



TRADE & INDUSTRIAL POLICY STRATEGIES



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

FOREIGN DIRECT INVESTMENT TRACKER

FOURTH QUARTER 2021

Compiled by Kelello Mashiane and Muhammed Patel

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.

Trade & Industrial Policy Strategies (TIPS)
info@tips.org.za | +27 12 433 9340 | www.tips.org.za

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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 a number of important 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 hence 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 2021

Monitoring identified 23 projects in the fourth quarter of 2021, These recorded a total pledged investment value of R128.2 billion. The Tracker further recorded 263 employment opportunities from one project, comprising 59 permanent jobs and 204 temporary employment opportunities. The majority of projects captured this quarter were announced as preferred bidders in Bid Window 5 of the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). Three existing projects were updated in the Tracker this quarter.



New FDI projects

Manufacturing recorded the highest investment in value this quarter. The manufacturing sector has the largest project this quarter, a green ammonia export plant. In project numbers, utilities dominated on account of projects announced as preferred bidders in the REIPPPP. The only other sector in which investment was identified is services, where one project was recorded. For the purpose of project description, projects are group by sector.

Manufacturing

Tetra Pak announced plans to invest R500 million to upgrade its manufacturing facility in KwaZulu-Natal. Food products packaged and processed by the firm include pet food and fruit and vegetables. Tetra Pak aims to increase the plant's production capabilities through the investment, and to support its commitment to be carbon neutral by 2030. Upgrades include the installation of sustainable energy sources, and new packaging technology that utilises less energy and water. Tetra Pak is also increasing the use of renewable materials, such as sugarcane-derived bio-based plastics imported from Brazil. It aims to find a local source of bioplastics in due course. The factory upgrade will allow Tetra Pak to produce the full range of its products and packaging, increase job opportunities in the local community, assist the local supply chain, and improve lead times (Burger, 2021).

Ford is investing R600 million through a commitment towards upgrades at the Struandale Engine Plant in the Eastern Cape. The project chiefly entails modernisation and expansion of the plant's current assembly line, which manufactures the 2.0L Single Turbo and 2.0L Bi-Turbo diesel engines. Ford will further introduce production for a third diesel engine through the investment – a 3.0L V6 turbodiesel engine that will power selected Ranger models. The investment accompanies an investment of R15.8 billion in the firm's Silverton Assembly Plant (Koooverjee, 2021).

Hive Hydrogen together with Afrox plan to establish a green ammonia export facility. The plant will be developed for an estimated US\$4.6 billion (R73 billion) at the Coega Special Economic Zone (SEZ) in the Eastern Cape. The facility is expected to produce approximately 780 000 tonnes per year of green ammonia from hydrogen. To achieve this, the hydrogen is extracted through an electrolysis process using renewable energy while nitrogen is extracted utilising an air separation unit. Hydrogen and nitrogen are then combined to produce green ammonia which is liquefied and stored. The investors have completed a pre-feasibility study and are taking the next step to final investment decision. Hive Hydrogen has had support from InvestSA in facilitation. The first phase of the operation is expected by 2025 with full operation planned for 2026 (Hive Energy, 2021).

Utilities

All the utilities projects captured this quarter were announced as preferred bidders in Bid Window 5 of the REIPPPP. At the time of reporting, only the total investment value of R50 billion for the projects collectively – including projects that will be developed by South African firms – was announced. Values for individual projects have not yet been disclosed, therefore the investment values reflected in this report for these projects are estimates¹ for purposes of the Tracker analysis. The report further excludes projects that will be developed exclusively by South African companies. A summary of the projects follows.

EDF Renewables, subsidiary of French energy company EDF will be developing three wind energy facilities for a total R8.1 billion. Coleskop, San Kraal and Phezukomoya will be developed in the Northern Cape at about R2.7 billion for each wind farm (EDF Renewables, 2022)

The proposed Coleskop Wind Energy Facility will be a 140MW wind farm. Infrastructure includes construction of a new road, electrical infrastructure, construction of a 60m x 60m operation and maintenance services building, and a 500m corridor for the construction of a 132 kilovolt (kV) overhead line (SAHRIS, 2021).

Sans Kraal Wind Energy is proposed as a 390MW wind facility with a contracted capacity of 140MW. The facility will comprise up to 78 wind turbine generators. Associated infrastructure includes a 132kV grid connection, and an on-site switching station which will transfer the electricity generated by the WEF to the proposed Umsobomvu 132/400kV substation (SAHRIS, 2018).

Phezukomoya is a 315MW wind energy facility (WEF) that could comprise up to 63 wind turbine generators. Infrastructure for the proposed wind facility will also include an onsite switching station to be constructed as part of the proposed facility (SAHRIS, 2017).

A consortium led by Ireland-based company Mainstream Renewable Power, plan to develop 12 solar and wind energy facilities with a total contracted capacity of 1 274MW. The name of the consortium is Ikamva and it includes Globeleq, Africa Rainbow Energy and Power, H1 Holdings and local community trusts. Mainstream currently owns 100% of the project, and at financial close it will be transferred between the partners. The project sites are across four provinces. (Mainstream Renewable Power, n.d.). The estimated investment value for the six solar and six wind energy facilities is R24.3 billion. The projected value for each wind farm is R2,7 billion (except for one) while the solar plants are valued at about R1.4 billion.

The 140MW Beaufort West Wind Farm will comprise up to 70 turbines (DFFE, 2017). The Trakas 140 MW wind farm will comprise up to 40 turbines. Other proposed infrastructure includes an operations and maintenance building, and a 200MW per hour lithium-ion battery energy storage system. Beaufort West and Trakas will be built in the Western Cape (DFFE, 2021).

In the Northern Cape, Mainstream plans to develop three wind energy facilities. Two of these are part of a trio of wind facilities named the “Sutherland WEF”. Sutherland is a 140MW wind energy facility that includes 39 wind turbines. Rietrug has the same capacity with 56 turbines. The other wind farm planned in the province is the 124MW Dwarsrug WEF will comprise up to 44 wind turbines. Dwarsrug is valued at R2.4 billion (CSIR, 2019). Completing Mainstream Renewable’s wind projects is the 140MW Waaihoek WEF in KwaZulu-Natal. The facility may host up to 93 wind turbines (Hawley, 2014).

Mainstream plans to roll out all its solar projects in the Free State. Together they make up the Kentani Cluster, a development comprising 11 solar photovoltaic (PV) or concentrated PV (CPV) facilities each

¹ The individual project amounts are estimated using the MW allocation for each project.

with a maximum generating capacity between 75MW and 100MW. The six solar PV facilities authorised under the REIPPPP are as follows: Kentani, Leliehoek, Klipfontein, Klipfontein 2, Braklaagte and Sonoblomo. The proposed cluster infrastructure includes solar panels covering between 300 and 400 hectares of land. Associated electrical infrastructure would comprise a main transmission substation, power lines and one Li-ion battery energy storage system (BESS), among others. The facilities would share operational and administrative infrastructure including a transformer unit building, operational control centre office, a warehouse/workshop for spares and maintenance equipment, and possibly an on-site substation. The solar energy projects are also part of the Strategic Infrastructure Projects (SIPs), specifically SIPs 8 and 10 which focus on the development of renewable energy (Scott-Shaw, 2021).

ENGIE, in partnership with Pele Green Energy, intends to complete three solar PV projects amounting to a total investment of approximately R4.2 billion. In the Free State, the partners aim to focus on the Grootspruit Solar PV and Sannaspos Solar PV Park 1. Grootspruit is a 75MW solar farm that spans 180 hectares. Associated infrastructure includes inverter/transformer enclosures, a grid connection substation, and two 132kV overhead power lines that connect to Eskom's power grid. Sannaspos also has a contracted capacity of up to 75MW. Infrastructure includes an on-site substation, internal access roads, offices and a control centre (H2ON Environmental Specialists, 2013; Maroga, 2019).

ENGIE's other REIPPPP project is in the Northern Cape. Graspan is also a 75MW solar PV power facility that will consist of infrastructure similar to the projects in Free State. This includes independent power producer substations that will facilitate connection to the grid, onsite buildings, access roads and an internal road network. ENGIE will further install a Li-ion BESS spanning about 1.5 hectares within the solar facility (Goddard and Thomas, 2022).

