Energy Investment in South Africa

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September 2013

South Africa is uniquely well positioned because it has many of the characteristics of a developed economy for example, a strong services-based economy, a relatively large domestic economy, strong financial framework and a robust democracy. In many ways, this makes [South Africa] an ideal entry point for foreign investors, particularly those that are still not certain about the continent.–Michael Lalor of Ernst & Young

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Above, Mr. Lalor commented that, "In many ways, South Africa is an ideal entry point for foreign investors." And he was unerringly correct.

South Africa has a politically stable government, well capitalised banking system, abundant natural resources, well developed regualtory systems, research development capabilities, and an established manufacturing base.

South Africa has the largest economy in Africa with a progressive legal framework, commerce governance, competition policy, and patent law. It was ranked the only "upper middle income country" in Africa. This strenght and growth will largely continue.

According to the South African Development Community, South Africa has a GDP per capita of $7,509, Imports of $120,461 million, Exports of $108,727 million, a Debt to GDP ratio of 35.7, and a total labor force of 18 million. [16]

The economic growth, which has been largely driven by domestic consumption, is expected to grow at 2.7% in 2013, 3.5% in 2014 and 3.8% in 2015. This advantage over not only the continent, but the world can be seen in terms of economic advantage, product diversity, legal protections, business infastructure, and social development.

1.1 Economic Advantage

South Africa is the economic superpower of the African continent, and a formidable world player. This advantage can be seen throughout its economic spectrum, and is quite quantifiable.

South Africa has a Gross Domestic Product (GDP) of R2.3 trillion or US$ 309bn which comprises 30% of the GDP Africa. [5] South Africa was rated one of the continent's top innovators. According to the Africa Competitiveness Report, South Africa was rated the second most innovative African country, between Tunisia on top and Senegal below. [14]

The World Economic Forum in their Global Competitiveness Report of 2011 ranked South Africa 54th and in 2012 ranked South Africa 52nd out of the 139 nations surveyed.[15] It was placed thrid amond the BRICS economies (China at 29 and Brazil at 48).*

*BRICS is an acronym for an association of five major emerging economies of: Brizil Russia, India, China, and South Africa. The grouping was originally known as "BRIC" before the inclusion of South Africa in 2010. BRICS are distinguished by thier large fast-growing economies and influence on global affairs.

Even more impressive was a rating of 3rd overall for the county's financial market development. The WEF stated this rating was "indicating high confidence in South Africa's financial markets at a time when trust is returning only slowly in many other parts of the world".

Furthermore, South Africa was ranked the leading emerging economy in Africa according to the Emerging Markets Opportunity Index based on research by international advisory firm Grant Thornton. [20] It was the only country on the continent to be ranked in the top 15 worldwide. Overall South Africa ranked 14th out of 26 emerging markets with China, India and Russia being the top three.

One can thus easily see the overwhelming advantage South Africa has in Africa, and its competitive ranking world wide.

1.2 Product Diversity

The South African economy also has an advantage of being one of the most diverse in Africa. The GDP contributors are roughly:

- Agriculture: 2.2%
- Mining: 10%
- Manufacturing: 12.3%
- Electricity and water: 2.6%
- Construction: 3.9%
- Wholesale, retail and motor trade: 16.2%
- Transport, storage and communication: 9%
- Finance, real estate and business services: 21.2%
- Government services: 16.7%
- Personal services: 5.9%

One can visualize this in Figure 1, wherethe South African economy is shown to be a leader in economic diversification.

Trade and industrial policies promote South African firms to explore new areas of growth and improve global competitiveness. Infrastructure, mining, finance and retail developments in the entirety of Africa are also helping to fuel a growth of the entire continent. [5]

