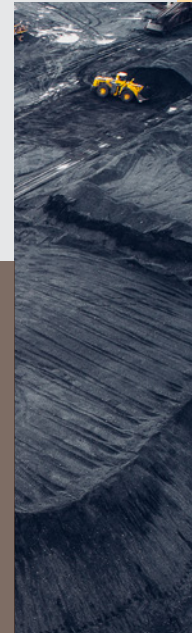




BOTSWANA
INVESTMENT
& TRADE CENTRE

INVESTMENT OPPORTUNITIES IN THE COAL SECTOR



OVERVIEW OF BOTSWANA

Botswana holds a strategic position within the Southern African Development Community (SADC), a region encompassing over 293 million individuals. With a strong foundation of good governance and an unwavering commitment to combating corruption, Botswana stands out as one of Africa's most stable and attractive economies for investors. While its economy has historically relied on abundant natural resources, particularly diamonds, the country has earned widespread acclaim as a success story in terms of its developmental progress on the continent.

Botswana has fostered a conducive environment for capital and business growth, aligning with its strategic objective of diversifying the economy into value-adding sectors that cater to the rapidly emerging regional market. Consequently, the country ranks as the fourth most competitive economy in Africa and is recognized as one of the continent's easiest destinations for conducting business.

Botswana: Quick Facts

Indicator	
Population	2.3 million
Area	581,730 km ²
Capital	Gaborone
Business language	English
GDP/capita	US\$ 6,581 (2022)
Nominal GDP	US\$28.42 (2022)
GDP growth	5.8% (2022) 4.0% (2023) 5.1% (2024)
Change in inflation Rate	12.2% (2022)

Source: [Statistics Botswana, 2023](#), [Transparency International, 2023](#) & [BITC](#)



OVERVIEW OF THE BOTSWANA COAL SECTOR

The Botswana mining sector ranks among the highest in Africa on investment returns and policy perception. Botswana remains at the top of BMI's Mining Risk/Reward Index with a score of 59.6 out of 100 in 2016. The country's high score in the index is due in large part to the difficulties being experienced by rival mining markets. The country is expected to remain one of the best regulated and strongest performing in mining in Africa over the coming years as the country's overall position was 13 out of the 122 jurisdictions. This sector is led by the diamond industry, though other metals and minerals are increasing in prominence, including Coal, Soda Ash, Copper and Nickel. The mining sector's attractiveness is demonstrated by the presence of high profile international operators that have invested in Botswana, taking advantage of the conducive mining investment climate in the country.

COAL SECTOR IN BOTSWANA

Botswana, the second largest country after South Africa, has vast untapped semi-bituminous coal resources, estimated at 212,868 million tons, with reserves comprising 50-60% of this resource, primarily found in the Karoo Basin.

Botswana has sparse coalfields in various regions, with deposits at Letlhakeng and Dutoitspan exceeding 70,000 tons each. The eastern side has shallow coal seams for cost-effective open-pit mining, while the western side has deep seams with Coal Bed Methane potential. Botswana's coal resources are of high quality and suitable for export markets. The eastern side is well-positioned with existing railway lines, power, roads, and planned railways to ports, making coal mining more feasible.

COAL INVESTMENT OPPORTUNITIES

Botswana will remain attractive to foreign investment, particularly from China, as China will continue to seek to plug its supply deficit in copper and coal. Given our expectation that mining costs in South Africa will rise considerably over coming years, Botswana could gain a regional competitive advantage.



Botswana is set to export coal to the seaborne market due to strong demand growth in China and India. In the medium term, coal will be used for domestic electricity generation, and the government is exploring coal beneficiation opportunities.

Opportunity 1: Exploration & Mining For Export

Botswana has extensive, and largely unexploited, coal resources which when developed can form part of the Government's effort to diversify the economy.

