

# **Skills for a Just Transition to a Green Future: Measuring the South African TVET System and providing input to support its development.**

A response by the GIZ- Career Path Development for Employment project

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## **1 Background**

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) recently published a discussion paper ([27\\_giz2022-0387en-just-transition-green-future.pdf](#)) exploring the implications for Technical and Vocational Education and Training (TVET) in creating a workforce which will be able to address not only the labour market needs for the Green Economy but also the socio-economic dimensions of this transformation processes (“Just Transition”). The paper comprises seven (7) separate research theses which explore various aspects such as the policy dimension, the anticipated changes in labour markets and how TVET systems need to respond. The paper also discusses how Development Corporation (DC) more broadly can support the TVET sector in partner countries in the context of Just Transition. The theses on which this paper is based were developed through a comprehensive literature review and numerous interviews and case studies of policies and projects addressing green economic transformation and skills development across the globe.

This document evaluates the South African context against the theses, to provide key areas of intervention required by the South African TVET system and to provide guidance for Development Cooperation support.

This document has been developed by the GIZ in South Africa, through the Career Path Development for Employment project (CPD4E) which is specifically focused on vocational skills development and employment within the framework of the Just Energy Transition. The issues raised are subject to discussion with partners where priorities can be set for the joint effort to facilitate an effective Just Transition process.

A succinct abstract will be provided for each of the seven papers followed by a review of their relevance and applicability in the South African status quo. This discussion will focus specifically on employability and TVET related matters as defined in the GIZ integrated employment promotion approach, which will be discussed in the final chapter of this paper.

## 2 Major research findings - 7 Theses

The seven theses cover a range of topics ranging from the general coordination of JET at country level to the specific approach in TVET and Skills development and employability. The main research findings and conclusions of each of the papers are briefly provided below.

### **A successful Just Transition requires a coherent alignment of green agendas and skills development policies**

“A successful transition to a Green Economy requires the systematic orientation of educational systems and TVET systems towards sustainability. This can only succeed if sustainability is incorporated into a country's development strategies and all policy areas, including TVET - and vice versa, if TVET is integrated in environmental and sustainability policies. Coherent policy and implementation structures are indispensable to accelerate the demand for Green Skills, but also to promote their supply. This is a particular challenge for developing countries, which often lack a proactive government and suffer from weak governance structures.”

### **The private sector needs incentives, sanctions and support to develop a demand for Green Skills**

“In many countries, the private sector does not yet demand Green Skills as policies creating demand and market incentives are often insufficient. The employment gains of a skilled workforce with green skills will not materialise if the private sector is not comprehensively incentivised and supported to develop Green Jobs and demand Green Skills. Companies are often unmotivated to invest in costly environmental protection measures if (a) regulations are not effectively enforced by authorities and (b) if they do not bring significant cost savings or additional revenue in the short term. DC measures promoting sectors with green potential such as renewable energy, energy efficiency, construction or waste recycling should examine and address both, the regulatory and incentive systems in order to promote the growth of Green Jobs.”

### **A Just Transition cannot be successful without the integration of the informal economy in green, economic and TVET policies**

“Given the prominence of the informal economy in many developing countries, it has to be given appropriate weight in the transition processes for two reasons: (1) to potentially reduce environmentally harmful activities in the informal economy and (2) in the context of Leave No One Behind (LNOB), to facilitate the inclusion of marginalised people working in the informal economy in modernised TVET systems.”

### **TVET is crucial to prepare the labour force for a Just Transition, but TVET systems need to be strengthened and aligned with comprehensive social protection measures**

“The transition to a low-carbon economy will inevitably lead to structural and sometimes disruptive changes in the labour market. TVET systems and labour market policies are crucial instruments to prepare in time for this shift, if they (1) react flexibly to changing skill requirements, (2) transmit solid occupational and transferable core skills, (3) address initial training as well as re- and upskilling, (4) equally include women and (5) are aligned with active labour market policy for facilitating a Just Transition.”

**Transition requires holistic TVET reforms, in line with Education for Sustainable Development, to ensure relevance, attractiveness and inclusivity.**

“Current TVET systems are too weak to support a Just Transition. They often miss the necessary governance mechanisms, are poorly financed, lack sufficiently skilled teachers and instructors and are not linked to other education pathways. As a consequence, TVET continues to be portrayed as second-rate education. There is a need for broad and holistic TVET reforms that are well coordinated with other relevant policies. These reforms should include alignment with sustainability and digitalisation policies, multilevel-governance approaches and close interlinkage with other forms of education. This needs to be complemented by mainstreaming of Education for Sustainable Development (ESD), integration of local knowledge and last but not least, initial and further training of TVET personnel that incorporates Green Skills and ESD.”