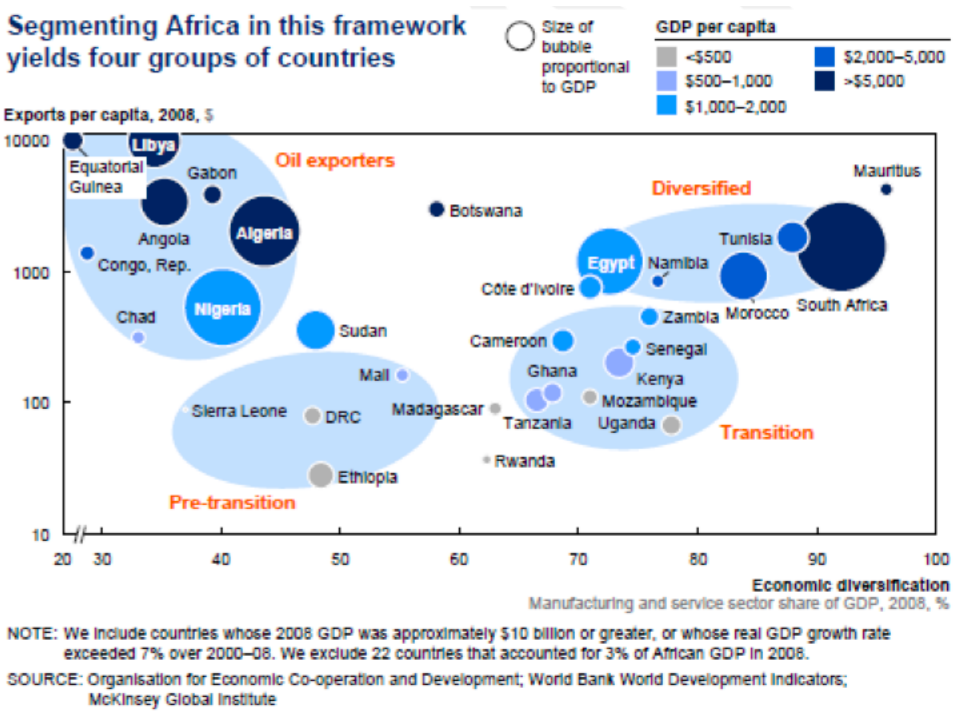

Figure 1: *Diversity*

1.3 Legal Protections

On top of a healthy economic climate, South Africa is rated very highly in terms of legal protections, ensuring a safer investment climate.

In the World Economic Forum's (WEF) report, South Africa was described as 17th in efficiency of legal framework, 20th in intellectual property protection, 26th in term of property rights, and 27th in terms of judicial independence. The country was also rated 1st for regulation of securities exchanges, 2nd for soundness of banks and 3rd for financing through the local equity market. [15]

South Africa's economy is regarded as "moderately free", being graded as the 74th freest economy of 177 countries. The economic freedom score was 61.8 which was slightly higher than the world average of 59.6, and the regional average of 53.7. [10]

South Africa is ranked 69th out of 174 countries on Transparency International's Corruption Perceptions Index 2012.[9] South Africa scored 43, where scores ranged from 90 to 8.

1.4 Business Infastructure

Even more importantly, South Africa has a robust business infastructure, that can healthily support both budding industries and large firms.

According to the World Bank, South Africa was rated 1st in terms of getting credit, 10th in terms of protecting investors, and 32nd in terms of payment of taxes. [2] It was ranked 39th for construction permits and 53rd for starting a business. Doing business in South Africa was ranked 34 from 183 countries surveyed in 2010.

The institutions of South Africa were rated very highly. They ranked 1st for auditing and reporting standards, 1st for efficacy of corporate boards, 2nd in the protection of minority shareholders' interests.[15]

South Africa also rated very highly in terms of business sophistication, ranking 38th overall, and innovation, ranking 42nd overall.

1.5 Social Development

And finally South Africa ranks highly in terms of social development, speaking to the great stability of the country and the people.

While in terms of Freedom of Press, South Africa dropped out of the top 50, according to Reporters Without borders Press Freedom Index in 2013. It was rated 52nd of 179 countries. [3]

South Africa was rated 16 out of 135 in the 2012 Global Gender Gap Index. [8] South Africa is the second-highest ranking African country, after Lesotho at 14. the only other African country in the top 20, recognised as having no gap in education and health. Mozambique (23), Burundi (24) and Uganda (28) complete Africa's top five.

1.6 Challenges

Whle South Africa has a wealth of opportunities and growth, it does have challenges. The National Treasury stresses that development is not just the pursuit of growth, but also the establishment of social justice and equality.

The country currently shows weakness in infastructure, labor market effuciency, and security and health of the workforce; weaknesses also include trading across borders and getting electricity.

South Africa's IT infastructure is also highly lacking. South Africa ranks 47th out of 66 countries measured in the 2011 IT industry competitiveness index, with a score of 35 out of a possible 100.[4] According to the study, South Africa performs best in the areas associated with the legal environment where it scored 64.5 out of a possible 100, but the country needs work on the IT infastructure with a very low score of 17.5. This is indicative of low quality networks and lack of telecommunications libralization.