- The demand for coal-for-energy has increased significantly nationally, regionally and internationally
- A number of coal licenses have already been issued to some investors. Additional licenses may be granted for further exploration and mining under the new tendering dispensation
- 24 new mines are possible to open, possibly stepping production up to 100 million tons /yr.
- Coalwashing to improve quality for export markets and residuals (middling) for power generation
- Quality of Botswana's coal is suitable for export market
 - It is in-line with international requirements
 - Might also be accepted in Europe market
 - Compares favourably with South African Exports
- The market studies concluded that the global demand for seaborne thermal coal will continue to grow strongly as domestic demand in a number of key countries outstrips supply.
- The growth in demand will be driven by the developing nations of Asia, especially China and India. Demand for seaborne thermal coal grew from 250 Mt in 1995 to 650 Mt by 2010, an annual growth rate of nearly 6.7%.
- This growth is expected to continue, with demand reaching nearly 1,100 Mt by 2025.
- Europe will continue to be a large importer of coal but only limited growth in demand is expected.

Opportunity 2: Energy Production

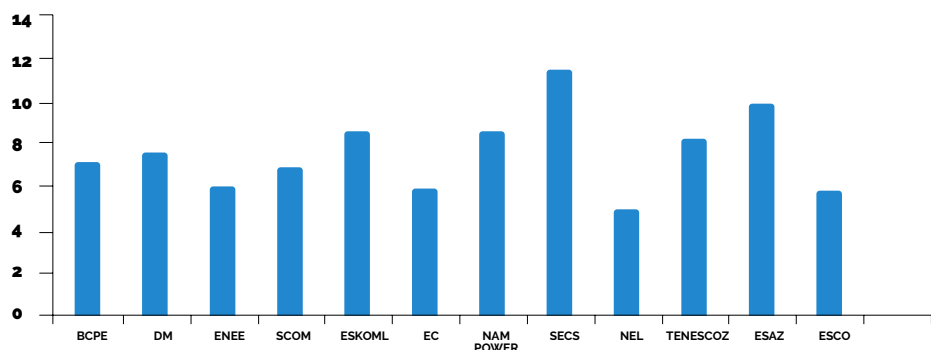
(a) Electricity Generation

The Botswana Government has introduced legislation allowing independent power producers to participate in the electricity sector, focusing on coal-fired power due to its abundant coal reserves and cheap fuel. The Zizabona Power Interconnector will increase cross-border electricity trade with Zambia, Zimbabwe, Botswana, and Namibia. Botswana has a 77% overall electrification rate and a 2.7/7 quality of electricity supply.

Botswana has a major opportunity of becoming an energy hub for the region; as the region is in high demand of power. There are already ongoing projects such as refurbishment and extension of existing Morupule Power Station and coal bed-methane projects in exploration. Opportunities to build Greenfield coal fired power stations are abundant for domestic and regional power requirements in SADC, COMESA and EAC. Below is an indication of the current high demand for electricity.

No.C	Country	Committed Generation Capacity, MW				
	Angola	389	640	550	1,246	2,825
1.	Botswana	600	-	-	300	900
2.	DRC	55	-	580	-	635
3.	Lesotho	-	-	35	-	35
4.	Malawi	64	-	-	-	64
5.	Mozambique	-	150	300	300	750
6.	Namibia	-	-	120	50	170
7.	RSA	923	3,105	2,543	1,322	7,893
8.	Swaziland	-	-	-	-	-
9.	Tanzania	60	160	500	1,110	1,830
10.	Zambia	230	180	435	494	1,339
11.	Zimbabwe	-	300	30	300	630