**Just Transition increases the need for labour market forecasting to match emerging skill demands**

“Due to higher workforce mobility, shorter innovation cycles and the mega trends digitalisation and greening, the skill needs of future labour markets will become increasingly dynamic and the importance of skills forecasting will continue to increase. Anticipation mechanisms can be based on national labour market information systems (LMIS) if they exist and are functional. Alternative and sometimes more efficient solutions are sectoral or locally based skills forecasting approaches. Private sector engagement and a close interlinkage of labour market forecasting with TVET systems is indispensable to make use of the findings for the modernization and greening of occupational profiles and curricula.”

**The emerging skill demand in a green economy will require TVET to rapidly adapt existing occupational profiles and develop new ones**

“TVET systems are often slow in responding to changing skill demand. Thus, policy makers, project designers and practitioners need to strike a balance between a sufficiently rapid response to market needs and the anchoring of modernised or new green qualifications in qualification frameworks and TVET systems. Potential approaches for ‘rapid response’ include providing support to the private sector to develop in-company training programmes and the development of non-formal trainings as well as of certified training modules that can later be added to an existing occupational profile. The greening of occupational profiles should be guided by the relevance of occupational fields to greening, the demand for Green Skills, as well as an analysis of industry practice and the need for greening this practice. Further guiding aspects should be policies for mainstreaming green content in occupational profiles and curricula and the existing standards of a country for development of qualifications and curricula.”

## **2 Analysis of the South African contexts against the major findings**

### **2.1 Policy coherence (Framework conditions)**

In 2020 the **Presidential Climate Commission (PCC)**, was established as an independent, multi stakeholder body as a direct result of the job summit held in 2018 and a response to the sustainability agenda of the country. The PCC comprises 10 ministers and 23 organizations representing a cross section of stakeholders. Such a **coordinating structure** is critical for the advancement of JET. The PCC is in an optimal position to ensure the coordination of JET processes. Private sector and civil society have to be part and need to play an active role in these coordination structures.

According to the Just Energy Transition declarations of the RSA Government “the process of transition needs to be based on the full involvement of the organized labour and businesses in **targeted programmes of reskilling and upskilling**, providing employment and providing other forms of support to ensure that workers are the main beneficiaries of our transition to a greener future”. This statement underlines the high relevance of skills development and active labour market policy measures to enable the implementation of a Just Transition policy.

The central document for the implementation of the national agenda 2030 is the National Development Plan (NDP) that aims to create employment through an inclusive job-growth that improves the employment perspectives especially of young people (SDG 8, decent employment). The Economic Reconstruction and Recovery Plan (ERRP) emphasises the reduction of poverty, inequality and unemployment. Both guiding policy documents remain vague on the topic of green economic transformation. There is no policy document yet that provides guidance for Just Transition and green economic transformation across the different pillars for economic and social development.

The **guiding policy documents for education and TVET** are the National Skills Development Plan 2030 (NSDP) and the Skills Strategy under the ERRP. These strategies aim at improving labour market relevance of TVET, expanding work-based learning and to place greater emphasis on upskilling and reskilling of the labour force. They do not provide direct references on the greening of skills (apart from the inclusion of a few qualifications) and on education for sustainable development (policy gap).

While significant work has been done, national level policies need to be translated into **action plans at provincial level**, that link the action plans for renewable energies, energy efficient infrastructure development, and circular economy with the agenda for skills development and inclusive employment promotion at the national and provincial level.

## 2.2 Employment opportunities (Demand side)

Past experiences showed that investments by the state into the renewable energy sector, such as the Renewable Energy Independent Power Producer Programme (REIPPP) had a significant impact on jobs created in this sector. However, three quarters of the total jobs created by this programme were in construction and installation, i.e. in the installation of PV power plants. These jobs are usually temporary. Since PV technology is almost “maintenance free” only one-quarter of the jobs in this sector were of a more permanent nature (IRENA 2022: Renewable Energy and Jobs, p.52). Experiences also show that state investments in the past have not been stable, creating incentives over a limited period of time (in some cases several programmes were launched in parallel) which created peaks of demand that were followed by periods of low demand (COBENEFITS 2019, Future skills and job creation through renewable energy in South Africa).