A consortium comprising TotalEnergies (72.5%), Mulilo Energy (25%) and Du Plessis Dam Solar PV1 Community HoldCo (2.5%) plan to develop the 75MW Du Plessis Dam Solar PV1 facility and the associated infrastructure. The project includes solar panels, internal cabling, transformers, a facility substation, and a BESS. It further proposes installing a 4km long grid connection, control building, laydown area, and an access road (Asha Consulting, 2021; Mulilo, n.d.).

Services

American information technology firm Vantage Data Centers is developing a US\$1 billion (R15.2 billion) 80MW data centre campus in Gauteng. Vantage Data Centers is expanding into Africa and construction of the facility is underway with first phase completion planned for 2022. Once fully complete, the campus will comprise three facilities over 12 hectares with 60 000 square meters of data centre space (Vantage Data Centres, 2021).

Mining

West Wits Mining is developing the Witwatersrand Basin Project, an underground gold mine in Gauteng. The Department of Mineral Resources and Energy approved the mining right application in July 2021. West Wits estimates total mine resources of about 29.1 million tonnes (Mt), an average steady-state annual production of 65 000 ounces for 25 years and a 27-year life-of-mine. The project will be implemented in four stages. The first is the development of the Qala Shallows mining area and is underway following the completion of a feasibility study in September 2021 (West Wits Mining, n.d.). The estimated peak funding requirement at this stage is US\$50 million (R767 million) (Simcock, 2021).

Updates

Progress

Toyota has launched the new Toyota Corolla Cross hybrid vehicle range following a R2.6 billion investment in the Prospecton Plant in KwaZulu-Natal. The Cross will be exported across Africa.

The Competition Commission has prohibited the sale of Sasol's sodium cyanide business to Draslovka, a Czech Republic-based specialty chemicals company. Draslovka had announced plans of a US\$50 million expansion of the facility, pending the approval of the sale.

The Amazon-commissioned 10MW solar farm in the Northern Cape is complete. It was developed by the SOLA Group. Other investors in the project include African Infrastructure Investment Managers (AIIM), through the IDEAS Fund. Through the project, 28GWh of solar energy will be wheeled via Eskom's grid to Amazon's facilities every year. Energy wheeling entails the transmission of power between different grid areas or procurement of independently generated power through the national grid.

FDI TRENDS, Q4 2021

Investment values

The total investment FDI value recorded for the quarter was R128.2 billion. The value was comprised chiefly of the Hive Hydrogen green ammonia plant (R73 billion), Vantage's data centre campus (R15.3 billion) and the 19 REIPPPP projects (R38 billion combined). These projects accounted for 77% of the total investment value recorded in the quarter.

On an individual project basis, the majority of projects (80% of projects) recorded this quarter have values between R1 billion and R5 billion. These comprise the 19 projects announced under Bid Window 5 of the REIPPPP that collectively make up close to 30% – R38 billion combined – of the recorded investment value. They include EDF Renewables' three wind farms; Coleskop, San Kraal and Phezukomoya, each valued at approximately R2.7 billion. With the exception of the Dwarsrug R2.4 billion wind project, Mainstream Renewable's five other project also contribute an estimated R2.7 billion each. These projects consist of the Beaufortwest, Trakas, Sutherland, Rietrug and Waaihoek WEFs. Ten solar facility projects individually valued at about R1.4 billion make up the other projects in this value range. Six of these will be developed by Mainstream Renewable, comprising the Kentani, Klipfontein, Klipfontein2, Leliehoek, Braklaagte and Sonoblomo solar facilities. ENGIE's three solar PV projects (Grootspruit, Graspan and Sannaspos) and the Mulilo/TotalEnergies Du Plessis Dam Solar PV1 round out projects in this grouping.

The Tracker captured three projects valued below R1 billion. Together they total about R1.9 billion or 1.5% of the total pledged value. West Wits Mining's US\$50 million (R767 million) Qala Shallows Phase 1 development has the highest investment value in this group. It is followed by Ford's R600 million modernisation of the Struansdale engine plant. The other project included is Tetra Pak's R500 million expansion of the company's packaging material plant.

Investment stages

Table 1: Investment stages

STAGE	VALUE (R BILLION)	NUMBER
Project-preparation	73	1
Announced	39.1	21
Construction/Implementation	16.1	2
Total	128.2	24

Note: Values may not always sum to the total due to rounding.

The largest investment value was recorded at the project preparation stage due to the Hive Hydrogen green ammonia project (R73 billion) and amounted to 57% of the total investment value. Most projects in the quarter (21 projects) were announced projects and these projects accounted for about R39 billion. The announced projects are mainly composed of the 19 projects selected as preferred bidders in Bid Window 5 of the REIPPPP. Wind energy projects showed the highest estimated value (R24 billion) while the projected collective value for solar projects was R14 billion. In addition, announced investments include Ford's R600 million modernisation project and Tetra Pak's R500 million plant expansion.

A breakdown of projects by investment stage revealed one project at project-preparation, which accounts for 57% of the total investment value. The project is Hive Hydrogen's US\$4.6 billion (R73 billion) planned green ammonia plant.

Two project were identified at the construction or implementation stage. These make up about 12.5% (R16.1 billion) of the total investment value captured this quarter. The largest project recorded at this stage is Vantage Data's R15.3 billion data centre campus. The other project at construction is the US\$50 million (R767 million) Phase 1 development of the Qala Shallows mining area by West Wits mining.

Investment type

Table 2: Investment type

TYPE	VALUE (R BILLION)	NUMBER
Greenfield	126.3	21
Upgrade	1.1	2
Brownfield	0.8	1
Total	128.2	24

Note: Values may not always sum to the total due to rounding.

An analysis of projects by investment type indicated greenfield projects as the majority of projects (21 projects) and the highest investment value (R126 billion). The largest greenfield project is the US\$4.6 billion (R73 billion) Hive Hydrogen green ammonia plant, followed by Vantage's R15.3 billion data centre campus development. The other initiatives that make greenfield investment are the 19 REIPPPP projects.

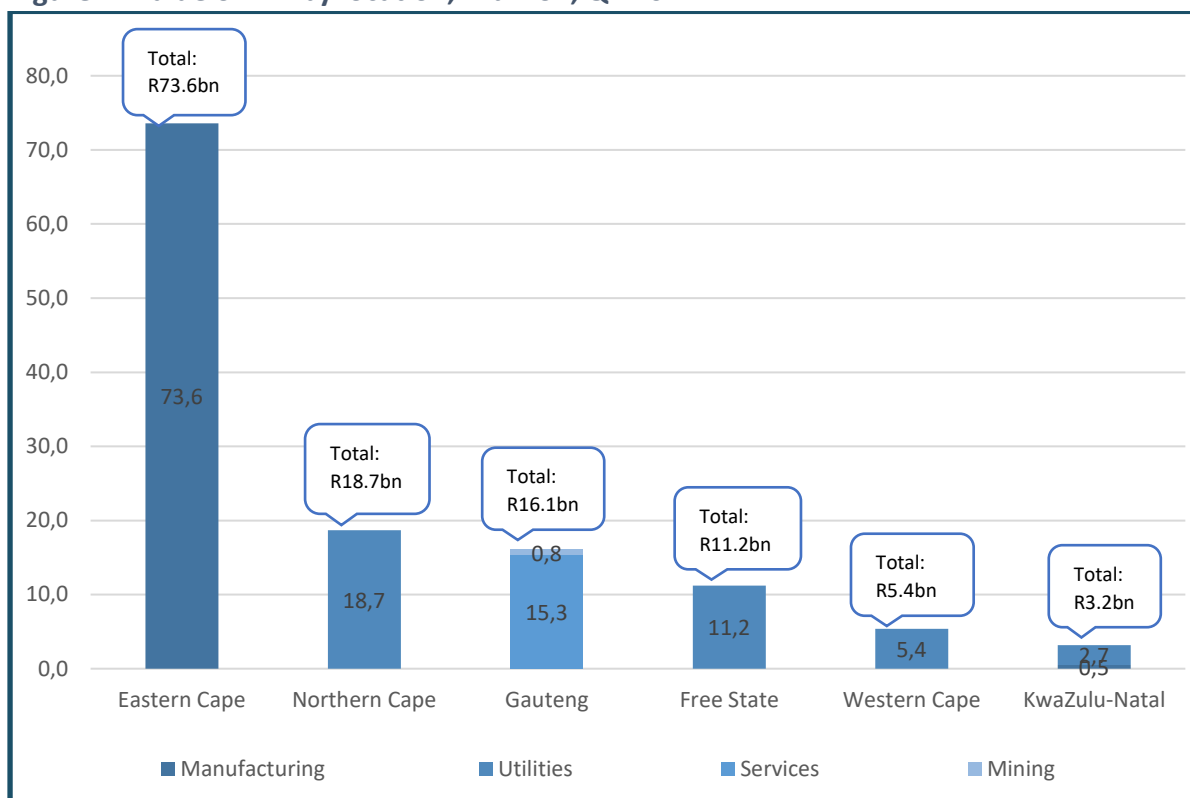
Upgrades were announced for two projects: Ford modernising the Struandale engine plant (R600 million) and Tetra Pak's plant expansion (R500 million). The single brownfield project recorded is West Wits Mining's Qala Shallows development (R767 million).