The largest hurdle for South Africa remains the unemployment rate of over 25%, and thus it remains the governments priority. [22] However, these challenges also display opportunities for the savy investor. South Africa as such has launched The New Growth Plan (NGP), mapping the Industrial Policy Action Plan, which proposes multisectoral interventions across agriculture, mining, manufacturing, tourism and other high-level services to create substantial employment including 5 million jobs. The plan includes:

- Investing in and improving infrastructure, as well as supporting industries such as mining and agriculture;
- Diversifying exports;
- Strengthening links to faster-growing economies;
- Enacting reforms to lower the cost of doing business;
- Reducing constraints to growth in various sectors;
- Moving to more efficient and climate-friendly production systems; and
- Encouraging entrepreneurship and innovation. [22]

The effort has been driven by massive govenment investment. South Africa has spendt R642 billion on infastructure development over the past three years, and plans to spend more than R827 billion over the next three. Money will be spent on improving the energy sector to double electricity generation, on transport and logistics, hospitals and clinics, and on education infrastructure as an investment in human capital.

One of the most important proposals in the NGP is the creation of a lower-carbon economy, as both a job genorator as well as a spur for industrial development. President Jacob Zuma has committed South Africa to slowing its growth in greenhouse gas emissions by 34% in 2020, and by 42% by 2025. The government has already approved 19 wind, solar, and hydropower proposals worth R73 million. [18]

The government has also planned the Green Economic Accord (GEA), which plans to create 300,000 jobs over 10 years in concert with the NGP. In 2012 the Treasury allocated R800 million over two years to this effort under the name of the Green Fund. [18]

So while challenges for the country arise, they also represent an opportunity for investment, in a country that is robust and stable.

2 Investment in South Africa

While South Africa has a GDP of $309bn, a World Economic Forum's (WEF) Global Cometitiveness ranking of 54th of 139 nations, a World Bank Group (WBG) Doining Business ranking of 34 of 183 nations, and a labor cost 1/3 of Europe, and one of the most sophisticated and promising emerging markets globally, many more factors comprise whether this opportunity is worth while or not. How is investment in South Africa rated? What incentives does the government provide? What are the means of investment? These questions will be answered in this section.

2.1 Ratings of South Africa

South Africa is a G20 country and as such, is considered a low risk enviornment, especially for investors seeking entrance to Africa. The government activly seeks to encourage not only comercial activity, but also foreign capital. Foreign Direct Investment (FDI) in South Africa has totaled more than R42 billion in 2011. South Africa's principal trading partners include: China, the United States, Germany, Japan, and the United Kingdom. Exports include metals and minerals, while imports are princaplly machinery and transportation.

South Africa is the highest ranked African country. It is third place among the BRICS economies accortind to the WEF's Global Comtetitiveness Index.

While the ratings are overall positive, in January 2013 Fitch cut South Africa's sovereign credit rating to BBB. The reasons being subdued growth which might affect public spending and exacerbate social and politial tensions. Unrest in the mining sector led to ratings of BAA1 from Moody's and BBB from Standard & Poor's. [12]

2.2 National Incentives

South Africa has vibrant investment incentive programs for investors looking to put money in South Africa, and these programs help make South Africa a great investment opportunity.

Both South Africa's Department of Trade and Indrustry (DTI) and Industrial Development Corporation (IDC) are promoting private sector development. The incentive falls under three categories:

1. Research and development incentives for private sector businesses which invest themselves in the creation and improvement of products and services.
2. Capital expenditure incentives for companies looking for expansion.
3. Incentives for development of increased competitiveness, sustainable growth, and sector advancement.

For specificity the incentives come in the form of:

- Grants for R&D projects;
- R&D tax incentives;
- Grants for feasibility studies;
- The Technology and Human Resources in Industry Programme (THRIP);
- The SEDA technology programme;
- A technology venture capital fund;
- R&D in the automotive industry;
- Capital incentives for small and large industry, critical infrastructure, industrial development zones, capital expenditure in the automotive industry, capital expenditure in the textiles industry, and manufacturing competitiveness enhancement;
- Competitiveness enhancement incentives are for business process services (outsourcing), black business supplier development, export marketing and investment assistance, sector specific assistance, film production, competitiveness in the clothing and textiles industries, co-operatives, female economic empowerment through the Bavumile and Isivande Women's Fund, and manufacturing competitiveness enhancement.[6]

Such investment incentives can be invauluable for investors looking into the area.

2.3 Department of Trade and Industry

More specificaly, the Department of Trade and Industery (DTI) offers many services for investors looking at South Africa. The DTI offers opportunities and incentives for investors and business facilitation for foreigners seeking to do business in South Africa. The DTI also offers coordination and connections for other African investment promotion agences.

One of the primary objectives of the DTI is to boost investment in South Africa, and thusly works to promote beneficial enviornments for investors. Specifically the Trade and Investment South Africa (TISA) division has the aim to increase export capacity and support direct investment. The DTI works with a suite of other agencies to accomplish its goals. [23]

2.4 Industrial Development Corporation

In addition, the Industrial Development Corporation (IDC) promotes industrial development in South Africa, offering a variety of financing options. The IDC is a Development Finance Institution entirely owned by the South African Government with total assets of R115 billion.