The overall policy landscape in South Africa is considered favourable to create a more permanent and growing demand for **jobs in the renewable energy sector**, however, scenarios for job creation differ vastly. They range from 15.000 jobs created per year till 2030 (base scenario) to 36.000 jobs per year (accelerated scenario) (SAPVIA 2021, Solar PV Industry Jobs Report, p.14-15).

Rising energy prices and the lack of energy availability are a primary motivating factor for the industry to invest in energy-efficient technologies and modes of production.

While job potentials in the PV industry are well researched, far less information is available about the enabling framework for job creation and skill demand in other environment and climate relevant fields of the economy. The construction and manufacturing industries have the potential to create “greener

jobs” if the industries were both incentivised and regulated to move to more climate and environmentally friendly ways of production. Legislation forcing the auditing of all buildings against an energy efficiency rating has the potential to be a catalyst for job creation (example of regulation).

The level of informal employment in South Africa is estimated at 44%, including the agriculture sector, without agriculture the proportion of informal employment is at 32% (ILO 2022, quoting Labour Force Survey data of 2021). The LFS report (Q4 2022) says that ca. 20% of employed persons work in the informal sector (Q4 2022) (2.955.000 persons out of 15.934.000 employed persons) ([LFS 2022](#)).

According to the Small Enterprise Development Agency of South Africa, of ca. 2,3 Million MSMEs 67% are informal (SEDA, 2021). All MSMEs are estimated to provide employment for 9,7 Million persons. Despite the high proportion of informal businesses, these provide “only” 13% of the employment given to other persons (i.e. excluding own-account and employers). No explicit data on the gender dimension has been found, but it has been estimated that around 38% are female ([SEDA](#), 2021).

The extent of informality may differ between economic sectors such as manufacturing, construction and services.

Making informal sector businesses more climate- and environmentally responsive will require a substantial effort in creating awareness and in upskilling of informal sector workers. National skills development policy should play a part in promoting green skills in the context of micro and small enterprise.

## 2.4 TVET and skills development (Supply side)

The TVET sector in South Africa is generally viewed as weak and the links to the labour market are seen as tenuous. Within this context supporting the Just Energy Transition and sustainable development goals in general is not without difficulty.

Significant strides have been taken to strengthen the governance structures in TVET colleges and particular emphasis given to the role of the private sector in the governance of institutions. However, within the Energy transition the labour market in itself is still emerging and unlikely to play a significant role in the colleges at present.

**Programmes and pathways** - In 2013 Renewable Energy Technology was introduced into the TVET Colleges as an elective subject within the National Certificate Vocational (NC(V)) electrical curriculum. This provides an excellent starting point to expand the offering of renewable energy programmes. At inception 5 colleges offered the programme, today this has increased to 19.

Through the Seta’s and QCTO, various occupational programmes have been developed such as the PV Technician programme. This can become a qualification which provides a good career path to both NC(V) students as well as electrical artisans. Some other qualifications in this area have been developed but a comprehensive analysis of the qualifications available and qualifications required is necessary as explained in the Renewable Energy Skills roadmap (South African National Energy Association (SANEA); Wits Business school; School’s African Energy Leadership Centre (AELC), University of Witwatersrand’s Centre for Research Education and Labour, BRICS Business council and GIZ, 2023).

**Funding** - Greening the curriculum’ of TVET colleges will require significant resources and plans to increase student enrolment in TVET colleges as Just Transition is expected to create about 250 000

new jobs until 2030. The non-alignment of funding between the Skills Levy system and the TVET fiscal system remain a critical deterrent for the public colleges to increase enrollments. Lessons learnt from the Centre of Specialisation implementation must be considered for the scalability of the occupational programmes in public TVET Colleges.

Amongst donor organisations much emphasis is being placed on the funding of the green economy as per the COP 26 commitments and while there is a coordinating committee for skills development, this has not resulted into dedicated coordination of funding of skills development.

**Lecturer development** - The skills of lecturers remain one of the most critical conditions for effective skills development. Programmes for lecturer upskilling must be systematically undertaken. Currently GIZ is supporting RET lecturer development. MerSeta has also invested into PV technicians who can support colleges and finally SARETEC is seen as a key partner in the development and support of colleges.

**Forecasting:** In March 2017 DHET issued a ten-year forecast (Modelling Future Demand and Supply of Skills in South Africa) as an important contribution to the establishment of the institutional mechanism for skills planning in South Africa. No reference to the transition to a green economy was made and developments from 2020 (COVID-19 pandemic, JET-P) are not covered yet.