Investment by location and industry

Projects are distinguished by location and industry in Figure 1. Over 60% of projects identified this quarter were captured in the Northern Cape and Free State – eight projects in each location and all part of the REIPPPP. Given the number and quantum of REIPPPP projects, investments were concentrated in utilities in five of the six provinces where investments were captured.

Eastern Cape captured the largest share of the investment value, recording R73.6 billion from two projects in the manufacturing industry. The highest value was registered from the Hive Hydrogen US\$4.6 billion (R73 billion) green ammonia export plant to be based in at the Coega SEZ. The other project contributing to manufacturing in the Eastern Cape is Ford’s R600 million expansion of the Struandale engine production plant.

Figure 1: Value of FDI by location, R billion, Q4 2021



Source: TIPS FDI Tracker project data.

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

All eight projects recorded in the Northern Cape are in utilities. They make up a total R18.7 billion towards investment in the province. The projects comprise six wind energy facilities and two solar PV power plants. EDF Renewables plans to build three of the wind facilities, the Coleskop, San Kraal and Phezukomoya wind farms, for an estimated R8.1 billion project value. Mainstream Renewable also intends to develop three wind energy facilities for approximately R7.8 billion. These are the Dwarsrug, Rietrug and Sutherland wind facilities. Solar projects comprise the Du Plessis Dam Solar PV1 project and the Graspan Solar PV project, each valued at about R1.4 billion. The former will be developed through the TotalEnergies/Mulilo partnership and the latter, ENGIE together with Pele Green.

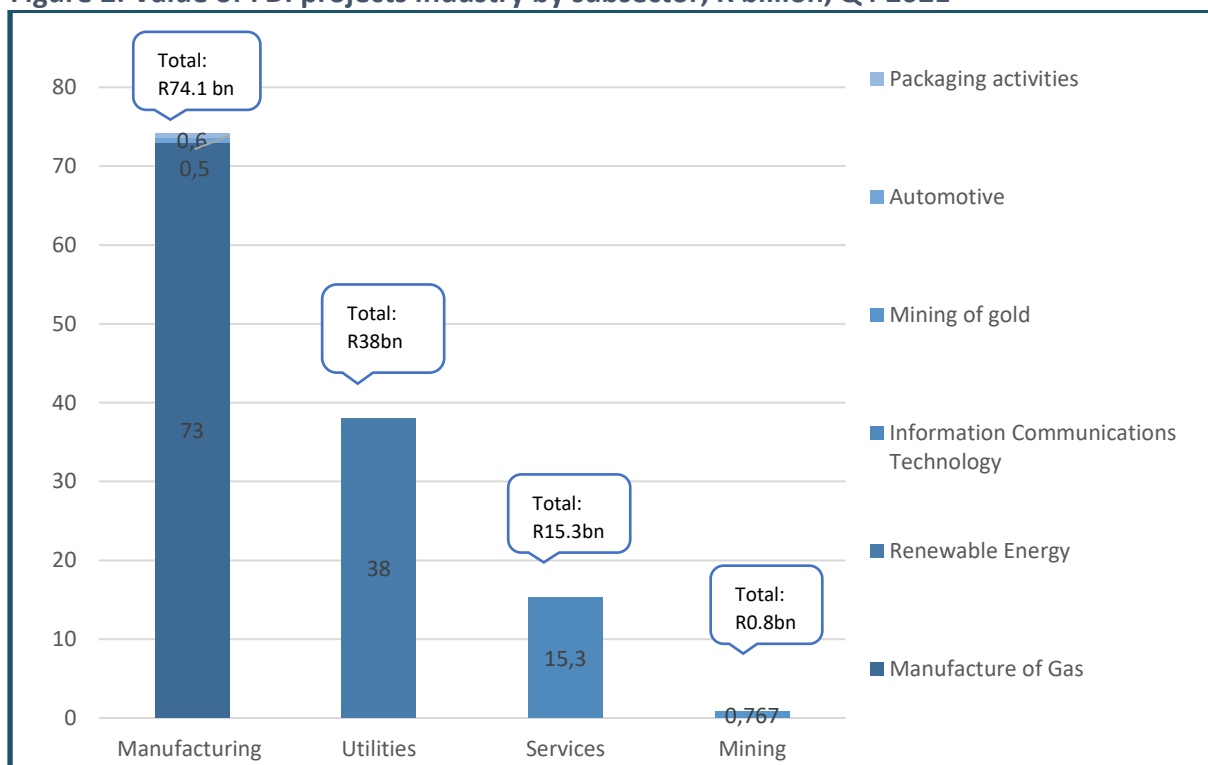
Two projects were identified in Gauteng in the services and mining industries. The total pledged investment value recorded in the province was R16.1 billion. The Vantage data centre campus project contributes about US\$1 billion (R15.3 billion) to services while mining is represented by West Wits Mining’s US\$50 million (R767 million) development of Qala Shallows Phase 1.

Free State also gained investment exclusively from REIPPPP projects. In total, the eight planned solar plants contribute approximately R11.2 billion to investment in the province’s utilities industry. Mainstream Renewable will develop six of these facilities with an estimated total project value of R8.4 billion, at about R1.4 billion to develop each plant. Mainstream’s solar facilities include Kentani, Klipfontein 1 and 2, Leliehoek, Braaklaggte and Sonoblomo. ENGIE and Pele Green will cultivate the other two solar projects for a total R2.8 billion (R1.4 billion per project) namely, the Grootspuit Solar PV project and Sannaspos Solar PV Park 1 project.

Western Cape garnered in a total of R5.4 billion in investment. This is due to two utilities projects that are a part of the REIPPPP. Mainstream Renewable plans to develop both the Beaufort West and Trakas wind energy facilities, that are individually valued at an estimated R2.7 billion each.

The two projects representing investment in KwaZulu-Natal were recorded in two industries with a total project value of about R3.2 billion. Mainstream Renewable plans to construct the Waaihoek WEF for approximately R2.7 billion under the REIPPPP, contributing to utilities. Manufacturing in the province benefits from Tetra Pak’s R500 million plant expansion.

Figure 2: Value of FDI projects industry by subsector, R billion, Q4 2021



Source: TIPS FDI Tracker project data.

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

Figure 2 shows projects categorised by subsector, within their respective industries. This quarter’s projects identified were in four industries and six subsectors. Manufacturing recorded the largest investment value followed by utilities which also had the highest number of projects.