Average Electricity Tariff, USc/kWh



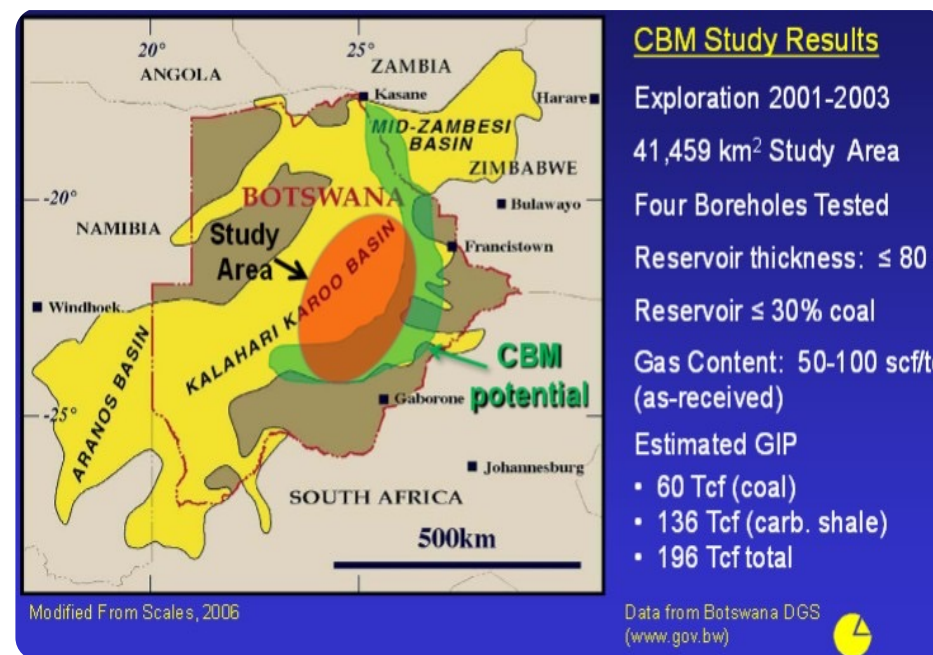
Coal-fired generating technologies & Investment Cost

Country	Technology	Net Capacity (MWe)	Electrical Conversion Efficiency (%)	Overnight Cost (USD/kWe)	Investment Cost (USD/kWe)		
					3%	7%	10%
Belgium	Ultra Super Critical	750	46	2.307	2.448	2.448	2.807
Germany	Hard Coal	700	46	1.643	1.744	1.887	1.999
	Lignite	900	43	2.054	2.180	2.358	2.499
Japan	Ultra Super Critical	704	41	2.496	2.649	2.866	3.037
Korea	Pulverised (PC1000)	960	43	1.218	1.289	1.386	1.463
	Pulverised (PC800)	766	41	1.252	1.317	1.407	1.477
Netherlands	Ultra Super Critical	1070	46	1.620	1.720	1.860	1.971
	Ultra Super Critical	777	46	2.746	2.914	3.152	3.341
	Ultra Super Critical	1554	46	2.660	2.823	3.054	3.237
Portugal	Pulverised	605	51	3.067	3.255	3.521	3.732
	Pulverised	605	46	2.533	2.689	2.909	3.083
United States	Ultra Super Critical						
	Pulverised	750	43	4.496	2.609	2.765	2.886
Non - OECD Countries							
China	Ultra Super Critical	100	45	813	863	933	989
South Africa	Pulverised	4693	40	2.222	2.222	3.157	3.652

(b) Coal Bed Methane

Botswana's mining industry is heavily reliant on heavy fuel oil / diesel. Diesel cost ~ gas equivalent ranges from AUD 25/GJ to AUD 30/GJ. Strong incentive for companies to convert to gas. Coal beds within the study area contain an estimated gas-in-place resource of 60 trillion cubic feet (Tcf). The associated carbonaceous shales are estimated to contain an additional 136 trillion cubic feet resulting in combined 196 trillion cubic of gas in place. The highest development potential is along the eastern margin of the basin, where the carbonaceous

sequence can be up 80m in thickness and contains up to 30% by volume of coal. Reservoir modelling of the results obtained indicates that a reasonably large percentage (15-20%) of Coalbed Methane (CBM) gas in place could potentially be developed at a gas price of \$2.00/thousand cubic feet at the wellhead.



