



TRADE & INDUSTRIAL POLICY STRATEGIES



Tracking quarterly trends and analysing foreign direct investment, imports and exports

FOREIGN DIRECT INVESTMENT TRACKER

FOURTH QUARTER 2022

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TIPS TRACKERS

TIPS FDI Tracker monitors inward foreign direct investment projects. It reports on new FDI projects, analyses these, and adds them to an ongoing list of investment projects.

TIPS Export Tracker provides updates on export trends and identifies sectors and products that are performing well and those that are lagging.

TIPS Import Tracker provides an overview of import patterns and looks at the causes of surges in manufacturing imports, and their likely impact on industry.

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ABOUT THE FDI TRACKER

The FDI Tracker traces the foreign direct investments that are made in South Africa every quarter, based on publicly available and published data. This information is synthesised into a database and categorised across several variables. These include investment values, project timeframes, number of jobs created, and the identity of the investor, among others. The Tracker also includes an analysis of the investment environment within the country, analysing key metrics of investment activity. Due to the sensitivity of private investment data, all variables cannot be publicly accessed, and when this is the case, the absence of data and assumptions are noted.

The FDI Tracker aims to assist policymakers and other relevant stakeholders in understanding the types of investments made each quarter. It also assists in assessing the extent to which pro-investment policies support actual investments. Extracting the barriers and constraints investors face indicates policy blockages that can be removed to improve the investment environment and lead to economic growth.

New Investments refer to investments that were not previously captured in the database. The investment is dated from when it first appears in the database. Updated Projects refer to any substantial change in a project already profiled.

The new projects for the quarter are included as comprehensive profiles at the end of the report.

FDI PROJECTS, Q4 2022

Analysis in the fourth quarter of 2022 identified 17 new projects. Investment values were reported for only nine of the projects, amounting to R8.6 billion. Employment data was reported for five projects, totalling 2 316 employment opportunities, mainly comprising of jobs resulting from the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) projects, with 266 permanent jobs and 2 050 temporary opportunities. The Tracker further recorded updates for 19 projects pre-existing this quarter.



New FDI projects

Utilities

AMEA Power was awarded preferred bidder status in Bid Window 6 of the REIPPPP. The company will be constructing the 120 megawatt (MW) Doornhoek solar photovoltaic (PV) power plant. The facility will produce over 325 gigawatt hours (GWh) of renewable energy, to be supplied to Eskom through a 20-year power purchase agreement (PPA). AMEA expects construction to start in 2023 and to complete the project for about US\$120 million (R2.3 billion). It further estimates that 400 employment opportunities will be created through the development. The facility will be AMEA's first in South Africa (AMEA Power, n.d.; Savannah Environmental, 2022; Slater, 2022).

Enel Green Power was also selected as a preferred bidder in the sixth round of the REIPPPP. The firm will develop two solar power facilities in North West province for about R1.5 billion each. The Kutlwano and Boitumelo solar plants will each have a generation capacity of 150MW and an expected production capacity of between 165-205GWh per annum. The firm plans to further install a battery storage facility at each plant with a capacity of up to 500MW. Collectively the projects could create 1 600 temporary opportunities during the construction phase and 70 permanent jobs once the facility is operational (Enel Green Power, 2022; Environamics, 2021a, 2021b).

Anglo American and EDF Renewables have partnered to establish a new renewable energy company, Envusa Energy. Envusa will develop a regional renewable energy ecosystem designed to meet Anglo's energy needs across its local operations in South Africa. The aim is for Envusa to generate 3-5GW of electricity by 2030. The company will supply a mix of wind and solar energy generated on Anglo's sites, which will be transmitted through the national grid. Envusa Energy is starting with the launch of over 600MW of wind and solar projects. The first phase of the projects is expected to be fully funded and construction to commence in 2023 (Anglo American, 2022; BusinessTech, 2022).

Volkswagen Group South Africa (VWSA) completed three projects at the company's Kariega manufacturing plant in the Eastern Cape. Two of the projects target environmental sustainability at the facility, as part of VWSA's Zero Impact Factory strategy and the broader group's We//2025 corporate strategy. To this end, the company concluded the construction of a wastewater recycling facility (R20 million) that reuses production-related wastewater in other manufacturing processes at the facility. VWSA further installed 3 136 rooftop solar PV panels for an undisclosed sum. These are

estimated to have a generation capacity of 2 500MWh – 3.5% of the plant’s energy requirements (News24, 2022; Venter, 2022a).

Hyundai Automotive South Africa has installed solar power infrastructure at the firm’s properties across Gauteng for about R14 million. These include Hyundai's head office in Bedfordview and various dealerships across the province. The head office features over 240 solar panels on the roof of the building that deliver about 110 kilowatts (kW) of electricity to the facility. These installations are connected to both the national grid and internal generators. The project was initiated in May 2022 and commissioned by September 2022. The project follows Hyundai’s 2020 installation of a solar system at the firm’s parts distribution centre. The company is exploring additional sustainability solutions for its properties (ITWeb, 2022; Venter, 2022b).

Pan African Resources has completed a feasibility study exploring the expansion of the recently commissioned Elikhulu solar plant at the firm’s operations in Mpumalanga. The expansion would enable the plant to deliver 22MW of electricity, up from the current 10MW. The value of the investment has not yet been disclosed (Pan African Resources, 2022).

Services

Equinix is a data centre developer based in the United States. The company is expanding its global presence with plans to invest US\$160 million (R2.8 billion) in a local data centre, which will be the firm’s first facility in South Africa. Equinix plans to serve major corporations locally and across Africa. The company intends to develop a 20MW retail campus that will provide 3 450 cabinets and more than 100 000 square feet (9 290 square metres) of colocation space. It is starting the development with a 4MW data centre named JN1 that will feature over 690 cabinets that span more than 20 000 square feet (1 858 square metres) of colocation space (Equinix, 2022; Prinsloo, 2022).

Google has selected South Africa as one of the countries in which the company plans to establish a new Google cloud region. The new region aims to support users, developers, businesses and institutions of learning, linking users’ on-site networks with Google’s grid in three African countries including South Africa. Services that can be accessed through the new Google cloud region include cloud storage, compute engine and management systems. Google plans to further leverage the firm’s private subsea cable, Equiano, which recently landed in South Africa and connects Europe and Africa. South Africa will be the first cloud region location on the continent. Google has not yet announced the value of the investment (Gupta, 2022; Njanja, 2022).

Vantage Data Centers has started construction of a second data centre campus, JNB2, in Gauteng for an undisclosed sum. When complete, the first building of the JNB2 campus will consist of a 20MW 355 000 square feet (33 000 square meters) two-storey data centre, which the company expects to begin operating in mid-2024. Vantage is repurposing a portion of an existing warehouse for the initial phase. Vantage has further initiated the next phase of the development of the company’s inaugural data campus JNB1 in Midrand (McLeod, 2022; Vantage, 2022).

Manufacturing

VWSA has also established a new wax flooding facility at the firm’s Kariega manufacturing plant, investing approximately R235 million, replacing the old electro-coating facility. Wax flooding prevents corrosion by coating hard-to-reach metal with a layer of wax ensuring extended longevity. The update facility spans 5 350 square metres, improves efficiency, and reduces CO₂ emissions of VW Polos and Polo Vivos (Shahini, 2022; Venter, 2022c).

Dräger Safety Zenith, a subsidiary of German company Dräger, manufactures safety and medical equipment. The company invested R135 million in a new manufacturing facility. The Department of Trade, Industry and Competition (the dtic) contributed a further R81 million towards the factory. The plant is Dräger's first on the continent. The project will result in about 96 permanent job opportunities. The company aims to export its products to the rest of Africa and to the international market (Dräger, n.d.; Eastern Cape Industrial & Business News, 2022).

Luxembourg-based Orion Engineered Carbons is undertaking the black oil tank project at the Coega Special Economic Zone (SEZ) in the Eastern Cape. Locally, the company manufactures and exports carbon black to Europe, with raw materials imported from the United States. Carbon black is a substance used mainly to strengthen rubber in tyres, in addition to other functions. Orion will be upgrading key equipment at the firm's facility investing approximately R60 million. The project further entails the development of two 18 000 cubic metre tanks for the storage of carbon black feedstock and associated infrastructure. The dtic is contributing an additional R200 million towards the project. The project includes the relocation of the liquid fuel storage facilities, the Dom Pedro Tank Farm, from the Port of Port Elizabeth to the Port of Ngqura. The Dom Pedro Terminal is due for closure to liquid vessels by the end of December 2022. This would have disrupted the supply of carbon black and impacted employment in the value chain. The project will create 150 employment opportunities – 50 during the construction phase and 100 when it's operational (CDC, 2022; Jacobs, 2022).