With the worsening of the energy crisis and the proclamation of the JET-P, the interest in specific forecasting for Green Skills (in particular in the energy sector) has risen significantly as the inevitable transition to renewable energy sources is generally being associated with the creation of new jobs, but also the need of re-skilling of workers whose jobs will gradually disappear (e.g. in coal mines).

Through the newly launched occupational qualification framework it is now possible to register with the QCTO short occupational programmes. This is a significant opportunity to introduce partial qualifications or specialisations into the formal qualification system. This provides for an ideal landscape to re- and upskill the current workforce.

According to the study of van Vandhuizen and Ochs, reskilling programmes are not enough: Most coal related jobs are in Mpumalanga, while renewable energy jobs are usually less centralised (geographical mismatch); thus, besides reskilling, it is also required to support workers in the “financial and psychological reallocation costs” that are incurred through the necessity to move within SA (p. 7).

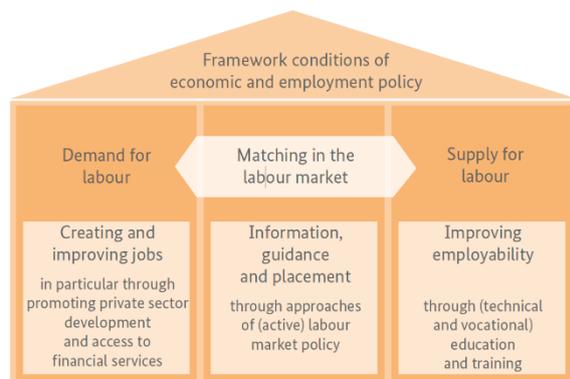
### 3 Example: Career Path Development for Employment Project

The Career Path Development for Employment Project (CPD4E)<sup>1</sup> promotes a Just Transition and inclusive employment creation by supporting the supply and demand side to understand and address the emerging opportunities for enterprise and skills development. CPD4E will unlock opportunities for young people and SMEs to gain access to employment in low-carbon footprint economic sectors. In the framework of the Just Energy Transition Partnership (JET-P), the CPD4E project identifies and

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<sup>1</sup> Commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and co-financed by the Swiss State Secretariat for Economic Affairs (SECO), implemented in partnership with the South African Department for Higher Education and Training (DHET)

addresses the significant future skills needs in the labour market and employment implications of the Just Energy Transition process with a special focus on promoting the employability of youth and disadvantaged gender groups as well as employees in the fossil fuel industry threatened by job-loss.



To achieve its complex and ambitious task the CPD4E project follows a holistic concept, using the **“Integrated Approach to Employment Promotion”**. German development cooperation addresses employment promotion by using an integrated, multi-dimensional approach that focuses on the supply and demand sides of the labour market as well as on active labour market policies and instruments. The approach combines elements of technical vocational education and training, labour market policy, and private sector

development. A particular focus is set on the challenges for new entrants to the labour market. The aim is to achieve positive long-term employment and income effects by coordinating all relevant intervention areas. Economic policy, which determines the general labour market conditions such as the business and investment climate, plays a key role by streamlining policy decisions with respect to employment targets.

As outlined in the analysis above, policy coherence (framework conditions), employment opportunities (demand side) and TVET and skills development (supply side) must go hand in hand to support a Just Transition in South Africa.

Corresponding to that and conceptionally based on the integrated approach the CPD4E project is being implemented through a combination of measures in four areas:

**Framework conditions – strengthen capacities of employment promotion institutions:** CPD4E is part of the German DC programme “TVET and Employment Promotion” in South Africa which addresses Just Transition

as one of its strategic priorities. German DC projects in this programme apply a multi-level approach and comprehensive capacity development strategies that address the policy dimensions as well as the multi-stakeholder cooperation of public, private and civil society actors involved in JT. The CPD4E project aims to strengthen the capacity of South African actors to develop and implement new approaches to employment promotion in the context of a Just Transition. Innovative support options will be developed and piloted for this, and their results will be fed into central political decision-making bodies.

For example, local employment initiatives in the context of JT shall be supported and pilot programs that will address reskilling and employment promotion of workers in the coal industry shall be developed.