Opportunity 3: Coal to Liquids (CTL)

The low price of coal compared to the high price of other fuel sources, whether oil (currently trading at \$600 per ton), 'unconventional' oil, or gas, provides a degree of longer term investment certainty that has generated a significant amount of interest in CTL fuels worldwide (World Coal Institute, 2015).

- CTL plants are one of the most cost effective of the alternative fuel, particularly when overall operating costs and the low cost of coal are considered.
- Through ongoing technological development the capital cost of CTL plants is expected to decrease.
- CTL provides one of the most affordable alternatives to conventional petroleum production.
- In Sub-Saharan Africa; South Africa has been operating CTL for many years, a broadening and growth of the market will drive both existing providers and new entrants to develop more efficient and cost effective processes to gain the market advantage
- CTL capital investment costs range around \$50,000 - \$70,000 per barrel of daily capacity, compared to \$100,000 - \$145,000 per barrel of daily capacity for biomass to liquids plants (World Coal Institute 2006).

Market Potential

There are currently few alternatives to liquid fuels, which make CTL the best and profitable option. There is a strong growing demand in developing economies. As an alternative source of liquid fuel from oil liquid, coal derived fuels can play a significant role.

- In the transport sector, as consumers purchase more vehicles and oil prices and as more stiff environmental measures are to be called for.
- Health impacts and local air quality concerns, have driven for clean cooking fuels. Coal-derived dimethyl ether (DME) is one of a suite fuel that can be produced in the CTL process. It is has great promise as a domestic fuel. DME can also be used as an alternative to diesel for transport.

Top Importers of Crude oil (Value imported in 2015 USD' 000)

Trade Partner	2018	2019	2020	2021	2022
World	1,833,323,997	1,315,040,949	543,031,737	1,109,530,532	703,918,161
United Arab Emirates	462,735,991	384,613,594	118,152,384	371,880,320	129,172,751
Saudi Arabia	161,726,964	55,535,788	45,281,639	119,556,227	97,600,698
Malaysia	54,334,411	76,031,246	24,703,693	68,489,211	73,752,956
Singapore	35,252,067	29,813,972	29,759,684	43,673,437	57,283,115
Korea, South	48,773,366	38,562,012	30,353,461	102,355,400	54,105,061
United States	50,939,955	20,730,121	30,874,174	28,231,847	30,646,053
Oman	56,605,461	3,403,403	7,757,551	99,630,142	29,508,779
Kuwait	95,277,684	86,401,488	14,070,908	23,090,235	27,634,470
Belgium	50,972,493	15,273,319	12,887,475	22,310,894	23,758,867
Taiwan	2,941,171	16,467,692	10,669,079	35,417,096	19,455,775
Thailand	17,230,246	19,869,930	12,957,326	15,322,656	17,927,982
Iran	17,190,870	22,162,128		13,695	17,816,772
India	22,081,403	11,452,253	9,540,789	17,944,277	16,940,231
Qatar	107,231,350	140,224,171	65,679,729	36,440,686	16,878,790
South Africa	26,528,307	10,334,682	8,899,488	9,650,914	15,791,090
Japan	8,541,973	9,348,445	15,851,688	22,930,013	14,444,899

Source: ITC

CTL Opportunity

CTL can be beneficial to countries that rely heavily on oil imports and are abundant with coal reserves. Botswana has high abundance of coal and this opportunity is very lucrative and has to be fully exploited. There are a number of developments already been undertaken;

- In collaboration with Pyro Carbon Energy (PCE), BITRI has taken the opportunity to explore Botswana's coal to add value to the country's natural resource Liquid fuels from coal provide ultra-clean transport fuels for use in the existing supply infrastructure, and cooking fuels;
- Funders of a 4.2 billion dollar coal-to-liquids plant in Botswana will start construction in 2016, which aims to tap the country's more than 200 billion tons of coal resources to reduce reliance on petroleum product imports.
- The 20 000-barrels-per-day project, which will also produce fertilizer, is funded by Botswana's unlisted Coal Petroleum and South African private company Kumvest. It will run over three phases from 2016 until 2020.
- Botswana imports all its liquid fuel to meet the country's annual consumption of 1.2 billion liters. The plant will require 4.3 million tons per year of coal, which it will source from the country's operating coal mine, Morupule.
- The project, which is set to create more than 9 000 jobs, is expected to have a positive 830 million dollar impact on Botswana's balance of trade.