The IDC mission is to be "the primary driving force of commercially sustainable industrial development and innovation to the benefit of South Africa and the rest of the African continent."

The primary focus is to facilitate sustainable direct and indirect employment, while the secondary foci are:

- imporve regional equality
- develop South African rural areas
- develop poorer provinces
- grow entrepreneurial and Small to Medium Enterprise sectors

- enviornmentally sustainable growth
- growing sectoral diversity and increased localisation of production
- impact growing black communities and black industrialists

The venues where the IDC pours its money into are:

- The green economy
- Agricultural value change
- Manufacturing activities
- Logistics, infastructure and cross-sector projects
- Tourism
- The mining value chain

On a final note, the IDC is self funding, thus uses exits from mature investments (dividends and capital growth) to cross subsidise higher risk activities and the loan profile. This strongly alludes to the high success rate of its the loan programs, for an organizaiton of this type to be self funding is a commendable feat. It finances endeavors using either debt, equity, quasi-equity, guarantees, trade finance, bridging finance, or venture capital.

2.5 Other Agencies

South Africa has a plethora of other regional and national institutions that seek to incentivise and foster investment in South Africa.

These agencies include the National Empowerment Fund promotes and empowers black economic participation. The Small Enterprise Development Agency (SEDA) has a mission to develop and support small enterprises in South Africa. The Free State Development Corporation provides a broad range of business servicesthat focus on small, medium, and micro enterprises. Various Provincial Investment Promotion Agencies also trive in the fabric of South Africa.

The other agencies include:

- The Eastern Cape: Eastern Cape Development Corporation
- Limpopo Province: Trade and Investment Limpopo
- Mpumalanga Province: Mpumalanga Economic Growth Agency
- The Northern Cape: Northern Cape Economic Development Agency
- North West Province: Invest North West
- The Western Cape: Western Cape Investment and Trade Promotion Agency
- Gauteng and the rest of Africa:Gauteng Growth and Development Agency

These incentives abound in South Africa. Listed here are only a fraction, but should serve to convince, that South Africa is packed with investment incentive opportunities.

2.6 Johannesburg Stock Exchange

While foriegn direct investment is a definite option for investment in South Africa, this section's purpose is to illuminate other venues of investment.

South Africa boasts a mature capital market that serves as a rich investment vehicle in South Africa and the wider continent. The Johannesburg Stock Exchange (JSE) is currently the world's 19th largest exchange offering equities, bonds, currency, and derivatives of equities and commodities. Current changes are listed below in Figure 2

The JSE was formed in 1887 for facilitation of the first South African gold rush, and in 1947, the JSE joined the World Federation of Exchanges. In 2003 the JSE launched AltX, an alternative exchange for small and mid-sized listings, in 2001 JSE acquired the South African Futures Exchange, and in 2009 the JSE aquired the Bond Exchange of South Africa (BESA) to complete its current state.

The JSE equity market has a market capitalization of $929 billion by the end of 2012 and is the largest exchange on the continent. The JSE is comprised of approximately 400 companies.

The JSE acts as a frontline regulator and is supervised by the Financial Services Board (FSB). Soon South Africa will change its regulation to a twin peaks model of oversight, meaning both the South African Reserve Bank (SARB) and the FSB will be dual regulators. [24]

3 Energy in South Africa

Deputy President Kgalema Motlanthe, during the keynote address at the South African Green Energy Youth Summit said, "South Africa, with its vast renewable energy resources, has the potential to become one of the world's fastest growing economic

Indices as at 20 August 2013

Index	Week move	YTD	Close	Index	Week move	YTD	Close
JSE All Share	3.10%	9.66%	43 042	DJIA	-2.23%	15.09%	15 081
JSE Top 40	3.51%	11.00%	38 624	S&P 500	-2.10%	16.10%	1 656
JSE Resources	7.95%	-2.05%	27 736	NASDAQ	-1.57%	19.32%	3 603
JSE Financials	1.19%	5.71%	31 074	FTSE 100	-1.27%	10.21%	6 500
JSE Industrials	1.38%	18.60%	55 684	Paris CAC 40	1.16%	13.26%	4 124
JSE SA Listed Property	-0.72%	0.69%	497	Frankfurt DAX	0.64%	10.24%	8 392
Rand / $*	2.71%	19.82%	R 10.06	Nikkei 225	0.26%	31.31%	13 650
Rand / £*	3.84%	15.76%	R 15.76	MSCI World $	-1.11%	14.79%	5 451
Rand / €*	-0.05%	18.33%	R 13.09				

* A positive value indicates rand depreciation

Economic indicators as at 20 August 2013

Repo Rate	5.00%	Oil Brent Spot	$109.59
Prime Rate	8.50%	Gold (London)	$1 369.25
SA 10-year Bond	8.00%	US Fed Fund Rate	0.25%
PPI Inflation	4.90%	Euro Area REFI	0.50%
CPI inflation	5.50%	UK REPO rate	0.50%
		US 10-year Treasury bond	2.82%

Figure 2: *Indicies*

hubs." But this does not mean that South Africa plans to abandon other fuels as sources of energy. He said, "On the contrary, we intend to develop our renewable energy resources not only to diversify our energy mix, without preferring one energy carrier over another, but also to take full advantage of our endowment in other natural resources."