**Demand side - Creating jobs through private sector development:** A major part of the CPD4E project focuses on improving the support options for South African SMMEs and entrepreneurs as an important prerequisite to demand for skilled workers. CPD4E wishes to support South African SMEs in the sectors of relevance to the green economy in order to stabilize their economic situation, strengthen their competitiveness and create opportunities for growth which will generate new jobs.

For example, partnering with the National Business Initiative (NBI) CPD4E supports job creation and skilling in the context of micro and small enterprises, with an emphasis on green jobs and skills. 6 hubs are being established at TVET colleges across South Africa to support the creation of entrepreneurial ecosystems with special focus on township economies, taking into consideration the important role of the informal sector for employment promotion.

**Supply side – Promoting employability through training:** The transition to a decarbonised economy will lead to a change in the skills required of employees and job seekers. CPD4E therefore aims at strengthening the delivery capacity of training providers to develop and implement training measures that will address new skills requirements and be designed in a gender-sensitive manner. Young people, especially girls and women, who take part in training interventions should increase their employability in respect of the skills that will be demanded in the labour market in the future. CPD4E is supporting the linking of the skills anticipation with the updating and design of training programmes as well as strengthening institutional capacities through a process of consultation and exchange among all stakeholders in order to formulate a response of the SA TVET system towards the development to a green economy.

For example, CPD4E builds the capacity of TVET institutions and industry partners to develop, adapt and implement pilot programmes, supports the development of new occupational profiles, curricula or short skills programs based on the needs of the labour market and supports processes for accreditation of new programmes in the area of green skills.

Lecturers are being trained, e.g. on renewable energy technologies. A study which is under preparation and will be conducted in 2023 will analyse and identify the various factors, key labour market and economic challenges, trends and opportunities in the South African economy that serve as possible enablers or inhibitors of a Just Transition towards an environmentally sustainable economy and society. The “Employment and Labour Market Analysis” developed by GIZ which uses the logic of the integrated approach to employment promotion will be used for this purpose. The findings from this exercise shall lay an evidence base for planning and designing green skill interventions.

Going beyond the 7 theses’, the CPD4E project puts a particular focus on bridging the gap between the supply and the demand side of the labor market:

**Better matching in the labor market – job placement and career counselling services:** The existence of productive jobs and qualified workers does not guarantee more employment if there is a shortage of labor market information and a mismatch between labor supply and demand. To improve job placement, the CPD4E project supports the development and application of active labor market policy instruments such as matching, placements, soft skill training and specific measures for girls and women to transition from learning to earning. Although numerous support measures for improving the employability of young job seekers in South Africa are already available, these are not geared towards the specific support needs of girls and young women and have not sufficiently considered the potential of the transition to a sustainable, decarbonised economy. Therefore, CPD4E aims to expand the range of support measures accordingly.

For example, the cooperation of CPD4E with the Institute of Energy Professionals in Africa (IEPA) opens potentials to train and upskill technicians that work (or seek new jobs) in the industry on energy efficiency, a sector with growing demand for skilled labour.

## 4 Conclusion

A Just Transition to a green economy is a herculean task, especially against the backdrop of a struggling South African economy as it means not less than a significant shift in the way society and economy operate. With the tremendous pressure to solve the energy crisis and the stipulation of the JET-P this transition towards a more sustainable and low-carbon economy has gained significant momentum. It will be complex, challenging to implement and will require a significant amount of resources. Moreover, transitioning to a green economy is not only about reducing greenhouse gas emissions but also requires ensuring that the transition is equitable, inclusive, and fair for all communities, including workers and vulnerable populations who may be disproportionately affected by these changes. Therefore, the Just Transition needs a collective effort from individuals, businesses, governments, and civil society to create a sustainable and equitable future for all.

By prioritizing job creation and supporting workers, a Just Transition can help to ensure that the shift towards a green economy is carried out in a way that is fair and inclusive. While some jobs may be lost as a result of the transition, such as those in the fossil fuel industry, many new jobs will also be created in emerging green sectors. Employment can be promoted by using an integrated and multi-dimensional approach that focusses on the supply and demand sides of the labour market as well as on active labour market policies and instruments to achieve sustainable employment and income effects by coordinating all relevant intervention areas.

With concerted effort the TVET system must play a central role for a Just Transition process which strongly requires a labour force with relevant skills and up-to-date knowledge in rapidly evolving sectors. The TVET system must adjust and respond to this critical challenge to ensure that jobseekers and workers are equipped with the skills to stay competitive and adapt to a changing job market. Without this a Just Transition will not be possible.

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