Sasol and ArcelorMittal South Africa have signed a joint development agreement and will undertake two projects through the partnership with the aim of producing sustainable chemicals and fuels. In the Western Cape, the partners will initiate the Saldanha green hydrogen and derivatives study to investigate the region's potential to host an export hub for green hydrogen, subsequent products, and green steel production. The collaboration is further exploring the revitalisation of ArcelorMittal's Saldanha Steel Midrex facility at the Saldanha Works plant (presently under care and maintenance) to produce and export green steel which is manufactured through green hydrogen and other processes. The second project is the Vaal carbon capture and utilisation (CCU) project. The study will investigate the potential of using renewable energy and green hydrogen to transform captured carbon from ArcelorMittal's Vanderbijlpark steel facility into sustainable chemicals and fuels (Sasol, 2022; Takouleu, 2022).

Mining

TotalEnergies plans to explore for oil offshore the Western Cape West Coast. TotalEnergies and partners hold an exploration right over Block 5/6/7, which allows for various exploration activities within the Block. The company intends to start drilling one exploration well and, based on the result, TotalEnergies will drill an additional nine wells. The drilling will take place in the deep-water Orange Basin in water depths ranging between one kilometre (km) to 3.2km. The target area identified covers about 10 000 square kilometres. The firm has completed an Environmental and Social Impact Assessment study to apply for the Environmental Authorisation required by the authorities to conduct drilling activities (Blood, 2022; Rani, 2022). The value of the undertaking has not been announced.

Updates

Progress

Two EDF Renewables – and partners – projects, under Bid Window 5 of REIPPP achieved financial and commercial close, meaning construction can commence. These are the San Kraal and Phezukomoya Wind Energy facilities that total 280MW. EDF's third wind project under Bid Window 5 is expected to reach the same status in early 2023. The PPA for all three was signed with Eskom in the third quarter of 2022. The projects have a combined investment value of R11.5 billion.

The 100MW Redstone Concentrated Solar Power Plant is under construction and is at 45% completion. The R11.6 billion project is being developed by ACWA Power in the Northern Cape. Construction started in 2021 and the planned commercial operation date is the fourth quarter of 2023. The project was awarded preferred bidder status in Round 3 of the REIPPP programme.

The Tshwane Automotive Special Economic Zone (TASEZ) has started operating following the completion of the first phase of the project. The development is the outcome of a private-public partnership between Ford Motor Company of Southern Africa and institutions at national, provincial and local government levels. The facility currently houses 10 component manufacturers, that will be supplying Ford's Silverton Assembly plant with parts for the Ford Ranger. The component suppliers have invested about R3.62 billion so far to establish their plants in the TASEZ.

PepsiCo has started implementing capital investment projects that are a result of a public interest commitment – totaling R6.5 billion – following the firm's acquisition of Pioneer Foods. The company opened a new R300 million production line at the firm's Weet-Bix facility in the Western Cape. PepsiCo further implemented upgrades at the company's Malmesbury Mill for an additional R60 million.

Vanadium Resources completed a definitive feasibility study for the Steelpoortdrift vanadium project. The study suggests the project could be developed for about US\$211 million (R3.8 billion) and proposes construction of a solar power plant. The investment decision is still pending. The Steelpoortdrift project involves the open pit mining of vanadium ore.

Teraco has completed the first phase of the JB4 data centre expansion in Gauteng. The first phase of JB4 comprises of 30 000 square metres of building structure, 8 000 square metres of data hall space, and 19MW of critical power load. Teraco has secured adjacent land and power for the Phase 2 expansion. The value of the project is R4.4 billion.

Nippon Telegraph and Telephone Corporation (NTT) has officially opened the Johannesburg 1 Data Centre. The facility has a capacity of 12MW, covering 6 000 square metres of IT space, and forms part of NTT's expansion into the African continent. The facility will cater to hyper-scalers and enterprises with services that include a managed hybrid cloud and application monitoring, among others. When it was announced the project value was R875 million.

Thirteen solar photovoltaic projects (see Appendix A, Table 1) from Bid Window 5 of REIPPPP have signed PPAs with Eskom, laying the ground for the projects to proceed. The exclusively solar projects will add about 975MW to the grid once complete. These include projects that will be developed by the Ikamva Consortium (six projects), Engie-Pele Consortium (three projects), Scatec (three projects) and Total Mulilo (one project).

FDI TRENDS, Q4 2022

Table 1 shows a breakdown of information discussed in the previous section on new projects added to the Tracker this quarter. It is presented in a disaggregated manner, reflecting some of the key variables collected in the Tracker database. The narrative that follows provides a brief discussion of each category as it relates to investment activity or trends observed in the Tracker for the quarter.

Investment values

Nine projects make up the total R8.6 billion investment value for the quarter, of which four – valued between R5 billion and R1 billion – constitute over 90% (R8.1 billion) of the value recorded this quarter. The highest commitment recorded is R2.8 billion pledged by Equinix. Two investments are valued between R500 million and R100 million, and three below R100 million, with the least value captured from Hyundai's R14 million solar installation project. Investment values for eight projects have not yet been reported.

Investment by industry and subsector

As observed in the second and third quarters of 2022, projects for the fourth quarter of 2022 were recorded in utilities, services, manufacturing, and mining industries (see Appendix A, Figure 1). Investment was further captured across six subsectors within the respective industries. The highest pledged value was once again recorded in utilities, with R5.5 billion from four of eight projects identified in the industry this quarter. Seven of these projects are in the renewable energy subsector, a mix of REIPPPP participants and self-generation power projects. Utilities also includes the water collection, treatment, and supply subsector. Services comprises of three projects that all make up investment in the ICT subsector; however, only one of these represent the R2.8 billion value recorded in the industry. Manufacturing captured R430 million, registered from three of five projects recorded across three subsectors: automotives, chemicals and medical equipment. The mining industry is represented by one project in the extraction of oil and gas subsector, which was reported for an undisclosed amount.

Investment stages

A categorisation of commitments by stage indicates investments that have only been announced make up just over half of the projects recorded this quarter and 90% (R8.1 billion from four of nine projects) of the total investment value for the fourth quarter of 2022. These include three REIPPPP projects and planned initiatives from the Sasol/ArcelorMittal partnership. The Tracker further recorded five complete projects, among them the three projects by VWSA. One project was registered at each of the following stages: project-preparation, feasibility, and construction/implementation.

Investment types

Investment classified by project type this quarter shows that greenfield commitments, as was the case in the last quarter, make up the bulk of pledges in value and number. Six of the 12 greenfield projects contributed a total of R8.3 billion to the quarter's investment value. Further, greenfield projects were registered in all four industries that captured investment for the quarter. Monitoring captured three upgrade projects with a combined R255 million in the manufacturing and utilities industries. One brownfield investment and one expansion project were recorded respectively, both in renewable energy.

Investment by location and industry

Investment was recorded in all provinces except KwaZulu-Natal (see Appendix A, Figure 2). The highest investment value was captured in the North West where four projects were recorded in the utilities industry. The R5.3 billion registered in the province is from three REIPPPP-related projects. Gauteng garnered investment from six projects of which only two – in services and utilities – contributed to the R2.8 billion investment value recorded for the province. Investment was also registered in Gauteng's manufacturing industry. Investment in the Eastern Cape totals R650 million, with the bulk of this value (R450 million) attributed to three projects in the manufacturing industry. The other two projects in the province were registered in utilities. The Anglo American/EDF partnership – Envusa¹ – exclusively represents investment in the Northern Cape, Limpopo and Free State benefiting the utilities industry in these provinces. Mpumalanga is another province that benefits from investment in utilities through Pan African Resources' potential solar plant expansion. Three projects were recorded for the Western Cape in manufacturing, services and mining, all for undisclosed amounts.