INVESTMENT CLIMATE

Botswana has created an enabling environment for capital and business to thrive and support its strategic focus to diversify the economy into value – adding sectors. As the fourth most competitive economy in Africa and the easiest African countries to do business with. The country has a peaceful democracy with an excellent investment climate. It enjoys good governance and a stable macro-economic environment.

BOTSWANA OFFERS MANY INCENTIVES FOR INVESTORS, INCLUDING:

- ✔ No restrictions on business ownership,
- ✔ Up to 100% Duty rebates on importation of machinery,
- ✔ Liberal tax regime: 22% corporate and 25% personal tax, with 15% corporate tax for manufacturing and IFSC-registered companies (lowest taxes in the SADC region),
- ✔ Negotiable tax holiday up to 10 years maximum; and
- ✔ Deductible training rebate of 200%.
- ✔ Provide up to 100% duty rebate for customs duties on imported raw materials for manufacturing under schedule 3 of the Customs Act.

INCENTIVES FOR IFSC ACCREDITED COMPANIES

- ✔ A competitive corporate tax incentive framework; 15% corporate tax,
- ✔ Exemption from Capital Gains Tax (CGT) and Withholding Tax (WHT),
- ✔ Access to a growing network of Double Taxation Avoidance (DTA) Treaties,
- ✔ No foreign exchange controls; and
- ✔ Denomination of share capital in any major convertible currency.

SPEDU REGION INCENTIVES

- ✔ 5% Corporate Tax for the first 5 years, 10 % thereafter,
- ✔ Duty rebates on imported raw material. Provide rebate of Customs duties and value,
- ✔ Added tax under schedule 4 – Rebate item 470.03, and VAT Act Third Schedule – Item 470.03 for manufacturing done exclusively for export outside Common Customs Area (CCA), and
- ✔ Provide rebate for customs duties and

SPECIAL ECONOMIC ZONES INCENTIVES

- ✔ 5% corporate tax for the first 10 years then 10% corporate tax thereafter
- ✔ Duty rebates on imports of specialised plant and machinery for manufacturing purposes
- ✔ Waiver on transfer duty on land and property and Property Tax Exemption for 5 years
- ✔ Zero – rated VAT on raw materials for manufacturing and export
- ✔ Fast – tracked land allocation and long-term renewable land leases

