Designation of suitable IDZs/SEZs dependent on environmental authorization Implementation of suitable CIP, MCEP projects dependent on environmental authorization	IDAD COO/DDG DEA	IDZ/SEZ applications for Mafikeng, Bloemfontein, Durban, Saldana, OR Tambo and Secunda have approved EIAs	2 IDZ/SEZ to confirm with relevant bodies that environmental authorisation is in place before designation CIP, MCEP applications to have approved EIAs Implementation according to environmental management programme as incorporated into the EIA	3 IDZ/SEZ to confirm with relevant bodies that environmental authorisation is in place before designation CIP, MCEP applications to have approved EIAs Implementation according to environmental management programme as incorporated into the EIA	5 IDZ/SEZ to confirm with relevant bodies that environmental authorisation is in place before designation CIP, MCEP applications to have approved EIAs Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for IDZs/SEZs Environmental impact assessment reports for CIP, MCEP		

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2015/2016 Target	2016/2017 Target	2017/2018 Target	2018/2019 Target	Performance indicator/measure
		IDZs/SEZs, CIP, MCEP provide for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in cleaner technology and greener IDZ/SEZ buildings Green jobs generated renewable utility solutions implemented	I DAD COO/DDG Municipalities/Business	Conceptualize incentives and investments in clean technology and afford a platform for investors to create green jobs One renewable energy project implemented at any IDZ/SEZ.	Business plan analysis Two renewable energy projects implemented at any IDZ/SEZ. One support process for Skills development and Incentive programme product developed.	Business plan analysis Two renewable energy projects implemented at any IDZ/SEZ. Develop Skills support programme and for RE and EE project support.	Business plan analysis Two renewable energy projects implemented at any IDZ/SEZ.	Policy for incentives incorporates IEM Projected clean investment leveraged No. of green jobs created No. of IDZ/SEZ clean energy projects

Table 6: Industrial Development Division

Sub Programme	Unit	Environmental Objective	2017/2018 Target	Indicator
Green Industry development.	D: E&E	Financial and Strategic management of the NCPC	Achieving higher impacts with existing resources, mainly through the development of training programmes	NCPC Business plan.
Green Industry Funding mechanism leveraging.	CD: Green Industry	Alignment of Climate Change to Industrialization Policy	Implementation as per IPAP	IPAP KAP's.

Table 7: Consumer and Corporate Regulation Division (CCRD)

Sub Programme	Unit	Environmental Objectives	2017/2018 Target	Indicator
Destruction and disposal of counterfeit goods by SAPS, with the assistance of OCIPE Unit	the dti, NRCS, SABS, ITAC, EDD	Inform waste disposal teams of the requirements for the disposal of counterfeit goods in suitable disposal facility	Strengthening of a range of measures – including closer collaboration between the dti, industry, NCRS, SABS, CIPC (on counterfeit goods) and SARS – through multi-sectoral forums such as the ports of Entry Control Centre that targets SA border posts. Conduct continuous targeted investigations and raids, on non-compliant products;	List of permitted disposal sites by category
Consumer protection and awareness.	the dti	Build capacity of the dti's staff dealing with consumer protection and awareness regarding sustainable consumption and environmental responsibility	On-going development of programmes aimed at improving compliance within industry and contributing to the formulation of best practice in the facilitation of trade, in accordance with all the Acts administered by SARS	Training module on sustainable consumption and environmental. Responsibility developed for staff as part of induction programme

5. Key Challenges

- **the dti** campus has been procured via a Public Private Partnership and thus the implementation of the environmental plan largely depends on the co-operation of the concessionaire.
- Lack of financing measures for the identified plans and targets' implementation. Explore potential funding mechanism alignment and leverage climate change funding.
- Measuring of impact in the context of environmental implementation plans.
- There are currently limited departmental monitoring and evaluation of the potential environmental impact facing **the dti**.

6. Acknowledgements

the dti would like to extend its appreciation to all sector desks that contributed information for the compilation of this report. Inputs and support from Environmental Affairs on the Environmental Implementation Plan (2015 – 2020) are also appreciated.

This EIP (2015 – 2020) is hereby submitted for gazetting.



Director General: the dti

Lionel October

Date:05/10/2016