¹ The project aims to provide power to Anglo's operations in South Africa. Key sites identified are in Limpopo, North West, Northern Cape, Gauteng and Free State. <https://www.angloamericankumba.com/about-us/where-we-operate?product=all>

Table 1: FDI Projects, Q4 2022

PROJECT NAME	VALUE (R'BILLION)	INDUSTRY	SUBSECTOR	PROJECT STAGE	PROJECT TYPE	PROJECT LOCATION	COUNTRY OF ORIGIN	PROJECT FIRM	TARGET MARKET
Equinix South Africa data centre	2,8	Services	ICT	Announced	Greenfield	Gauteng	United States	Equinix	Domestic and regional
Doornhoek PV	2,3	Utilities	Renewable Energy	Announced	Greenfield	North West	United Arab Emirates (UAE)	AMEA Power	Domestic
Kutlwano solar plant	1,5	Utilities	Renewable Energy	Announced	Greenfield	North West	Italy	Kutlwano Solar Power Plant (RF) (Pty) Ltd /Enel	Domestic
Boitumelo solar plant	1,5	Utilities	Renewable Energy	Announced	Greenfield	North West	Italy	Boitumelo Solar Power Plant (RF) (Pty) Ltd /Enel	Domestic
VWSA wax flooding facility	0,235	Manufacturing	Automotive	Complete	Upgrade	Eastern Cape	Germany	VWSA	Domestic, regional and international
Dräger Southern Africa	0,135	Manufacturing	Medical and surgical equipment and orthopaedic appliances	Complete	Greenfield	Eastern Cape	Germany	Dräger Safety Zenith	Domestic and International
Carbon black feedstock storage facilities	0,06	Manufacturing	Manufacture of chemicals and chemical products	Project-preparation	Greenfield	Eastern Cape	Luxembourg	Orion Engineered Carbons	Domestic, regional and international
VWSA sustainability projects: Waste water recycling plant	0,02	Utilities	Water collection, treatment and supply	Complete	Upgrade	Eastern Cape	Germany	VWSA	Domestic
Hyundai solar project: Head office and dealerships	0,014	Utilities	Renewable Energy	Complete	Brownfield	Gauteng	South Korea	Hyundai	Domestic

Google South Africa Cloud	Not reported	Services	ICT	Announced	Greenfield	Multiple Locations ²	United States	Google	Domestic and regional
Envusa – Anglo American and EDF renewable energy business	Not reported	Utilities	Renewable Energy	Announced	Greenfield	Multiple Locations ³	Multiple ⁴	Envesa (Anglo American/ EDF Renewables)	Domestic
Sasol/ArcelorMittal Decarbonisation initiatives: Saldanha green hydrogen	Not reported	Manufacturing	Manufacture of chemicals and chemical products	Announced	Greenfield	Western Cape	Luxembourg	Sasol/ArcelorMittal	Domestic, regional and international
Sasol/ArcelorMittal Decarbonisation initiatives: Vaal carbon capture and utilisation	Not reported	Manufacturing	Manufacture of chemicals and chemical products	Announced	Greenfield	Gauteng	Luxembourg	Sasol/ArcelorMittal	Domestic, regional & international
Elikhulu solar plant expansion	Not reported	Utilities	Renewable Energy	Feasibility	Expansion	Mpumalanga	United Kingdom	Pan African Resources	Domestic
Total Energies West Coast exploration	Not reported	Mining	Extraction of crude petroleum and natural gas	Announced	Greenfield	Western Cape	France	TotalEnergies	Domestic, regional and international
Vantage Data Centers: JNB2	Not reported	Services	ICT	Construction/Implementation	Greenfield	Gauteng	United States	Vantage Data Centers	Domestic and regional
VWSA sustainability projects: Solar	Not reported	Utilities	Renewable Energy	Complete	Upgrade	Eastern Cape	Germany	VWSA	Domestic

Note: Numbers may not always sum to the exact total investment amounts due to rounding.

² Gauteng and Western Cape

³ See footnote 1

⁴ United Kingdom and France

Investment by country of origin

Projects distinguished by source show that investment originated from eight countries this quarter, predominantly from Europe (see Appendix A, Figure 3). Investment from the region amounts to R3.7 billion, which mainly comprises of Enel’s R3 billion commitment to develop two solar plants under the REIPPP, representing investment from Italy. Germany had the highest number of projects with four investments from the country recorded this quarter. Luxembourg, France and the United Kingdom are the other countries from the region that contributed to investment for the fourth quarter of 2022. Outside Europe, three projects were recorded from the United States, which had the second highest investment value of R2.8 billion, solely attributed to investor Equinix. All the projects from the United States are ICT-related. AMEA Power’s R2.3 billion Doornhoek PV REIPPP project represents investment from the UAE. Similarly, investment from South Korea is attributed to one project which is Hyundai’s R14 million solar installation.

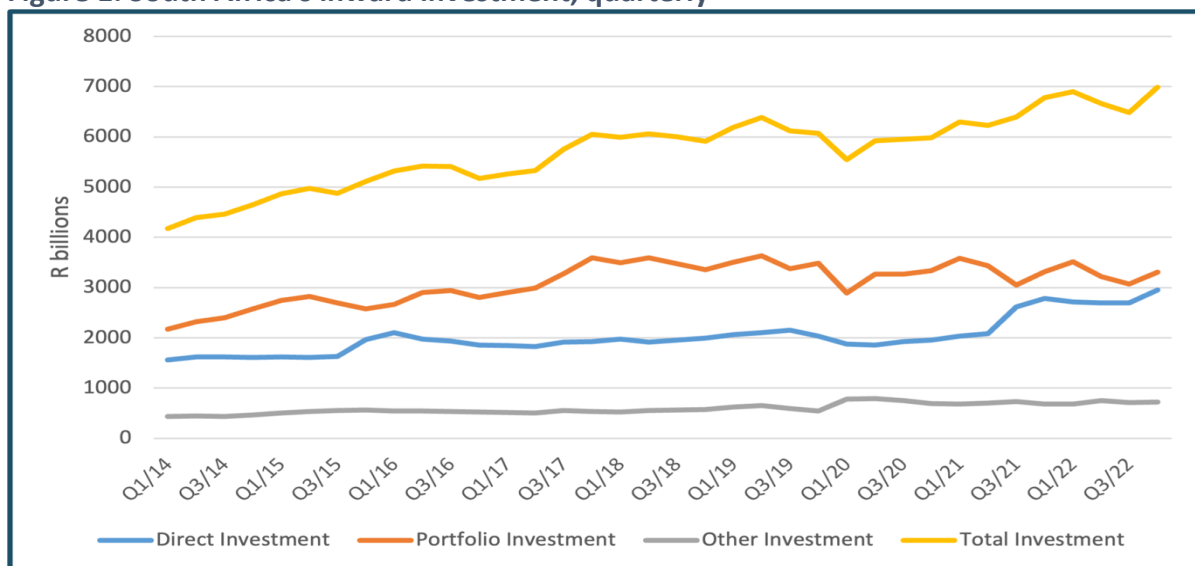
Investment by target market

Investment this quarter was directed towards three target markets. The majority of projects concentrate exclusively on the domestic market segment. The eight projects are in the utilities sector. Three projects aim to serve the domestic and regional target market. These commitments in the services sector are all ICT investments, and the value for the segment is entirely on account of Equinix’s R2.8 billion pledge. Projects that have a domestic, regional and international outlook are in the manufacturing and mining industries. Manufacturing further accounts for the R630 million registered for this segment.

Investment environment

Analysis of the domestic investment environment provides insight into the general environment in which investments take place. These analysis metrics indicate the extent to which pledged investments materialise and provide a glimpse into investor sentiment, which will ultimately have an impact on future growth prospects of the economy. These metrics are detailed in the Appendix.

Figure 1: South Africa's inward investment, quarterly



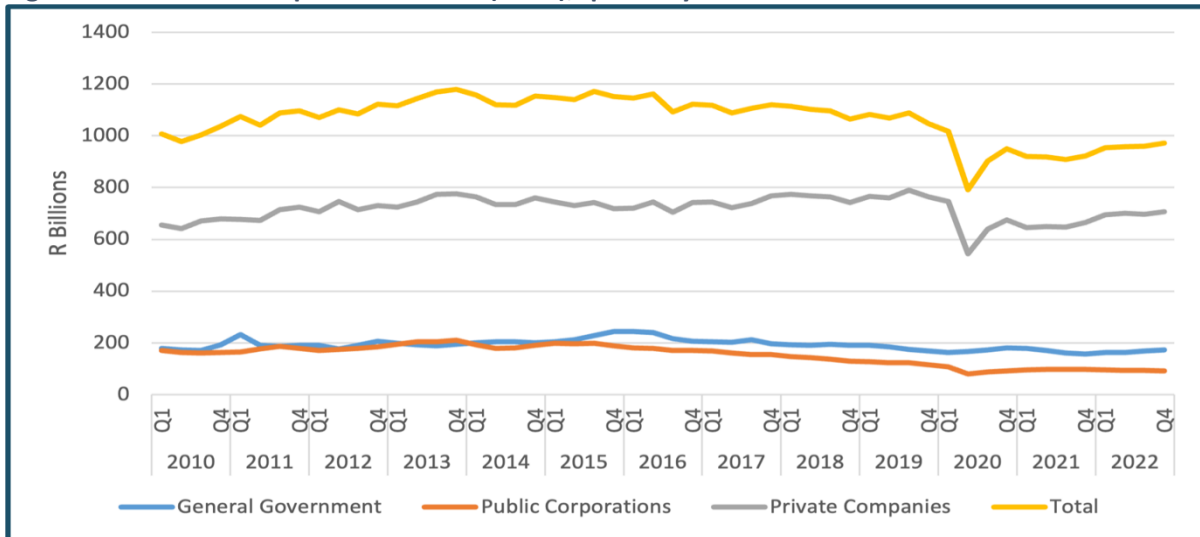
Source: TIPS, based on South Africa’s international investment position data by (SARB, 2022).