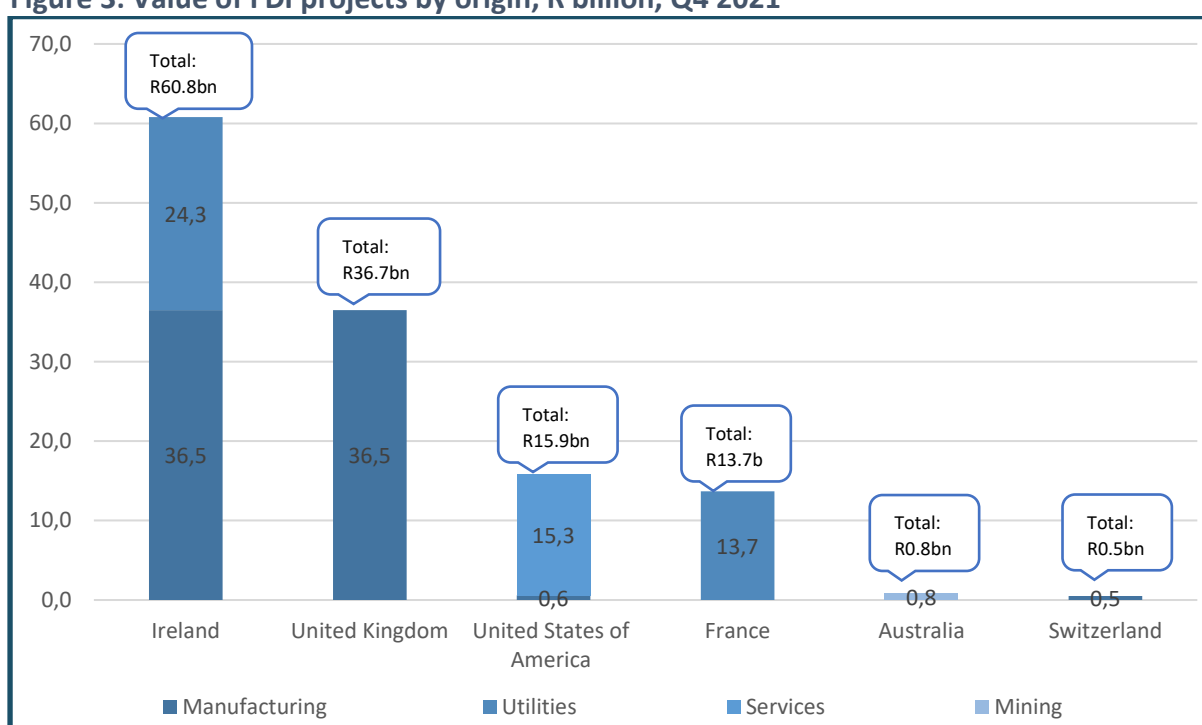
Total investment in manufacturing was R74.1 billion from projects in three subsectors. Notably manufacture of gas made up the largest share of the value due to Hive Hydrogen’s US\$4.6 billion (R73 billion) green ammonia export plant. The other subsectors contributing to manufacturing are automotives – Ford’s R600 million plant expansion – and packaging activities with a R500 million packaging plant by Tetra Pak.

The only subsector identified in utilities was renewable energy, representing an investment of R38 billion and comprised entirely of the 24 REIPPPP Bid Window 5 projects. Similarly, services is represented by one subsector – information communication technology (ICT) – through the (US\$1 billion) R15.3 billion Vantage data centre campus. The mining industry also captured investment in one subsector, mining of gold. This is on account of West Wits Mining’s US\$50 million (R767 million) project.

Investment by country of origin

Figure 3 differentiates investment by country of origin and industry. It is notable that Europe’s dominance as a source of investment is maintained this quarter with the region accounting for nearly 87% (R111.5 billion) of the total pledged value recorded. In addition, projects from Europe make up the majority number of projects in this reporting period, largely on account of REIPPPP-related projects.

Figure 3: Value of FDI projects by origin, R billion, Q4 2021



Source: TIPS FDI Tracker project data.

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

Thirteen projects were recorded from Ireland, which represent the largest share of the overall investment value, 47% (R60.8 billion) over half of which (R36.5 billion²) is attributed to Hive Energy’s green ammonia project. All other investments identified from Ireland are REIPPPP projects (six solar plants and five wind facilities) that will be rolled out by Maintstream Renewable for a collective R24.3 billion. The green ammonia plant also represents R36.5 billion investment from the United Kingdom. France had the second highest number of investments with seven projects in the REIPPPP. The total pledged value from French firms was about R13.7 billion, including

² This value represents half the total pledged value, US\$4.6 billion (R73 billion) for the green ammonia export plant project. Foreign firms (Hive Energy and Linde subsidiary Afrox) participating in the project are from Ireland and the United Kingdom. They have not disclosed individual contributions to the project so the value is an estimate for purposes of analysis in the Tracker.

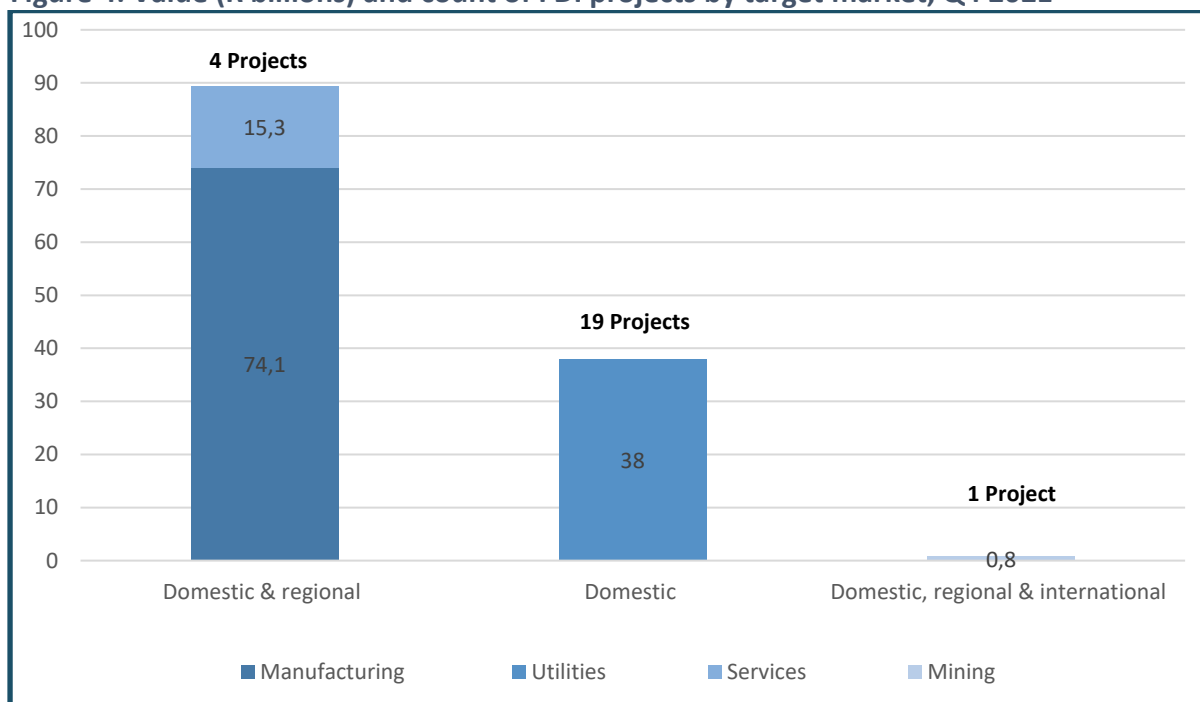
EDF Renewables, ENGIE Africa and TotalEnergies. Switzerland rounds out investment from Europe with a R500 million expansion by Tetra Pak.

Investment identified from the United States amounts to R15.9 billion, which mainly comprises Vantage’s notable R15.8 billion data centre project. Ford completes investment from the US this quarter with the R600 million Struandale plant expansion. The single project captured from Australia is West Wits Mining’s development of the Witswatersand Basin contributing US\$50 million (R676 million).

Investment by target market

Figure 4 presents projects categorised by target market. Four projects have a domestic and regional outlook across two industries - manufacturing and services. They recorded a substantial R89,4 billion for this category, of which a large portion was captured from the green ammonia plant planned by Hive Hydrogen for R73 billion. All commitments with an exclusively domestic market focus are REIPPPP related projects contributing to utilities. There was only one project targetting the domestic, regional and international segment in the mining industry - West Wits Minings US\$50 million (767 million) investment.

Figure 4: Value (R billions) and count of FDI projects by target market, Q4 2021



Source: TIPS FDI Tracker project data.