Such an endowment includes coal, one of the best solar resources in the world, abundant shale, natural gas, and a large supply of uranium.

Motlanthe stressed the green energy route and searching for clean coal technologies which could open regional development of the Northern Cape. In addition, Motlanthe said, there was the possibility of interconnecting the hydropower potential of the Southern African Development Community, particularly in Mozambique and the Democratic Republic of the Congo, stepping up exploration for shale gas in the Karoo, and harnessing natural gas discoveries in Tanzania and Mozambique.

On a final note he said, "Stemming from this reality is the imperative for us to continue pursuing a developmental state which is rich with cutting-edge technologies and innovation alike, while we concentrate on strategic spaces such as niche industries." [13]

By this point in the article, one is hopefully convinced that South Africa is a viable and potentially fruitful investment opportunity. However, while South Africa as a whole may be a rich opportunity, one of the most promising of the sector in South Africa is the energy sector. This section will illuminate that promise.

3.1 Current Condition

In 2010, South Africas electricity production measured 268,100 GWh, ranking the country fifteenth (15th) in the world, and almost all of this production was consumed within the country. Eskom, South Africas government-owned utilities company, generates 95% of the countrys electricity. The majority of the countrys power supply, around 77%, is derived from coal-fired power plants, according to South Africas Department of Minerals and Energy. Furthermore, when added together, the traditional fossil fuel sources of oil, coal, and natural gas provided 94.1% of South Africas electricity in 2009making it clear that it is still one of the worlds biggest users of high-emission dirty fuels. [1]

Still, significant renewable resources have been already put into action and some very large projects are underway. Hydropower is South Africas largest power provider in the renewable segment, with seven major plants projected to provide 3,514 mW of capacity in 2012; the largest of these plants, the Ingula Pumped Storage Scheme, is to be completed in late 2012 and to provide 1332 mW. Wind power is in its infancy, with only three small-scale wind farms currently operational and providing 8.2 mW. However, South Africas first large scale wind project, the Sera Wind Farm, is currently under construction and expected to generate 100 mW by its completion in 2013.

Finally, while current generation from solar sources is almost null and void, the sector is set to experience rapid growth. One of the soonest-to-be-completed of these projects, a 50 mW solar thermal plant slated to be developed in South Africas Northern Cape Province, is moving forward under the control of a consortium of investors headed by the Spanish companies SENER, Acciona, and TSK.

Demand for electricity will continue to grow rapidly in South Africa in the coming years, and demand will soon outstrip supply unless significant new plant construction is undertaken. In 2008 the country was plagued by rolling blackouts based on surges in demand, and while blackouts have become less frequent, Eskom still warns that the electricity grid remains under strain . In 2010, Eskom announced that South Africa would need to add 50,000 MW of new generating capacity in the next twenty years in order to keep up with growing demand, and it was itself planning to invest $62.5 billion in new power plants over the next seven years.

3.2 Investment focus on Energy

Right now is a good time to start powering sub-Saharan Africa. The Obama administration has started its Power Africa initiative which will direction government resources to help develop the sub-Saharan African energy sector.

During his recent trip to Africa, President Obama announce plans to direct up to $7billion into sub-Saharan Africa. The plan aims to bring over 10GW of "cleaner, more efficient" electricity to the region which will power over 20 million homes. The funding will principally come in the form of federal loans, loan guarantees, political risk insurance and grant programs.

These programs lead by the two US agencies, Export-Import Bank and the Overseas Private Investment Corporation, seek to be ancillary with financing, technical assistance, energy reliability, project implementation expediency, and risk mitigation.

Some examples of agencies and their commitments are listed here:

Export-Import Bank $5bilion

Millennium Challenge Corporation $1bilion

US Agency for International Development $285million

OPIC $20million

US African Development Foundation $2million dollar off grid challenge, and $100,000 dollar grants.