The total market value of South Africa’s inward investment increased from a revised R7 156 billion at the end of the third quarter of 2022 to R7 583 billion at the end of the fourth quarter of 2022, an increase of 6%.

Direct investment increased by 8.68% from a revised R2 694 billion at the end of the third quarter 2022 to R2 950 billion at the end of the fourth quarter. SARB reports that this increase was due to an increase of a non-resident company’s equity investment in a domestic subsidiary (Gumbi et al., 2023).

Portfolio investment increased by 7.08% in the fourth quarter of 2022 from R3 073 billion in the third quarter of 2022 to R3 307 billion. Other investment increased as well in fourth quarter by 1.79% from R713 billion in the third quarter of 2022 to R726 billion.

Figure 2: Gross Fixed Capital Formation (GFCF), quarterly

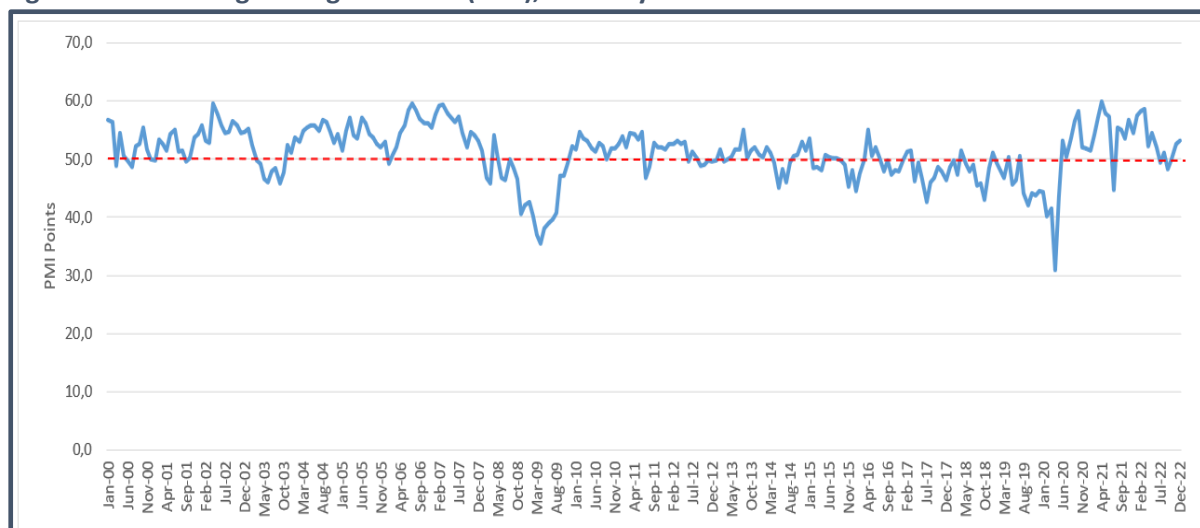


Source: TIPS, based on StatsSA, 2023. *Note:* Values are on a constant 2022 prices, seasonally adjusted, and annualised basis. Values are deflated using an implicit deflator, rebased to Q4 2022.

For 2022 as a whole GFCF amounted to 14% of GDP, up from 13% in 2021 but below the 15% recorded in 2019 (TIPS, 2023). In the fourth quarter of 2022, total GFCF increased further by 1.3% from the third quarter due to increased capital spending by general government and private businesses. The increase is mainly attributed to investment in transport equipment, machinery, and other equipment (SARB, 2023).

From the third quarter to the fourth quarter of 2022, investment by general government increased from R169 billion to R173 billion, an increase of 2%. Investment by private companies also increased by 2% from R696 billion to R707 billion with investment by public corporations conversely decreasing by 2% from R94 billion to R92 billion.

Figure 3: Purchasing Managers’ Index (PMI), monthly



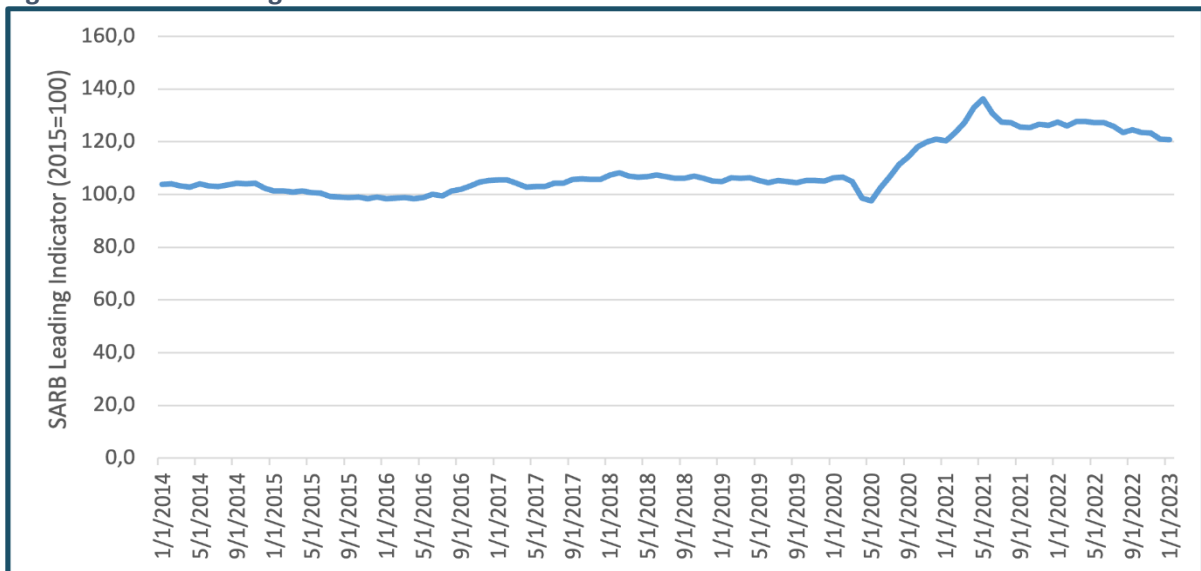
Source: TIPS, based on PMI data by BER, 2022a. Note: The PMI data are seasonally adjusted by BER.

In October 2022, the seasonally adjusted Absa PMI rose from 48.2 points in September 2022 to 50 points. This improvement was mainly due to a significant increase in the business activity index from 39.8 in September to 48.8 in October, a bounce back in the new sales order index from 39.8 points to 46.4 points (although both are still in the negative terrain). In November 2022, the index improved further to 52.6 points, due to further improvements in the business activity index to 49.5 points and new sales orders moving to the positive terrain with 54.3 points. Closing off the quarter in December 2022 saw a third consecutive rise of the PMI to 53 points which was mainly due to demand growth shown in the new sales orders index with 53 points (BER, 2022b, 2022c, 2022d).

Throughout the fourth quarter of 2022, sustained loadshedding had, once again, been noted as having a negative impact on output in the sector.

Overall, the ABSA PMI averaged 51.9 points in Q4 2022 from 49.6 in Q3 2022, indicating an improvement in manufacturing conditions in the fourth quarter of 2022 compared to the third quarter of 2022.

Figure 4: SARB Leading Indicator



Source: TIPS, based on (SARB, 2022).

The SARB also reports on a composite leading indicator that aims to predict future economic activity and serves as supplementary evidence for future changes in the economy. This indicator is calculated based on several underlying datasets that predict growth (see Appendix).