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

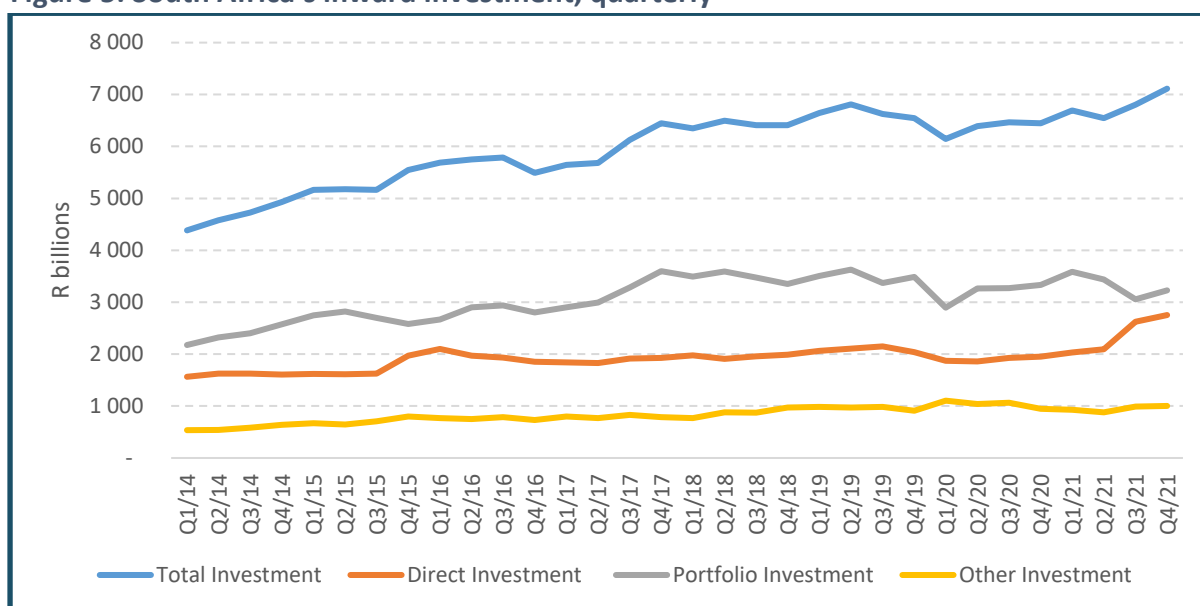
Investment environment

Analysis of the domestic investment environment provides insight into the general environment in which investments happen. This analysis is important for the following reasons. First, metrics that measure investment indicate the extent to which pledged investments materialise into actual investments. This assists in tracking the extent to which investment drives materialise into actual investments. Further, analysing the investment environment provides a glimpse into investor sentiment on future growth prospects in the economy. A flurry of investment activity is typically a sign of future growth, while during times of lacklustre growth investors tend to hold back investments given a pessimistic view of future growth and the risk of tying up capital, hampering the returns on

that capital. With the President’s annual investment conferences, it is important from a policy point of view to monitor whether the pledges made at that event are materialising as a substantial improvement in investment levels. To evaluate the investment environment, a number of key investment metrics have been incorporated, which are further detailed in the Appendix.

The total market value of South Africa’s inward investment increased from a revised R6 803 billion at the end of September 2021 to R7 113 billion at the end of December 2021, an increase of 4.6% between Q3 2021 and Q4 2021. The rise in total investment was driven by increase in all categories of investment except financial derivatives. The direct³ and portfolio investments were driven by an increase in the FTSE/JSE All-share Index of 14.7% in Q4 2021 (SARB, 2022a). The rise in other investments were driven by national government borrowing US\$400 million from the New Development Bank.

Figure 5: South Africa’s inward investment, quarterly



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

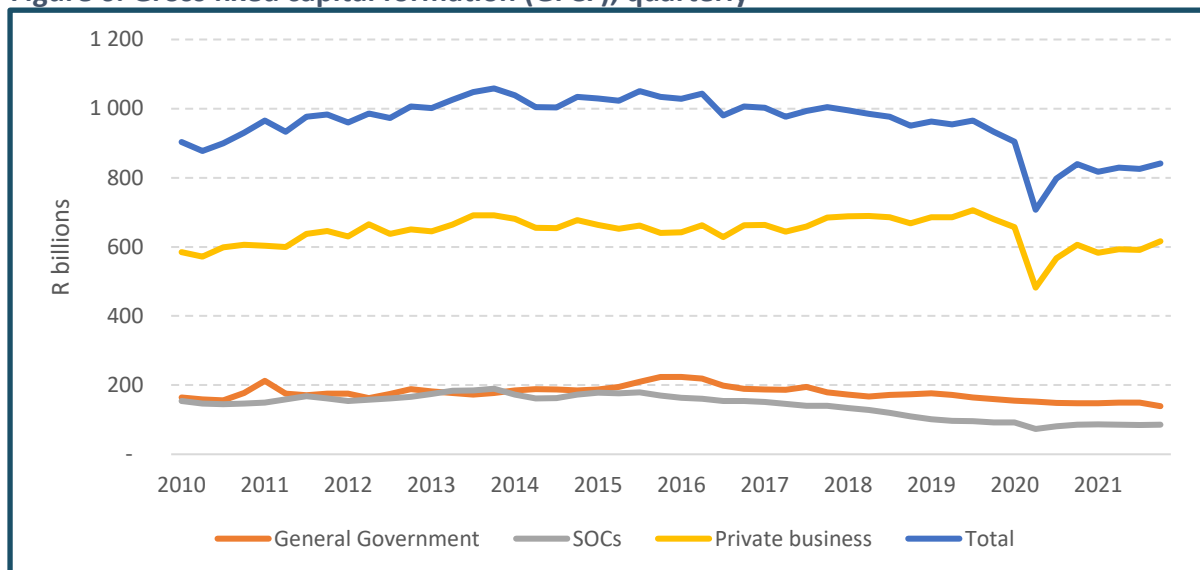
Over the period, portfolio investments increased by 5.8% from R 3 054 billion in Q3 2021 to R 3 230 billion in Q4 2021. Direct investments increased by 4.8%, from R 2 627 billion in Q3 2021 to R2 753 billion in Q4 2021. Other investments increased by 1.0 % from R990 billion to R1 000 billion.

The increase in total investment followed an increase in total investment of 3.9% between Q2 2021 and Q3 2021. Compared to the Q4 2020, total investments were about 10.3% higher in Q4 2021. The rise was driven by dramatic changes in the underlying datasets. Direct investments were 40.8% higher in Q4 2021 compared to Q4 2020. Portfolio investments were 3% lower in Q4 2021 compared to Q4 2020, while other investments were 5.9% higher.

Statistics South Africa calculates gross fixed capital formation (GFCF) as part of the expenditure component of gross domestic product (GDP). The metric is an important measure of overall investment in the economy. It includes money spent on improvements to land, equipment purchases, and road and building construction. The total GFCF increased by 1,9% between Q3 2021 and Q4 2021 in constant 2021 prices, seasonally adjusted, and annualised. Stats SA reported this change as flat between the quarters (Stats SA, 2022a).

³ Direct investment is defined as: the objective of obtaining a lasting interest by a resident entity in one economy (direct investor) in an entity resident in an economy other than that of the investor (direct investment enterprise). This refers to foreign investment into South Africa, See (SARB, 2019).