Heirs Holdingd $2.5bilion

General Electric 5GW

Symbion Power $1.8bilion

The African Finance Corporation $250million

Pan African Infrastructure Fund $500million

Standard Chartered Bank $2bilion

Aldwych International $1.1bilion

There is obviously a great deal of money committed, and this is not surprising. The International Monetary Fund forecast the seven of the 10 fastes growing countries in the world would be in Africa. The World Bank expects Africa to grow faster than the world average in the coming years. And all of this growth must depend upon reliable energy.

Because of this focus, Africa has been able to develop facilities to meet this investment demand. Countries have streamlined regulations, limited curruption, and opened paths for foreign-domestic cooperation.

This plan, however, is in direct competition with that of other supplier countries, most importantly China. Chinese investments in Afrcia have grown by a factor of 30 since 2005. China has already completed $20billion dollars in transactions in Africa. But the Chinese style of investment stands in stark contrast to the Western style.

China has a non-interventionist investment model, and has a more hands off approach for how home countries manage in-bound investments. China often ties loans to Chinese goods and services and even Chinese labor. Thus, while the USA and other OECD members have committed to the OECD Arrangement on Export Credits to regulate terms, China has declined to join the arrangement. Thus 40% of China'a global foreign aid are in countries where China also provides financing, services, materials, and labor on financing terms against the OECD Arrangement.

So the fundamental differance is the type of bid offered. Chinese bidders often win with lowest bid, but have shown a tendency to deliver facilities with correspondingly low quality (and those that may have high maintainence). The US and other countries instead try to promote "life-cycle costing" and best value, rather than just lowest price. [7]

Regardless, the world is focusing its investments towards energy in Africa, and for good reason.

3.3 IDC Programs

The IDC activly seeks to support the green economy. The IDC supports the Green Economy through investments in:

1. Clean production
2. Energy efficiency
   - Transport Efficiency
   - Industrial Efficiency
   - Heat and Electric
3. Clean Energy
   - Wind Power
   - Hydro Power
   - Photo Voltaic
   - Concentrated Solar Power
4. Emission and pollution control
   - Air pollution control
   - Waste Management
   - Recycling
   - Clean Stoves
5. Waste reduction
   - Waste to Energy
6. Bio Fuels
   - Bio Ethanol
   - Bio Diesel

In order to fight the energy crisis in South Africa the IDC is targeting R98.5bn in investment over the next five years starting in 2011 ending in 2016. These investments are distributed into various forms of energy. The distribution is:

R28.5bn Wind

R15.0bn Solar CSP

R52.5bn Solar PV

R2.5bn Other

This leaves over R400bn left to invest. By 2030 the IDC plans to invest R500bn.

3.4 Department of Energy Programs

The Department of Energy also seeks to promote this investment. The Department of Energy under tier Integrated Resource Plan has a plan to incorporate over 42.5GW into the South African Grid by 2030. Currently the Department of Energy is in the middle of their bidding process with over 9GW left in the second determination. The allocations in the following years are in Figure 3. [11]

The Integrated Resource Plan (IRP) for South Africa, initiated by the Department of Energy (DoE) after a first round of public participation in June 2010, led to a Revised Balanced Scenario (RBS) that was published in October 2010. It laid out the proposed generation new build fleet for South Africa for the period 2010 to 2030. This scenario was derived based on the cost-optimal solution for new build options (considering the direct costs of new build power plants), which was then balanced in accordance with qualitative measures such as local job creation and environmental considerations. In addition to all existing and committed power plants, the RBS included a nuclear fleet of 9.6 GW; 6.3 GW of coal; 11.4 GW of renewables; and 11.0 GW of other generation sources.

During the second round of public participation in November and December 2010, solar photovoltaic (PV), concentrated solar power (CSP) and wind options were particularly emphasized and it was suggested that each of them should have an appropriate developmental plan rather than combining them as a general renewables project.

Additional cost-optimal scenarios were generated based on the changes. The outcomes of these scenarios, in conjunction with the following policy considerations, led to the Policy-Adjusted IRP.

This Policy-Adjusted IRP is recommended for adoption by Cabinet and for subsequent promulgation as the final IRP. This proposal is a confirmation of the RBS in that it ensures security of supply. It is a major step towards building local industry clusters and assists in fulfilling South Africas commitments to mitigating climate change as expressed at the Copenhagen climate change summit. The Policy-Adjusted IRP includes the same amount of coal and nuclear new builds as the RBS, while reflecting recent developments with respect to prices for renewables. In addition to all existing and committed power plants (including 10 GW committed coal), the plan includes 9.6 GW of nuclear; 6.3 GW of coal; 17.8 GW of renewables; and 8.9 GW of other generation sources.