The leading business cycle indicator depicted a 0.9% decrease in October 2022, a marginal increase of 0.1% in November 2022, and a decrease of 2.1% in December 2022 (SARB, 2022b, 2023a, 2023b).

In October 2022, the largest negative contributors to the leading indicator were decelerations in the six-months smoothed growth rate of new passenger vehicles and the growth rate of job advertisement space. In November 2022, the largest positive contributors were an increase in the volume of orders in manufacturing and an acceleration in the six-months smoothed growth rate in the number of passenger vehicles sold. To close off the quarter, the largest negative contributors to the leading indicator in December 2022 were a deceleration in the six-months smoothed growth rate of job advertisement space and a decrease in the number of residential building plans approved.

Barriers and constraints

The FDI Tracker aims to inform and improve policymaking by assisting the state to better understand the environment in which investors operate. To gain deeper insight into investor experiences, the FDI Tracker captures concerns and challenges faced by investing companies. Challenges include those related to the business environment, infrastructure blockages and service constraints. In addition to barriers and constraints, the analysis highlights challenges that have been unblocked or resolved.

While completing upgrades for a wax flooding facility at the firm's Kariega facility, VWSA navigated COVID-19 lockdowns when the project was initiated in January 2020. Over two years VW Group employees worked remotely across four countries, collaborating with suppliers to complete the project.

TotalEnergies reported challenges in relation to the company's planned oil and gas exploration off the West Coast. Environmental organisations are contesting TotalEnergies application to drill wells. They are further arguing that oil and gas should not be considered as part of the country's energy mix, and that they don't have a place in South Africa's just energy transition.

Credibility classification

FDI pledges are subject to frequently changing plans and may not happen in the form initially announced. For this reason, the FDI Tracker assigns a subjective measure of credibility to each project based on the standard described in Table 2.

Table 2: Classification of project by credibility of investment pledge

GRADING	EXPLANATION
Commitment	Project has been announced, but the plan lacks details (such as company commitment or clear development plan) or is too early to be substantive.
Potential	Project has been announced, shows possibility for future development and the company has a strong track record, but the plan lacks some details or there are doubts on specific aspects of the announcement.
Likely	Project has been announced and is highly credible, often with plans that are partially in progress, such as completed feasibility studies or regulatory approval.
Construction/ implementation	Projects that are underway. Figures will be updated to reflect changes to the project during the construction/implementation period.
Cancelled	The project is no longer moving ahead.

In Table 3, projects are listed according to the allocated classification together with a brief explanation for the assigned rating where relevant.

Table 3: Project credibility grading

PROJECT	CLASSIFICATION	REASON
Sasol/ArcelorMittal Decarbonisation initiatives: Saldanha green hydrogen	Commitment	Companies are well established, provided good sense of what the project entails, partners entered into a joint development agreement; however, too early for substantive details, studies still to be conducted and information such as timeframes and value are not yet available.
Sasol/ArcelorMittal Decarbonisation initiatives: Vaal carbon capture and utilisation	Commitment	
Google South Africa Cloud	Commitment	South Africa would be part of a broader global initiative. A detailed project plan – that relates to South Africa is not yet available, neither is the investment value, nor timeframes. Pledge follows recently launched Equiano project.
Envusa – Anglo American and EDF renewable energy business	Potential	Both companies are reputable and well established in the country. Detailed project description, however, investment value not available. Timeframes provided with first phase planned to commence in early 2023.
Total Energies West Coast exploration	Potential	Track record investing in South Africa, not the first exploration initiative, substantive project information, however, facing resistance from environmental organisations, and regulatory approvals still pending. Environmental and Social Impact Assessment study competed to apply for the Environmental Authorisation.
Elikhulu solar plant expansion	Likely	Completed feasibility study.
Enel Kutlwano solar plant	Likely	REIPPPP project. Studies have been completed and applications submitted to the relevant authorities. Enel further is a well-established company developing sustainable technologies globally.
Enel Boitumelo solar plant	Likely	
AMEA Doornhoek PV	Likely	REIPPPP project. Studies have been completed and applications submitted to the relevant authorities. New entrant in South Africa – will be first facility in South Africa.
Equinix South Africa data centre	Likely	New entrant investing in a growing sector along with other similar companies
Carbon black feedstock storage facilities	Likely	Project-preparation and sod turning getting ready for construction. Support from and partnership with government in terms of funding detailed project plan with clear timeframes.
Vantage Data Centers: JNB2	Construction/ Implementation	Construction has started.

PROJECT PROFILES

PROJECT NAME	GOOGLE SOUTH AFRICA CLOUD	ENVUSA/ANGLO AMERICAN/EDF RENEWABLES
Investment value	Not reported	Not reported
Investment rand value	Not reported	Not reported
Project location: province	Gauteng and Western Cape	Limpopo, North West, Northern Cape, Gauteng and Free State
Project location: city/town	Not reported	Multiple locations
Investor firms	Google	Envesa/Anglo American/ EDF Renewables
Investor country	United States	Multiple
Investor city	Mountain View, California	London/Paris
Indicative start date	October 2022	October 2022
Indicative end date	Not reported	2030
Project phase	Greenfield	Greenfield
Project type	Announced	Announced
Project industry	Services	Utilities
Project sector	Information Communications Technology	Renewable energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Department of Mineral Resources and Energy, Nersa
Target market	Domestic and regional	Domestic
Social development programme	40 000 jobs by 2030; localisation	Not reported
Project description	<p>Google has selected South Africa as one of the countries in which the company plans to establish a new Google cloud region. The new region aims to support users, developers, businesses and institutions of learning, linking users' on-site networks with Google's grid in three African countries including South Africa. Services that can be accessed through the new Google cloud region include cloud storage, compute engine and management systems. Google plans to further leverage the firm's private subsea cable, Equiano, which recently landed in South Africa and connects Europe and Africa. South Africa will be the first cloud region location on the continent.</p>	<p>Anglo American and EDF Renewables have partnered to establish a new renewable energy company, Envusa Energy, that will develop a regional renewable energy ecosystem designed to meet Anglo's energy needs across its local operations in South Africa. Through Envusa, the company aims to generate 3-5MW of electricity by 2030. The company will supply a mix of wind and solar energy generated on Anglo's sites, which will be transmitted through the national grid. Envusa Energy is starting with the launch of over 600MW of wind and solar projects. The first phase of the projects is expected to be fully funded and commence construction in 2023.</p>
Motivation	Market entry and expansion	Energy self-generation; transition to sustainable energy resources

PROJECT NAME	SASOL/ARCELORMITTAL DECARBONISATION INITIATIVES: SALDANHA GREEN HYDROGEN	SASOL/ARCELORMITTAL DECARBONISATION INITIATIVES: VAAL CARBON CAPTURE AND UTILISATION
Investment value	Not reported	Not reported
Investment rand value	Not reported	Not reported
Project location: province	Western Cape	Gauteng
Project location: city/town	Saldanha	Vanderbijlpark
Investor firms	Sasol/ArcelorMittal	Sasol/ArcelorMittal
Investor country	Luxembourg	Luxembourg
Investor city	Luxembourg	Luxembourg
Indicative start date	October 2022	October 2022
Indicative end date	Not reported	Not reported
Project phase	Greenfield	Greenfield
Project type	Announced	Announced
Project industry	Manufacturing	Manufacturing
Project sector	Manufacture of chemicals and chemical products	Manufacture of chemicals and chemical products
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Not reported
Target market	Domestic, regional and international	Domestic, regional and international
Social development programme	Not reported	Not reported
Project description	Sasol and ArcelorMittal South Africa have signed a joint development agreement intending to produce sustainable chemicals and fuels. They further intend to pursue green steel production through green hydrogen and derivatives. In the Western Cape, the partners plan to launch a study into Saldanha green hydrogen and derivatives to investigate the regions potential to host an export hub for green hydrogen, derivative products and green steel production. The collaboration is exploring the revitalisation of ArcelorMittal's Saldanha Steel Midrex facility at Saldanha Works, which is under care and maintenance, to produce and export green steel.	Sasol and ArcelorMittal South Africa have signed a joint development agreement intending to produce sustainable chemicals and fuels. They further intend to pursue green steel production through green hydrogen and derivatives. The second project the companies are exploring is the Vaal carbon capture and utilisation (CCU) project. The study will investigate the potential of using renewable energy and green hydrogen to transform captured carbon from ArcelorMittal's Vanderbijlpark steel facility into sustainable chemicals and fuels.
Motivation	Expanding global shift to decarbonisation and growing demand for export of green chemicals	Expanding global shift to decarbonisation and growing demand for export of green chemicals