Figure 6. Gross fixed capital formation (GFCF), quarterly

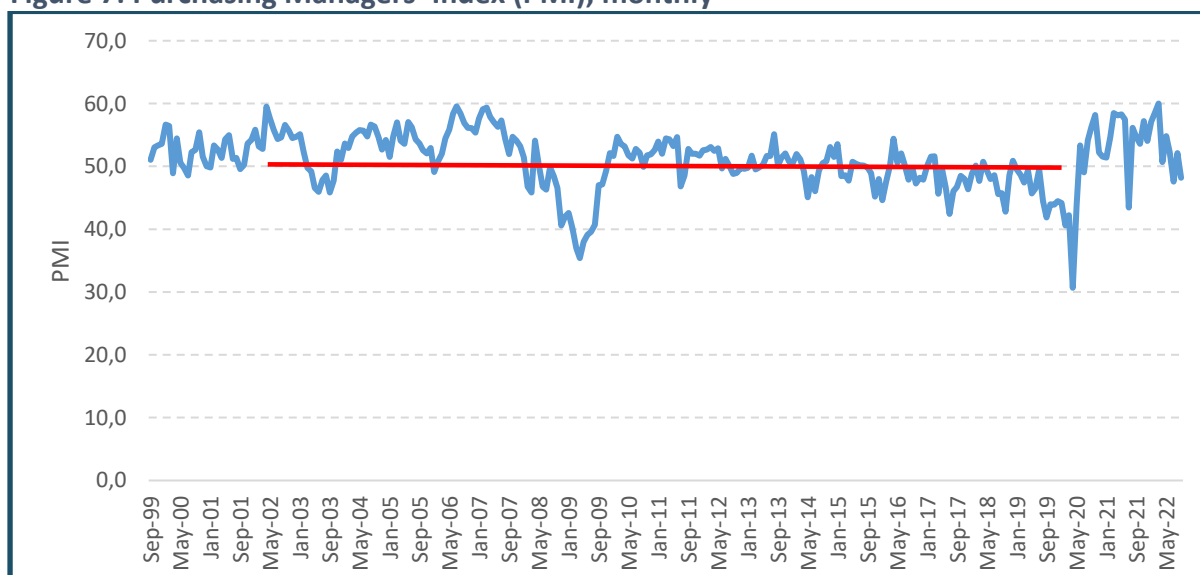


Source: (TIPS, 2022), based on Stats SA GDP data (Stats SA 2021a; 2021b).

Notes: Values are on a constant 2021 prices, seasonally-adjusted, and annualised basis. Value are deflated using an implicit deflator, rebased to Q4 2021.

Disentangling GFCF by the type of institution reveals the contributions to investment levels in the public and private sectors. Between Q3 and Q4 2021, the increase in total GFCF was driven by rises in private investment (4.2%) and public corporation investment (1.4%) in constant 2021 prices, seasonally adjusted and annualised basis. Investments by general government decreased by 7% over the same period. According to Statistics South Africa, the increase in total GFCF was largely driven by increases in machinery and equipment (6.7%) and other⁴ assets (5.2%) (StatsSA, 2022b). Major declining datasets were non-residential buildings (7.9%), transfer costs (7.9%), and construction works (2.8%).

Figure 7: Purchasing Managers' Index (PMI), monthly



Source: TIPS, based on PMI data by (BER, 2021).

Note: The PMI data are seasonally adjusted by the Bureau for Economic Research (BER).

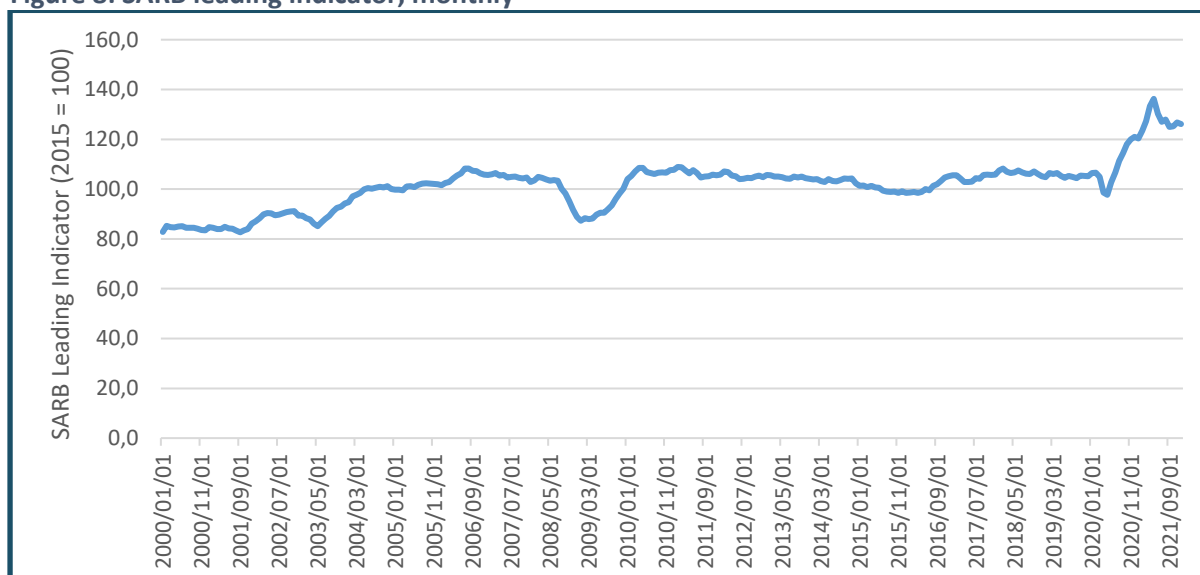
⁴ "Other assets" includes research and development, computer software, mineral exploration and cultivated biological resources.

The Absa PMI focuses on business conditions in the manufacturing sector, and points to challenges within the sector. These challenges may inform and influence investor decisions in the future. A value that exceeds a value of 50 implies an improvement from the previous month, and vice versa.

In Q4 2021, the seasonally adjusted Absa PMI declined in October, while registering a recovery in November and declining somewhat in December. Despite the volatility witnessed in Q4 2021, the index remained in expansionary territory (above 50). The PMI decreased between September and October 2021 (from 54.7 to 53.6), then increasing between October and November (from 53.6 to 57.2) and subsequently decreasing between November and December (from 57.2 to 54.1) (BER, 2021).

The decline in October 2021 was attributed to declines in the indices for business activity and new sales orders. Business activity declined due to the three-week strike in the steel and engineering sector and the return of Eskom loadshedding in the month. The declines in new sales orders pointed to deflated demand for manufactured goods in the month. The declined demand was noted to be due to deflated domestic demand as export sales improved compared to the month before. Overall manufacturing conditions improved in November with rises in the business activity and new sales orders indices – the indices that were most impacted by the steel strike in October. Rising demand for manufactured goods was attributed to a ramp-up of activity and demand before the annual festive season industry break from mid-December. Purchasing managers were pessimistic around future business activity due to a new COVID-19 variant being discovered domestically, combined with the resultant travel bans and the rise of a fourth wave in Europe – a key South Africa export destination. Constraints in the month were also noted around higher shipping costs. Manufacturing activity slowed down in December 2021. The decline was attributed to declines in the indices for new sales orders, expected business conditions and input prices. The declines were attributed to slower services sector activity in the Eurozone as a result of a rise in COVID-19 infections and tightening in lockdown restrictions in several countries at the end of 2021. The combination of weak employment dynamics and fast-rising input costs also added negative pressure on the indices in the month.

Figure 8: SARB leading indicator, monthly



Source: TIPS, based on (SARB, 2021)

The SARB also reports a composite leading indicator that aims to predict future growth in the economy and serves as supplementary evidence for future changes in the economy. The composite leading business cycle indicator is calculated based on a number of underlying datasets that predict growth (see Appendix). The SARB leading indicator was volatile in Q4 2021. The leading indicator increased

marginally in October (0.1%), increased in November (0.6%), and subsequently declined in December (0.5%) (SARB, 2021). The increases in the early parts of the quarter were driven by accelerations in the growth rate of job advertisements and the growth rate of new passenger vehicle sales, a widening in the interest rate spread and an increase in the US dollar denominated export commodity price index. Declines in the latter part of the quarter were driven by decelerations in the growth rate in the real M1 money supply and in the composite leading business cycle indicator for South Africa’s main trading partner countries.

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 of 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. With the projects captured this quarter, there were no reports of challenges identified.

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 3.

Table 3: 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.

Table 4 lists projects according to the assigned credibility grading. Two projects were classified under the “potential” grading, Tetra Pak’s aseptic packaging material plant and Hive Hydrogen’s green ammonia export plant. Tetra Pak is a well-established packaging manufacturer in South Africa, and has given details of what the project will entail; however, the project has only just been announced and it is not clear whether there any plans in progress. Hive-Hydrogen’s project is being supported by institutions such as Invest SA, and it plans to develop the project at the Coega SEZ, indicative of a strong commitment to follow through on the pledge. With the firm having completed a pre-feasibility

study and moving forward to making a final investment decision, the project is categorised as potential.