Technology	MW Second Determination December 2012	4th Bid Submission Phase August 2014	5th Bid Submission Phase August 2015
Onshore wind	1 470 MW	600 MW	600 MW
Solar photovoltaic	1 075 MW	400 MW	400 MW
Concentrated solar power	400 MW	MW remaining from window 3	
Small hydro (≤ 40MW)	60 MW	60 MW	MW remaining from window 4
Landfill gas		0.0 MW	MW remaining from window 4
Biomass	47.5 MW	47.5 MW	MW remaining from window 4
Biogas	47.5 MW	47.5 MW	MW remaining from window 4
Small projects	100 MW		Separate programme RFP to be release in April 2013
Total	**3 200 MW**	**1 155 MW**	**1 000 MW**

Figure 3: *Second Determination*

3.5 Other Programs

Apart from Funding directly from such agencies as the IDC, South Africa has a host of other funding opportunities. The BEE offers lending to community trusts or BBE shareholders to invest. The Green Energy Efficiency Fund offers reduced interest loans, and long repayment to stimulate energy efficiency. Loans are up to R50 million at 2% interest for 15 years to companies that are large enough (R55million in assets) and promote green energy. [21]

As one of the major financial supports to encourage renewables investment, Renewable Energy Market Transformation (REMT) was initiated in April 2008 trough the agreement reached by the South African government and the World Bank, in which the Development Bank of South Africa (DBSA) was appointed as the official implementing agency of the agreement.

Besides its original target of removing barriers and minimizing costs of installing renewable energy, REMT currently works by dispensing grants to support the preparation and financing of sustainable energy projects in two areas: Renewable Energy Power Generation (REPG) and Solar Water Heating (SWH). A total of $2 million (US) has already been budgeted for allocation, with $1 million of those funds having been allocated to REPG initiatives and the other $1 million allocated to SWH initiatives. REMT welcomes applications from both public and private sector entities and will distribute to each qualifying firm up to $200,000 for REPG matching grants, $100,000 for SWH matching grants, and $50,000 for SWH performance grants. [19]

3.6 Requst for Proposals

These organizations overview the application process. This process is three steps: Request for Proposals (RFP), Power Purchase Agreement, and Implementation Agreement.

The RFP has three parts: an initial requirement, qualification over various parameters including price and enviornmental concerns, and the comparative evaluation which then compares based on many other factors. The bids are evaluated roughly on Price (70%) and Economic Development (30%). But all proposals must have proven technologies, not exceed price caps as well as follow various other regulations.

The evaluation process stresses on these issues:

- Enviornment
- Land
- Commercial/Legal
- Economic Development
- Financial
- Technical

To comply with all of these pre-requisits generally companies must comply with grid connection, enviornment impact assessment, geotechnical survey, financial viability assessments, and community impact assessment. Criteria can be generally described below in Figure 4.

Ultimately much of South Africa's energy infastructure still needs development and the Minister of Energy has made the further determination of 3,200MW in December 2012. These come in the form of:

Wind 1,470MW

Solar CSP 400MW

Solar PV 1,075MW

Other 255

4 Resources

4.1 Legal and Audit

Predominant legal firms in South Africa are:

- Werksmans Attorneys
- Edward Nathan Sonnenbergs (ENS), Africa's largest law firm
- Norton Rose Fulbright, a top 10 global legal practice
- Cliffe Dekker Hofmeyr, affiliated with DLA Piper
- Webber Wentzel Bowens, in association with Linklaters
- Bowman Gilfillan

Predominent audit firms in South Africa are:

- BDO Spencer Steward
- Deloitte & Touche
- Ernst & Young
- Grant Thornton Kessel Feinstein
- KPMG
- PKF South Africa
- Price Waterhouse Coopers
- SekelaXabiso

4.2 Notable Investment Incentives

Government attempts to attract investment in economic activity by creating a stable macro-economic environment. Success has been achieved with regard to issues such as fiscal stability, low inflation, and a commitment to privatisation and the development of free enterprise. Most incentives for investment are in the form of non-tax incentives. Since the 1994 elections, South Africa has attracted more than R30 billion in the form of foreign direct investment, whilst the value of the country's fixed capital stock has increased by R131 billion (at current prices).

Investment South Africa (ISA) is an agency of the DTI that plays a role in marketing investment projects to potential investors. ISA has an online investor database, knowledge of incentives, and a qualified team of people to help potential investors through the regulatory and legislative requirements of investing in South Africa. ISA also maintains communication with provincial development agencies. The provincial development agencies have been set up by the provincial governments to promote the economic development of their provinces. These agencies have emphasised the attraction of investment as a key strategy in provincial economic development. They play a key role in developing the skills and institutional infrastructure that service industrialisation.