Project name	HYUNDAI SOLAR PROJECT: HEAD OFFICE AND DEALERSHIPS	KUTLWANO SOLAR PARK
Investment value	Not reported	Not reported
Investment rand value	R14 million	R1.5 billion
Project location: province	Gauteng	North West
Project location: city/town	Multiple Locations	Ditsobotla Local Municipality
Investor firms	Hyundai	Kutlwano Solar Power Plant (RF) (Pty) Ltd /Enel Green Power
Investor country	South Korea	Italy
Investor city	Seoul	Paris
Indicative start date	May 2022	December 2022
Indicative end date	September 2022	2025
Project phase	Brownfield	Greenfield
Project type	Complete	Announced
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	35
Temporary jobs	Not reported	800
Government partnership	National Energy Regulator of South Africa (Nersa)	Department of Mineral Resources and Energy, Nersa, Department of Forestry Fisheries and the Environment, South African Heritage Resources Agency
Target market	Domestic	Domestic
Social development programme	Not reported	REIPPPP-related
Project description	Hyundai Automotive South Africa has installed solar power infrastructure at the firm's properties across Gauteng for about R14 million. These include Hyundai's head office in Bedfordview and various dealerships across the province. The head office features over 240 solar panels on the roof of the building which deliver about 110kW) of electricity to the facility. These installations are connected to both the national grid and internal generators. The project was initiated in May 2022 and commissioned by September 2022. The company is exploring additional sustainability solutions for the firm's properties.	Enel has been selected as a preferred bidder in the sixth round of the REIPPPP Programme. The firm will be developing the 150MW Kutlwano solar plant with an expected production of between 165-205GWh per annum. The power plant and associated infrastructure is expected to span 421,1 hectares. They plan to further install a battery storage facility with a capacity of up to 500MW.
Motivation	Operate on renewable energy as far as possible. South Africa's energy supply challenges.	REIPPPP participation

PROJECT NAME	ELIKHULU SOLAR PLANT EXPANSION	TOTALENERGIES WEST COAST EXPLORATION
Investment value	Not reported	Not reported
Investment rand value	Not reported	Not reported
Project location: province	Mpumalanga	Western Cape
Project location: city/town	Evander	Saldanha/Cape Town
Investor firms	Pan African Resources	TotalEnergies
Investor country	United Kingdom	France
Investor city	London	Courbevoie
Indicative start date	October 2022	November 2022
Indicative end date	Not reported	Not reported
Project phase	Expansion	Greenfield
Project type	Feasibility	Announced
Project industry	Utilities	Mining
Project sector	Renewable Energy	Extraction of crude petroleum and natural gas
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Department of Mineral Resources and Energy
Target market	Domestic	Domestic, regional & international
Social development programme	Not reported	Local business activation and subsequent indirect workforce opportunities. Supplier development and community investments in health, education and infrastructure.
Project description	As part of their decarbonisation strategy, Pan African Resources has completed a feasibility study exploring the expansion of the recently commissioned Elikhulu solar plant. The expansion would result in the plant being able to provide 22MW of electricity from the current 10MW.	TotalEnergies plans to explore for oil offshore the Western Cape West Coast. TotalEnergies and partners hold an Exploration Right over Block 5/6/7, which allows for various exploration activities in the Block. The company intends to start drilling one exploration well and, based on the result would drill an additional nine wells. The drilling will take place in the deep-water Orange Basin in depths ranging between 1000m to 3 200m. The target area identified covers about 10 000 square kilometres. The firm has completed an Environmental and Social Impact Assessment study to apply for the Environmental Authorisation required authorities to conduct drilling activities.
Motivatio	Electricity self-generation	Resource seeking

PROJECT NAME	BOITUMELO SOLAR PARK	DOORNHOEK PV
Investment value	Not reported	US\$120 million
Investment rand value	R1,5 billion	R2.2 billion
Project location: province	North West	North West
Project location: city/town	Ditsobotla Local Municipality	Klerksdorp
Investor firms	Boitumelo Solar Power Plant (RF) (Pty) Ltd /Enel Green Power	AMEA Power
Investor country	Italy	United Arab Emirates (UAE)
Investor city	Paris	Dubai
Indicative start date	December 2022	December 2022
Indicative end date	2025	2025
Project phase	Greenfield	Greenfield
Project type	Announced	Announced
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	35	Not reported
Temporary jobs	800	400
Government partnership	Department of Mineral Resources and Energy, Nersa, Department of Forestry Fisheries and the Environment, South African Heritage Resources Agency	Department of Mineral Resources and Energy, Nersa, Department of Forestry Fisheries and the Environment, South African Heritage Resources Agency
Target market	Domestic	Domestic
Social development programme	REIPPPP-related	REIPPPP related: Community Trust, BBBEE Partners (Ziyanda Energy and Dzimuzwo Consulting), local procurement (45%)
Project description	Another of Enel's projects I has been selected to participate in the 6 th round of the REIPPPP. The firm will be developing the Boitumelo solar power plant. The facility has a generation capacity of 150MW and is expected to produce between 165-205GWh per annum of electricity. The facility and associated infrastructure will cover about 300ha. The battery storage system will have a capacity of up to 500MW.	AMEA Power was awarded preferred bidder status in bid window 6 of the REIPPPP Program. The firm will be constructing a 100MW solar photovoltaic (PV) power plant. The facility will produce over 325GWh of renewable energy. The power will be supplied to Eskom through a 20-year power purchase agreement. The facility will cover about 200ha.
Motivation	REIPPPP participation	REIPPPP participation; Market entry

PROJECT NAME	VANTAGE DATA CENTERS: JNB2	EQUINIX SOUTH AFRICA DATA CENTRE
Investment value	Not reported	US\$160 million
Investment rand value	Not reported	R2,9 billion
Project location: province	Gauteng	Gauteng
Project location: city/town	Johannesburg	Johannesburg
Investor firms	Vantage Data Centers	Equinix
Investor country	United States of America	United States of America
Investor city	Denver, Colorado	Redwood City, California
Indicative start date	December 2022	December 2022
Indicative end date	2024	2024
Project phase	Greenfield	Greenfield
Project type	Construction/Implementation	Announced
Project industry	Services	Services
Project sector	Information Communications Technology	Information Communications Technology
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Not reported
Target market	Domestic & regional	Domestic and regional
Social development programme	Not reported	Not reported
Project description	Vantage Data Centers has started construction of a second data centre campus, JNB2, in Gauteng for an undisclosed sum. When complete the first building of the JNB2 campus will consist of a 20MW, 355 000 square foot (33 000 square meters) two-story data centre, the company expects operations to begin mid-2024. Vantage is repurposing a portion of an existing warehouse for the initial phase.	Equinix is a data centre developer based in the United States. The company is expanding its global presence with plans to establish a local data centre, the firm's first facility in South Africa. Equinix plans to serve major corporations locally and across Africa. The company intends to develop a 20MW retail campus that will provide 3 450 cabinets and more than 100 000 square feet (9 290 square metres) of colocation space. They are starting the development with a 4MW data centre named JN1 that will feature over 690 cabinets and span more than 20 000 square feet (1 858 square metres) of colocation space.
Motivation	Market expansion	Market entry and opportunity to provide services in Africa