The bulk of projects this quarter (22) were graded as likely. Common traits that characterise the firms behind these projects include existing operations well that are established in the country and visible track records. Ford's commitment to upgrade the Struandale engine plant is part of the firm's broader modernisation programme for its facility. It follows on the R15.8 billion expansion and improvement of the Silverton assembly plant for the next-generation Ford Ranger. Upgrades to the Struandale engine plant will allow it to produce a new engine variant for the new model Ranger. The rest of the projects graded likely are under the REIPPPP. In addition to the status of the companies, as previously explained, and detailed project development plans, the projects have also submitted relevant regulatory applications that have either been approved or pending.

Table 4: Project credibility grading

PROJECT	CLASSIFICATION
Tetra Pak aseptic packaging material plant expansion	Potential
Green ammonia export plant	Potential
Ford Struandale Engine Plant modernisation	Likely
Coleskop Wind Energy Facility	Likely
San Kraal Wind Energy Facility	Likely
Phezukomoya Wind Energy Facility	Likely
Beaufortwest Wind Facility	Likely
Trakas Wind Facility	Likely
Sutherland Wind Facility	Likely
Rietrug Wind Facility	Likely
Waihoek Wind Facility	Likely
Dwarsrug Wind Facility	Likely
Kentani Solar Facility	Likely
Klipfontein Solar Facility	Likely
Klipfontein2 Solar Facility	Likely
Leliehoek Solar Facility	Likely
Braklaagte Solar Facility	Likely
Sonoblomo Solar Facility	Likely
Grootspruit Solar PV Project	Likely
Graspan Solar PV Project	Likely
Sannaspos Solar PV Park 1 Project	Likely
Du Plessis Dam Solar PV1	Likely
Witwatersrand Basin project: Qala Shallows Phase 1	Construction/Implementation
Vantage Data Centers campus	Construction/Implementation

PROJECT NAME	TETRA PAK ASEPTIC PACKAGING MATERIAL PLANT EXPANSION	VANTAGE DATA CENTERS CAMPUS
Investment value	(Rand only)	US\$1 billion
Invest Rand Value	R500 million	R15.3 billion
Project location: Province	KwaZulu-Natal	Gauteng
Project location: City/Town	Pine Town	Johannesburg
Investor firms	Tetra Pak	Vantage Data Centers
Investor country	Switzerland	United States
Investor city	Pully	Kolin
Indicative start date	October 2021	July 2021
Indicative end date		
Project phase	Announced	Construction/Implementation
Project type	Upgrade	Greenfield
Project industry	Manufacturing	Services
Project sector	Packaging activities	Information Communications Technology
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Competition Commission; Department of Trade, Industry and Competition
Target Market	Domestic and regional	Domestic and regional
Social Development Programme	Technical knowledge transfer	Navuka Investment Holdings is its broad-based black economic empowerment (B-BBEE) partner. Navuka will own 25% plus one share of the South African operations; localisation
Project Description	Tetra Pak is a firm that processes and packages food headquartered in Sweden. The company announced plans to invest R500 million to upgrade the firm's factory in KwaZulu-Natal. Tetra Pak further aims to increase the plant's production capabilities through the investment. The plant will use alternative green energy sources and new packaging technology will be introduced that utilises less energy and water. Food products packaged and processed by the firm include pet food and fruit and vegetables.	American information technology firm Vantage Data Centers plans to invest US\$1 billion (R15.2 billion) in the development of an 80MW campus in Gauteng. The firm specialising in hyperscale data centre campuses is expanding into Africa and construction of the facility is underway with the first phase completion planned for 2022. One fully complete, the campus will comprise three facilities over 12 hectares with 60 000 square meters of data centre space
Motivation	Increase production capability and capacity for a new product (vaccines) in the region	Market expansion

PROJECT NAME	FORD STRUANDALE ENGINE PLANT MODERNISATION	GREEN AMMONIA EXPORT PLANT
Investment value	(Rand only)	US\$4.6 billion
Invest Rand Value	R600 million	R73 billion
Project location: Province	Eastern Cape	Eastern Cape
Project location: City/Town	Gqeberha	Coega
Investor firms	Ford	Hive Hydrogen(Hive Energy) Linde (Afrox), Built Africa
Investor country	United States	Multiple
Investor city	Istanbul	Multiple
Indicative start date	September 2021	December 2021
Indicative end date	2022	2026
Project phase	Announced	Project-preparation
Project type	Upgrade	Greenfield
Project industry	Manufacturing	Manufacturing
Project sector	Automotive	Manufacture of Gas
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Not reported	Coega Special Economic Zone, Department of Trade, Industry and Competition through InvestSA
Target Market	Domestic and regional	Domestic and regional
Social Development Programme	localisation with future introduction of local manufacturing	Localisation
Project Description	Ford's latest investment towards will go towards upgrades at automotive manufacturers Struandale Engine Plant in the Eastern Cape. The majority of the project entails modernisation and expansion of the plants current assembly line which manufactures the 2.0L Single Turbo and 2.0L Bi-Turbo diesel engines. Ford will further introduce production for a third diesel engine through the investment, a 3.0L V6 turbodiesel engine that will power selected Ranger models. The project is in addition to an investment of R15.8 billion in the firms' Silverton assembly plant.	Hive Hydrogen – a partnership between United Kingdom based Hive Energy and South Africa's Built Africa – together with Afrox (Ireland based Linde plc's subsidiary) plan establish a green ammonia export facility. The plant will be developed for an estimated US\$4.6 billion (R73 billion) at the Coega Special Economic Zone in the Eastern Cape. The facility is expected to produce approximately 780 000 tonnes per year of green ammonia from hydrogen extracted through a process using renewable energy and nitrogen extracted utilising an air separation unit. The first phase operation is expected by 2025 with full operation planned for 2026.
Motivation	Market expansion with introduction of new Brand of products	Market expansion, responding to growing demand for ICT infrastructure