- Incentives apply equally to domestic and foreign investors.
- The major goals of incentives are employment creation, small business development, industrial development, exports, spatial development and the upliftment of previously disadvantaged people.
- The Department of Trade and Industry (DTI) and the Industrial Development Corporation largely administer non-tax incentives.
- Tax incentives are kept to a minimum.
- Tariffs protect local industry, but the average tariff levels have been lowered significantly since 1994 in order to comply with the GATT.
- Export incentives involve an export marketing and investment assistance scheme; export credit and foreign investment reinsurance, and targeting capital exports.

Gate Keeping Criteria	Wind	Solar Photovoltaic	Concentrated Solar	Hydro
- Project size (min 1MW)	< 140MW	< 75MW	<100MW	<10MW
- Resource measurement	12-month on site	Satellite data	12-month on site	10-years Hydrology
Price Caps	**R1.15/kWh**	**R2.85/kWh**	**R2.85/kWh**	**R1.03/kWh**
- Environmental Approval	ROD required	ROD required	ROD required	ROD required
- **Commercial Operation Date (COD) for REPP 1**	June 2014	June 2014	June 2015	June 2014
- **COD for REPP 2-5**	Dec 2016	Dec 2016	Dec 2016	Dec 2016
- Local content	25%	35%	25% -Storage 35% - No Storage	25%
- BEE/BBBEE Ownership	12% - 30%	20% - 40%	10% - 30%	20% - 30%
- Community Trust	2.5% - 5.0%	2.5% - 5.0%	2.5% - 5.0%	2.5% - 5.0%

Figure 4: *Criteria*

- A total of eleven Spatial Development Initiatives have been identified in South Africa, some of which extend into other SADC countries.
- A number of specific industry sectors and lead projects have been identified under the spatial development strategy.
- Government provides support for technology development.

Such general incentives may include:

- Electricity tariff concessions: companies may negotiate special tariffs with the relevant local authority and/or the Electricity Supply Commission (Eskom).
- Support programme for industrial innovation (SPII): for the development of significant technological advances and that possess a commercial advantage over existing products. Support is in the form of a grant of 50% of actual direct costs incurred in development activity up to a maximum grant amount of R1.5 million per project.
- Technology and Human Resources for Industry Programme (THRIP): THRIP invests in research projects where project leaders are on the academic staff of South African higher education institutions.
- Rebate provisions: Available to all manufacturing industries. Provision exists for rebate or drawback of certain duties applicable to imported goods, raw material and components used in manufacturing, processing or for export.
- Incentives for the small business sector
- Small/Medium Manufacturing Development Programme (SMMDP): This DTI programme is available to local and foreign firms investing up to R3 million in land, buildings, plant and equipment to encourage small and medium-sized manufacturing and to facilitate increased employment creation.
- Critical Infrastructure Programme (CIP): The Critical Infrastructure Programme (CIP) is a non-refundable scheme that covers between 10% and 30% of the total development costs of the qualifying infrastructure.

The DTI has also decided to opt for Industrial Development Zones (IDZs). They are designed to attract Foreign Direct Investment (FDI) for export-oriented manufacturing production and will be located within designated SDI regions so as to maximise the natural linkages between these two programmes.The incentives the DTI will offer are targeted at those areas identified as critical to foreign investors.

These include the:

- Institutional framework
- Administrative support
- Advanced labour relations
- Incentive structure
- Regulatory mechanisms

There are also two major export incentive schemes are operational in South Africa:

- The Export Marketing and Investment Assistance Scheme (EMIA): The purpose of assistance under the EMIA scheme is to partially compensate exporters for certain costs incurred in respect of activities aimed at developing export markets.
- Export Credit and Foreign Investment Reinsurance (ECRS): The DTI recognises that exporters face multiple risks when pursuing export opportunities. The objective of Export Credit and Foreign Investment Reinsurance is to promote trade with countries outside the Republic of South Africa by making provision for reinsurance with the Government of the Republic for insurance contracts in connection with export transactions and export credit loans or similar facilities in coherence with suchlike transactions.

As well as a plethora of regional incentives:

- Platinum SDI near Rustenburg, North-West Province (industry, agriculture, tourism).
- Gauteng SDI (multi-sectoral).
- Phalaborwa SDI (mining, agriculture, tourism).
- Maputo Development Corridor (road building and multi-sectoral).
- Lubombo SDI in KwaZulu-Natal (agri-tourism).
- Richards Bay SDI (mining, industry, tourism).
- KwaZulu-Natal SDI in Durban (industrial, tourism).
- Wild Coast SDI (agri-tourism).
- Fish River SDI (industrial).
- West Coast Investment Initiative (tourism, fisheries, agriculture, industry).
- Coast to Coast SDI, linking Johannesburg with Windhoek and Walvis Bay in Namibia (road-building and multi-sectoral).

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