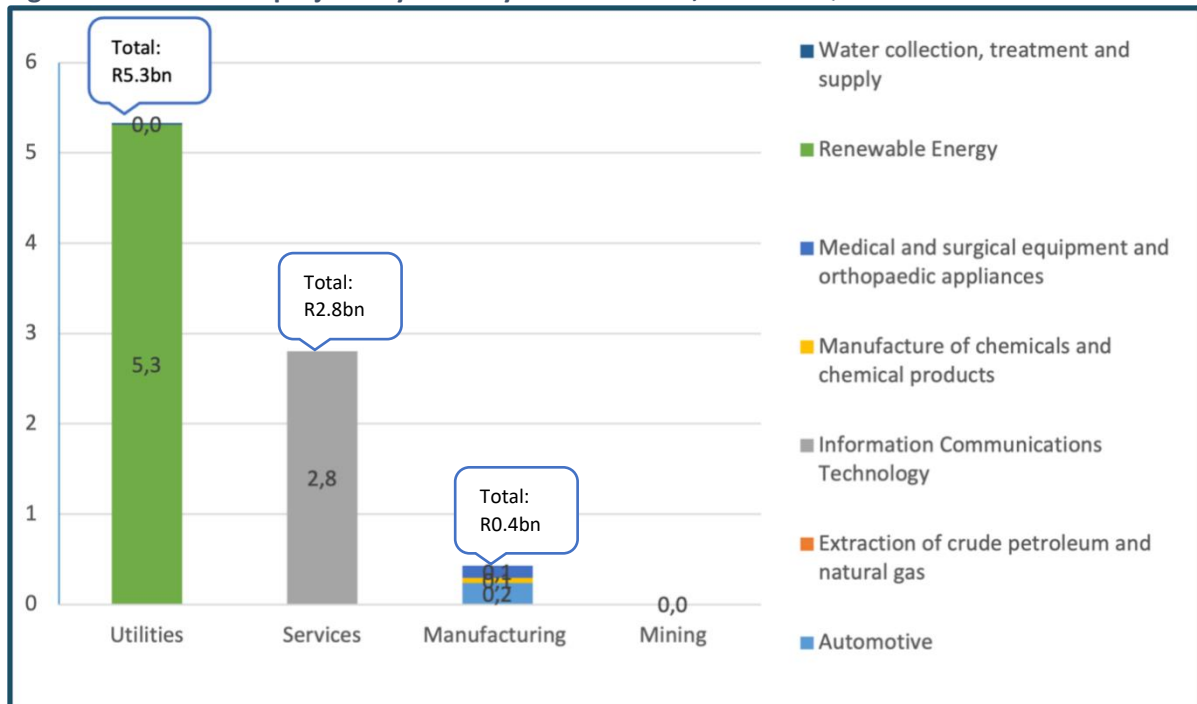
PROJECT NAME	CARBON BLACK FEEDSTOCK STORAGE FACILITIES	VWSA SUSTAINABILITY PROJECTS: WASTEWATER RECYCLING PLANT
Investment value	Not reported	Not reported
Investment rand value	R60 million	R20 Million
Project location: province	Eastern Cape	Eastern Cape
Project location: city/town	Gqeberha	Kariega
Investor firms	Orion Engineered Carbons	VWSA
Investor country	Luxembourg	Germany
Investor city	Senningerberg	Wolfburg
Indicative start date	May 2022	Not reported
Indicative end date	Not reported	June 2022
Project phase	Greenfield	Upgrade
Project type	Project-preparation	Complete
Project industry	Manufacturing	Utilities
Project sector	Manufacture of chemicals and chemical products	Water collection, treatment and supply
Permanent jobs	100	Not reported
Temporary jobs	50	Not reported
Government partnership	Coega Development Corporation, Department of Trade, Industry, and Competition contributed R200 million to the project	Not reported
Target market	Domestic, regional and international	Domestic
Social development programme	Not reported	Not reported
Project description	Orion Engineered Carbons is undertaking the black oil tank project at the Coega SEZ in the Eastern Cape. The company manufactures and exports carbon black to Europe, with raw materials imported from the United States. Carbon black is a substance used mainly to strengthen rubber in tyres, in addition to other functions. Orion will be upgrading key equipment at the firm's facility, investing about R60 million. The project two 18 000 cubic metre tanks for the storage of carbon black feedstock and associated infrastructure, the dtic provided an additional R200-million. The project includes relocating the liquid fuel storage facilities, the Dom Pedro Tank Farm, from Port of Port Elizabeth to Port of Ngqura.	VWSA constructed a wastewater recycling facility onsite the Kariega manufacturing plant. It will recycle wastewater related to production from various areas for further use in select manufacturing processes. The initiative will further reduce VWSA's dependence on municipal water. The project forms part of VWSA's We //2025 corporate strategy and is included in the Zero Impact Factory strategy VWSA initiated in 2020. Zero Impact Factory aims to reduce the firm's production-related environmental footprint with a focus on the responsible use of natural resources.
Motivation	Export market opportunity	Environmentally sustainable operational efficiency; transition to sustainable energy resources as part of the Zero Impact Factory.

VWSA SUSTAINABILITY PROJECTS: SOLAR		VWSA WAX FLOODING FACILITY
Investment value	Not reported	Not reported
Investment rand value	Not reported	R235 million
Project location: province	Eastern Cape	Eastern Cape
Project location: city/town	Kariega	Kariega
Investor firms	VWSA	VWSA
Investor country	Germany	Germany
Investor city	Wolfburg	Wolfburg
Indicative start date	Not reported	January 2020
Indicative end date	June 2022	August 2022
Project phase	Upgrade	Upgrade
Project type	Complete	Complete
Project industry	Utilities	Manufacturing
Project sector	Renewable Energy	Automotive
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Not reported
Target market	Domestic	Domestic, regional and international
Social development programme	Not reported	Not reported
Project description	VWSA also installed 3136 solar photovoltaic panels on the roof of the Kariega manufacturing facility. These have the capacity to generate about 2 500MW/h of electricity, enough to supply up to 3.5% of the plant's energy needs. The project is a part of the Zero Impact Factory programme.	VWSA completed upgrades at the firm's Kariega manufacturing plant. The new 5 350 square metre wax flooding facility is operational. Wax flooding prevents corrosion by coating hard-to-reach metal with a layer of wax, extending longevity. The upgrade is said to improve production efficiency by about 25% with heating and reduces carbon emissions by about 55% for the locally built Volkswagen Polos and Polo Vivos. The new wax flooding facility replaces the former electro-coating facility.
Motivation	Energy self-generation; transition to sustainable energy resources as part of Zero Impact Factory	Modernisation and production efficiency

PROJECT NAME		DRAGER SOUTHERN AFRICA
Investment value	Not reported	
Investment rand value	R135 million	
Project location: province	Eastern Cape	
Project location: city/town	East London	
Investor firms	Dräger Safety Zenith/Dräger	
Investor country	Germany	
Investor city	Lübeck	
Indicative start date	Not reported	
Indicative end date	August 2022	
Project phase	Greenfield	
Project type	Complete	
Project industry	Manufacturing	
Project sector	Medical and surgical equipment and orthopaedic appliances	
Permanent jobs	96	
Temporary jobs	Not reported	
Government partnership	Department of Trade Industry and Competition contributed R81 million to the project, East London Industrial Development Zone	
Target market	Domestic, regional and international	
Social development programme	Not reported	
Project description	Dräger Safety Zenith, a subsidiary of German company Dräger, manufactures safety and medical equipment. The company invested R135 million in a new manufacturing facility. The dtic further contributed R81 million towards the factory. The plant is Dräger's first on the continent. The company aims to export its' products in Africa and to the international market	
Motivation	Local and regional market expansion	