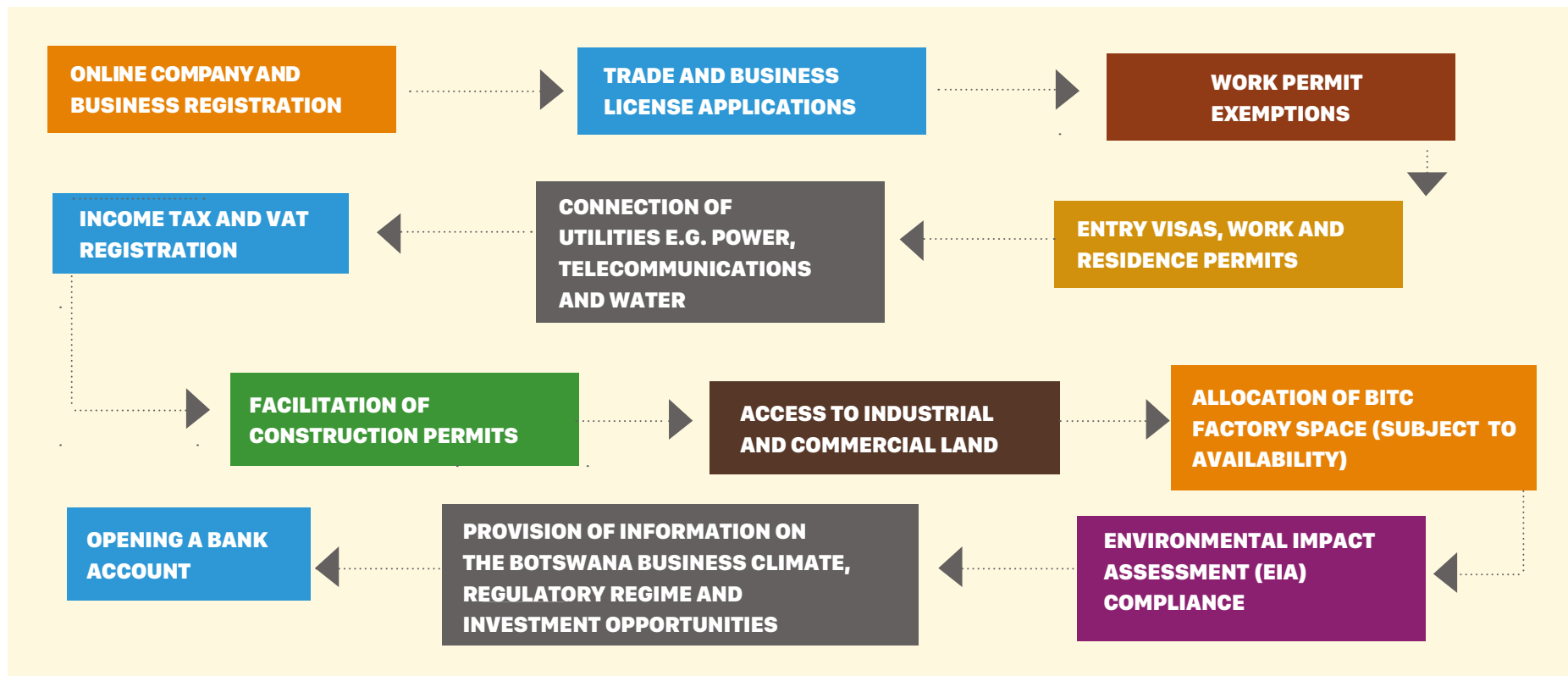
Industrial Rebates

Industrial Rebates are specified under Schedule 3 of the Customs and Excise Tariff Schedule, and are granted to manufacturers who import raw materials from outside the SACU market for production of goods for domestic consumption. The Industrial Rebates offer a full or partial exemption of customs duty on the imported raw materials and are generally accessible to a wide range of industries such as Textiles, food, machinery etc. The customs duty liability on the raw materials ceases as soon as manufacture has been completed. In exceptional cases where goods manufactured under Industrial Rebate are disposed of within Botswana, VAT becomes due and payable: Botswana Unified Revenue Services

BOTSWANA INVESTMENT AND TRADE CENTRE

The organization plays a critical role of driving Botswana's economic growth through attraction of Foreign Direct Investment (FDI), domestic investment, facilitation of expansions and further spearheads the growth of exports by promoting locally manufactured goods to regional and international markets. BITC drives wealth creation for Botswana by creating platforms that will ensure increased citizen participation in the economy and create sustainable job opportunities.

Of great importance within the role of this organization is building and maintaining a positive and impressive image of our country locally and internationally. Through this encompassing mandate, BITC has committed to deliver on the following services, through the Botswana One Stop Service Centre housed at its head office in Gaborone to ensure the ease of doing business for all investors:



CONTACT DETAILS

BITC is ready to facilitate your investment. For further information and inquiries related to Botswana and opportunities in the Investment Opportunities In The Coal Sector please contact:

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