PROJECT NAME	COLESKOP WIND ENERGY FACILITY	SAN KRAAL WIND ENERGY FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R2.7 billion	R2.7 billion
Project location: Province	Northern Cape	Northern Cape
Project location: City/Town	0	0
Investor firms	EDF Renewables	EDF Renewables
Investor country	France	France
Investor city	Paris	Paris
Indicative start date	May 2020	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	The proposed Coleskop Wind Energy Facility will be a 140MW wind farm. Infrastructure includes construction of a new road, electrical infrastructure, the construction of a 60m x 60m operation and maintenance services building, a 500m corridor for the construction of a 132 kV overhead line which will be routed from the Coleskop Substation to the MTS Substation. This will include a double circuit, twin Tern 132kV conductor.	The Sans Kraal wind energy facility is proposed as a 390MW wind facility with a contracted capacity of 140MW. The WEF will comprise up to 78 wind turbine generators, each with a hub height of up to 150m, blade length of up to 75m and a rotor diameter of up to 150m. Associated infrastructure includes a 132kV grid connection, an on-site switching station which will transfer the electricity generated by the WEF to the proposed Umsobomvu 132/400kV through a via a 132kV double or single string transmission line.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	PHEZUKOMOYA WIND ENERGY FACILITY	BEAUFORTWEST WIND FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R2.7 billion	R2.7 billion
Project location: Province	Northern Cape	Western Cape
Project location: City/Town		Prince Albert Municipality
Investor firms	EDF Renewables	Mainstream Renewable Power Projects (Ikamva)
Investor country	France	Ireland
Investor city	Paris	Dublin
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	Phezukomoya 315MW wind energy facility will (bid capacity 140MW) comprise up to 63 wind turbine generators with a hub height of 150 m, blade length of up to 75m and a rotor diameter of 150m. Infrastructure for the proposed wind facility will also include An onsite switching station will be constructed as part of the proposed Phezukomoya WEF, which will transfer the electricity generated by the WEF to the proposed Umsobomvu 132/400kV substation.	Beaufort West will be a 140MW wind farm. Associated infrastructure will include a 33kv/132kv on-site substation and a 200MW/h Energy Battery Energy Storage System (BESS).
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	TRAKAS WIND FACILITY	SUTHERLAND WIND FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R2.7 billion	R2.7 billion
Project location: Province	Western Cape	Northern Cape
Project location: City/Town	Prince Albert	Sutherland
Investor firms	Mainstream Renewable Power Projects (Ikamva)	Mainstream Renewable Power Projects (Ikamva)
Investor country	Ireland	Ireland
Investor city	Dublin	Dublin
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	The Trakas 140MW wind energy facility will comprise up to 40 turbines with a hub height and rotor diameter of up to 200m. Other proposed infrastructure includes an operations and maintenance building, 200MW/h Lithium ion battery energy storage system in the vicinity of the substation and a portion of the 33/132kv substation inclusive of the transformer.	The proposed 140MW wind energy facility will include 39 wind turbines with a hub height of 200m and a rotor diameter of 200m.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	RIETRUG WIND FACILITY	WAAIHOEK WIND FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R2.7 billion	R2.7 billion
Project location: Province	Northern Cape	KwaZulu-Natal
Project location: City/Town	Sutherland	Utrecht
Investor firms	Mainstream Renewable Power Projects (Ikamva)	Mainstream Renewable Power Projects (Ikamva)
Investor country	Ireland	Ireland
Investor city	Dublin	Dublin
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	The 140MW facility is one of three facilities that form part of the Sutherland WEF. The facilities have separate Environmental Assessment reports. The proposed turbine dimensions and rotor diameter is 200m. The wind farm will comprise 56 turbines.	The Waaihoek Wind Farm will connect to the Eskom grid via a new 88kV which will connect the IPP substation to the Eskom Bloedrivier 88/225kV transmission substation. The WEF may host up to 93 wind turbines.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	DWARSRUG WIND FACILITY	KENTANI SOLAR FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R2.4 billion	R1.4 billion
Project location: Province	Northern Cape	Free State
Project location: City/Town	Loeriesfontein	Dealesville
Investor firms	Mainstream Renewable Power Projects (Ikamva)	Mainstream Renewable Power Projects (Ikamva)
Investor country	Ireland	Ireland
Investor city	Dublin	Dublin
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	The planned 124MW Dwarsrug wind energy facility will comprise up to 44 wind turbines with a hub height from ground level and rotor diameter of up to 200m.	Kentani PV facility is proposed as a 75MW solar PV power project. It forms part of the "Kentani cluster" a development comprising 11 solar PV or CPV facilities each with a maximum generating capacity between 100-75MW. Proposed infrastructure includes solar panels would cover 300 to 400 hectares of land. Proposed electrical infrastructure includes one (1) Main Transmission Substation (MTS), three (3) power lines (namely 1 x 132kV power line and 2 x 400kV power lines), one (1) Li-Ion Battery Energy Storage System (BESS), the associated electrical infrastructure.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	KLIPFONTEIN SOLAR FACILITY	KLIPFONTEIN2 SOLAR FACILITY
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R1,4 billion	R1,4 billion
Project location: Province	Free State	Free State
Project location: City/Town	Dealesville	Dealesville
Investor firms	Mainstream Renewable Power Projects (Ikamva)	Mainstream Renewable Power Projects (Ikamva)
Investor country	Ireland	Ireland
Investor city	Dublin	Dublin
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	Klipfotein solar PV facility is proposed as a 75MW solar PV power project. It forms part of the Kentani Cluster. a development comprising 11 solar PV or CPV facilities each with a maximum generating capacity between 100-75MW. Proposed infrastructure includes solar panels would cover 300 to 400 hectares of land. Proposed electrical infrastructure includes one (1) Main Transmission Substation (MTS), three (3) power lines (namely 1 x 132kV power line and 2 x 400kV power lines), one (1) Li-Ion Battery Energy Storage System (BESS), the associated electrical infrastructure.	Klipfotein 2 solar PV facility is proposed as a 75MW solar PV power project. It forms part of the Kentani Cluster, a development comprising 11 solar PV or CPV facilities each with a maximum generating capacity between 100-75MW. Proposed infrastructure includes solar panels would cover 300 to 400 hectares of land. Proposed electrical infrastructure includes one (1) Main Transmission Substation (MTS), three (3) power lines (namely 1 x 132kV power line and 2 x 400kV power lines), one (1) Li-Ion Battery Energy Storage System (BESS), the associated electrical infrastructure.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	SONOBLOMO SOLAR FACILITY	GROOTSPRUIT SOLAR PV PROJECT
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R1.4 billion	R1.4 billion
Project location: Province	Free State	Free State
Project location: City/Town	Boshoff	Odendalsrus
Investor firms	Mainstream Renewable Power Projects (Ikamva)	ENGIE Africa/Pele Green Energy
Investor country	Ireland	France
Investor city	Dublin	La Défense
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	Sonoblomo PV facility is proposed as a 75MW solar PV power project. It forms part of the Kentani Cluster, a development comprising 11 solar PV or CPV facilities each with a maximum generating capacity between 100-75MW. Proposed infrastructure includes solar panels would span between 300 - 400 hectares of land. Proposed electrical infrastructure includes one (1) Main Transmission Substation (MTS), three (3) power lines (namely 1 x 132kV power line and 2 x 400kV power lines), one (1) Li-Ion Battery Energy Storage System (BESS), the associated electrical infrastructure.	ENGIE – previously SolaireDirect – plans to develop Grootspuit as a 75MW photovoltaic solar farm that spans 180 hectares, inclusive of associated infrastructure. Infrastructure includes solar panels will consist of Photo-Voltaic cells placed on aluminium structures. Inverter/Transformer enclosures covering 21m ² area, grid connection substation (convert 22kV to 132kV) connection to Eskom power grid by through two 132kV overhead power lines. The electricity produced will connect via the Grootkop-Kutlwanong power line on the site.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	GRASPAN SOLAR PV PROJECT	SANNASPOS SOLAR PV PARK 1 PROJECT
Investment value	(Rand only)	(Rand only)
Invest Rand Value	R1,4 billion	R1,4 billion
Project location: Province	Northern Cape	Free State
Project location: City/Town	Herbert	Bloemfontein Road
Investor firms	ENGIE Africa/Pele Green Energy	ENGIE Africa/Pele Green Energy
Investor country	France	France
Investor city	La Défense	La Défense
Indicative start date	October 2021	October 2021
Indicative end date	2024	2024
Project phase	Announced	Announced
Project type	Greenfield	Greenfield
Project industry	Utilities	Utilities
Project sector	Renewable Energy	Renewable Energy
Permanent jobs	Not reported	Not reported
Temporary jobs	Not reported	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	ENGIE plans to develop the Graspán 75MW solar PV power facility which will consist of components including ; PV solar panels/modules (arranged in arrays), PV module mountings, DC-AC current inverters and transformers. On-site, 132kv independent power producer substations will facilitate connection to the grid, the inverter/transformer will connect to two new on-site substations. ENGIE will further install a solid state Lithium ion Battery Energy Storage System (BESS) covering approximately 1.5 hectares within the solar facility.	The project will have a contracted capacity of up to 75MW and will comprise infrastructure including solar PV panels, an on-site substation and 132kV overhead power line to facilitate the connection between the solar energy facility and the Eskom electricity grid.
Motivation	REIPPPP participation	REIPPPP participation

PROJECT NAME	DU PLESSIS DAM SOLAR PV1
Investment value	(Rand only)
Invest Rand Value	R1,4 billion
Project location: Province	Northern Cape
Project location: City/Town	De Aar
Investor firms	Mulilo Renewable Energy; TotalEnergies
Investor country	France
Investor city	Dublin
Indicative start date	October 2021
Indicative end date	2024
Project phase	Announced
Project type	Greenfield
Project industry	Utilities
Project sector	Renewable Energy
Permanent jobs	Not reported
Temporary jobs	Not reported
Government partnership	Eskom, Department of Mineral Resources and Energy, Nersa, South African Heritage Resources Agency
Target Market	Domestic
Social Development Programme	REIPPPP economic development commitments criteria including SMME development and a community upskilling programme
Project Description	A consortium comprising Mulilo Energy (25%) TotalEnergies (72.5%) and Mastowiz (Pty) Ltd t/a Du Plessis Dam Solar PV1 Community HoldCo (2.5%) will develop the 75MW Du Plessis Dam Solar PV 1 facility and the associated infrastructure. The project includes, among other things, solar panels, internal cabling, transformers, a facility substation, battery energy storage system (BESS).
Motivation	REIPPPP participation

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APPENDIX

Table 5. 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.