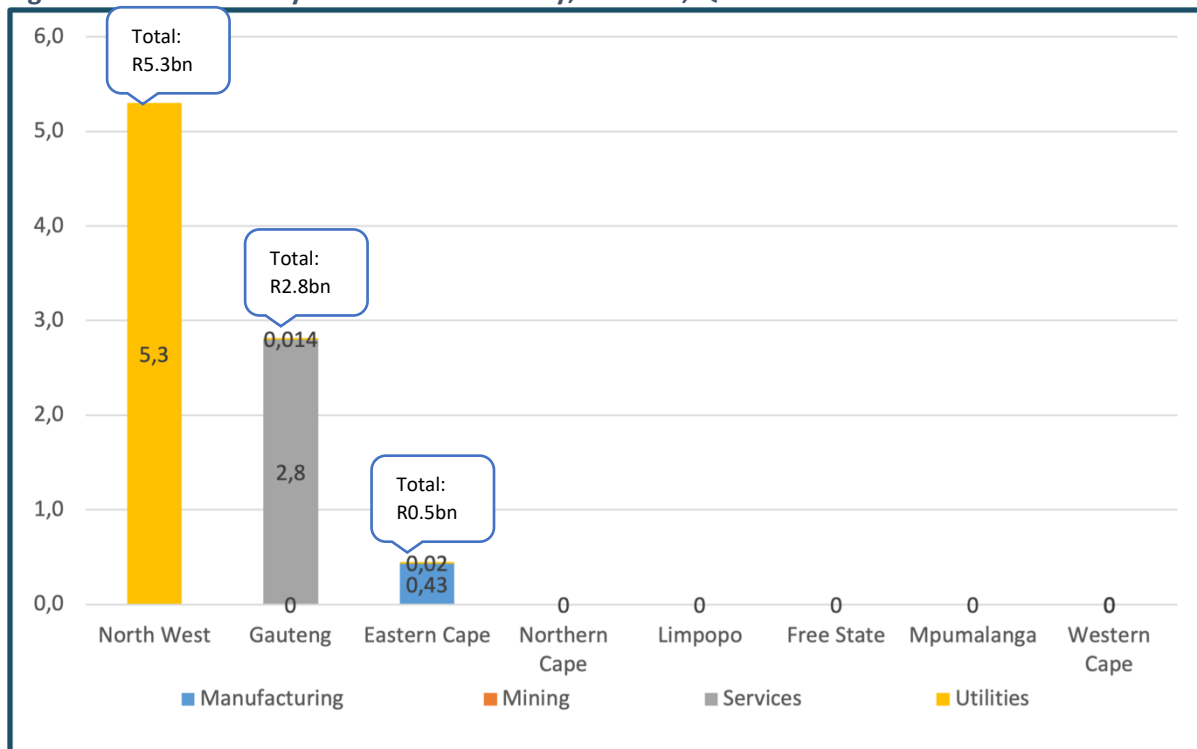
APPENDIX A

Figure 1: Value of FDI projects by industry and subsector, R'billion Q4 2022



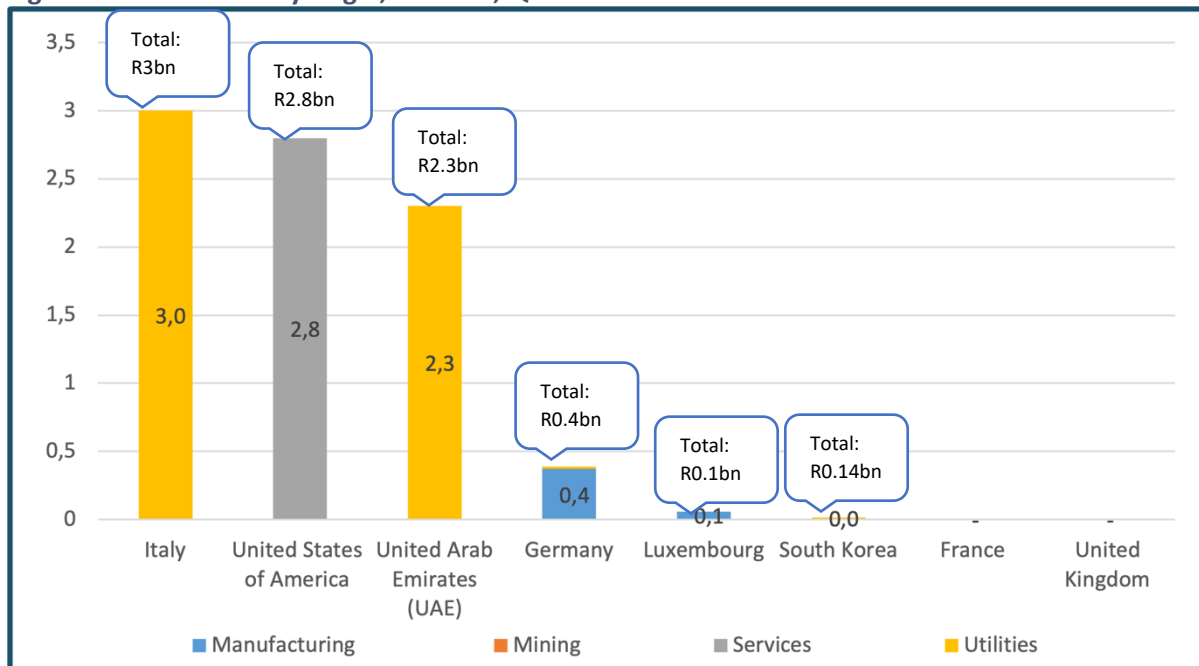
Source: TIPS FDI Tracker project data. *Note:* Numbers may not always sum to the exact total investment value due to rounding

Figure 2: Value of FDI by location and industry, R'billion, Q4 2022



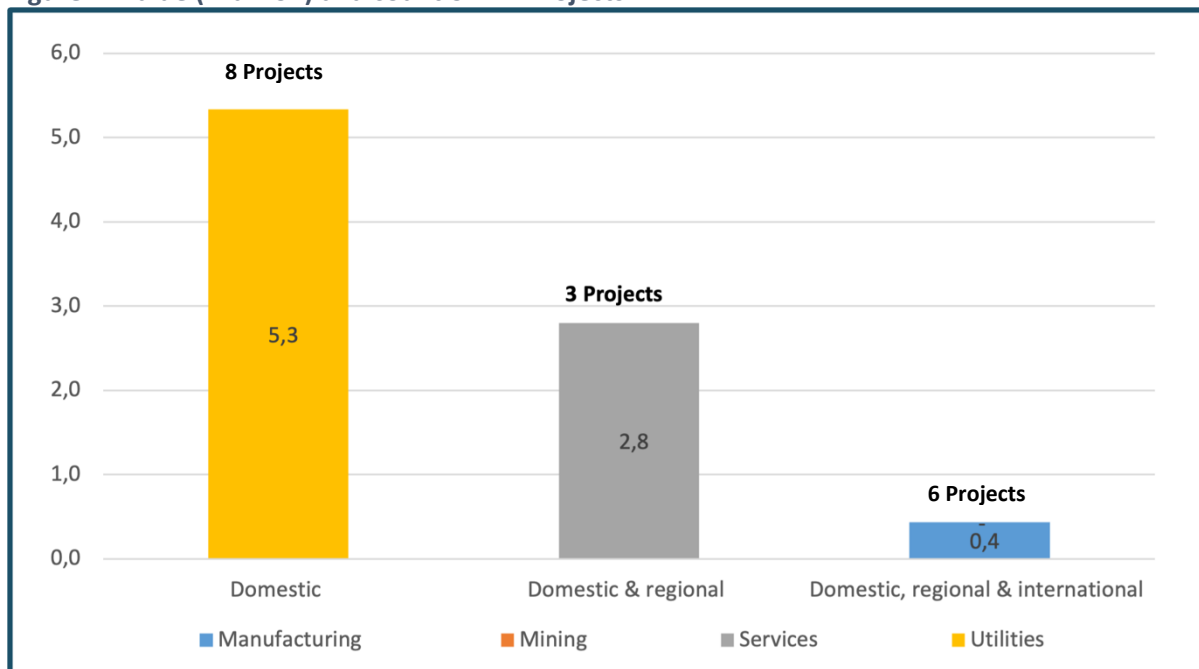
Source: TIPS FDI Tracker project data. *Note:* Numbers may not always sum to the exact total investment value due to rounding. *Note:* The investment value for the project in Northern Cape, Limpopo, Free State, Mpumalanga and Western Cape has not yet been reported.

Figure 3: Value of FDI by origin, R'billion, Q4 2022



Source: TIPS FDI Tracker project database. Note: Numbers may not always sum to the exact total investment amounts due to rounding. Note: The investment values from France and the United Kingdom have not yet been announced.

Figure 4: Value (R'billion) and count of FDI Projects



Source: TIPS FDI project database. Note: Numbers may not always sum up to the exact total investment value due to rounding.

APPENDIX B

Table 4. Investment-related metrics used in the analysis

METRIC	SOURCE	FREQUENCY	DESCRIPTION
Inward investment data	SARB	Quarterly	Inward investment is composed of direct investments, portfolio investments, financial derivatives, and other investments.
Gross fixed capital formation	Stats SA	Quarterly	GFCF is a component of GDP that groups transactions on the net acquisitions (acquisitions less disposals) of capital assets, both existing and new, by general government, private enterprises (i.e. private and quasi-corporations) and public corporations and in addition households and unincorporated enterprises.
Purchasing Managers' Index (PMI)	Absa/BER	Monthly	The survey is conducted by way of questionnaires to a panel of purchasing managers in the manufacturing sector. The questionnaire consists of nine questions on the monthly changes in business conditions in the manufacturing sector. Respondents indicate qualitatively whether a particular activity has increased, decreased or remained unchanged.
Leading indicator Index	SARB	Monthly	The leading indicator index aims to predict future economic activity. The index is based on job advertisements, building plans passed, interest rate spread, real M1 money supply, an index of commodity prices for export commodities, the composite leading business cycle indicator of South Africa's major trade partners, gross operating surplus as a percentage of GDP, the RMB/BER Business Confidence Index, the average number of hours worked per factory worker, the net balance of manufacturers observing an increase in the volume of domestic orders received, and the number of new passenger vehicles sold.

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