

### **DNG IS A COMPANY THAT ENABLES GROWTH**



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# WHO WE ARE

DNG Energy was founded in 2013 by South African entrepreneur, Aldworth Mbalati, with the vision of achieving energy security and stability.

As a 100% black-owned African entity, DNG Energy is creating a pan-African Liquefied Natural Gas (LNG) supply network. A widescale infrastructure programme will see a US\$5 billion investment to bring this affordable energy alternative to the market.

The initial development and infrastructure expansion programmes are being planned for South Africa, Mozambique, and Nigeria.

DNG Energy is looking at the LNG value chain from source to consumption holistically.

The environmental, social, and economic benefits that come with the use of LNG include helping South Africa to meet its targets in reducing greenhouse gas emissions, driving economic growth, and improving the lives of all citizens.

As a first step in contributing to sustainable development, DNG Energy is championing the use of LNG for road and maritime transport, specifically for minibus taxis, trucks, buses, and ships. LNG is a new way of delivering energy. It offers the market a cleaner, cheaper fuel alternative where transactions are digital as well as safe.

The transport of LNG from exporting countries to South Africa will happen predominantly by sea. DNG Energy has commissioned South African Shipyards in Durban to build an 8,000 ton LNG Barge that will be moored at Coega. This is the largest vessel by weight ever to be built on the African continent and will come into service in 2021.

DNG Energy is ISO 9001, 14001, and 45001 certified, representing its commitment to excellence, quality, and ongoing improvement.



#### **OUR VISION**

Energising a brighter future - Today!

#### **OUR MISSION**

 Bring energy security and supply stability to Africa, using cleaner and affordable energy solutions to help mitigate climate change while stimulating economic growth and social cohesion.

 Commit to bring cleaner smart fuel and energy to people, organisations, and communities.

#### **OUR VALUES**

Everything we do is underpinned by transparency and integrity as we pursue and instill:

- Excellence
- Consistency
- Creativity
- Resourcefulness

#### **OUR GOALS**

- Transform South Africa's energy landscape through the advancement of LNG.
- Serve the demands of a growing population, increase industrial output, and improve people's lives.
- Support the South African government to meet its targets of reducing greenhouse gas emissions.
- Help South Africa's public transport industry to transport millions of South Africans in an environmentally cleaner, safer, responsible, and more affordable way.
- Boost local manufacturing and investment.
- Bring natural gas power to thousands of companies and households.
- Drive economic growth through the transfer of skills and creation of employment.



### WHAT WE DO

We contribute to a new economic future by providing innovative, technologically advanced smart energy solutions to support energy security, socio-economic progress, and energy efficiency in South Africa and the rest of the Southern Hemisphere.

Liquefied Natural Gas (LNG) is both a responsible and responsive energy solution for economic, social, and environmental benefits.

With lower greenhouse gas emissions than other fossil fuels, the reduced pollution levels will help our children tomorrow by giving them a clean environment.

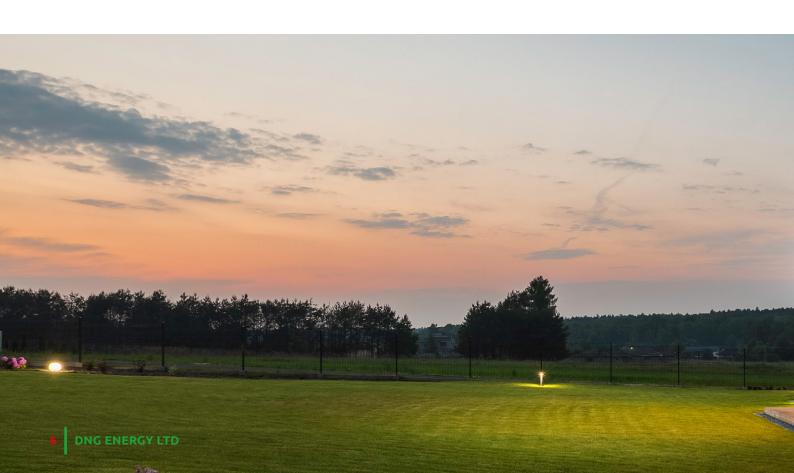
Natural gas is also a cheaper alternative to traditional fuels such as petrol and diesel. As a result, the availability of LNG in South Africa will impact positively on the country's economic future.

#### **DELIVERING A NEW ENERGY FUTURE**

DNG Energy is advancing the delivery of Liquefied Natural Gas (LNG) in South Africa to fast-track the adoption of a cleaner and cheaper fuel alternative in the market.

The environmental, social, and economic benefits that come with the use of LNG include helping South Africa meet its targets in reducing greenhouse gas emissions, driving economic growth, and improving the lives of all citizens.

As a first step in contributing to sustainable development, DNG Energy is championing the use of LNG for the power, gas, marine, and industrial sectors.



### **BUSINESS UNITS**

#### **DNG POWER**

DNG Power provides gas-to-power solutions responding to SA's energy needs. We supply secure, cheaper and stable alternative energy (LNG), in line with the country's national commitment to transition to cleaner sources of energy to support the economy while solving the current electricity generation crisis. We have the rights to import LNG to support the development of power generation capacity as per the country's IRP, which seeks to add more generation capacity by 2030 in order to restore energy security.

Using natural gas as a source of power gives South Africans a reliable alternative to power the economy. It also presents the country with a cleaner source in its energy mix to ensure that various technologies support each other in supplying electricity reliably 24/7.

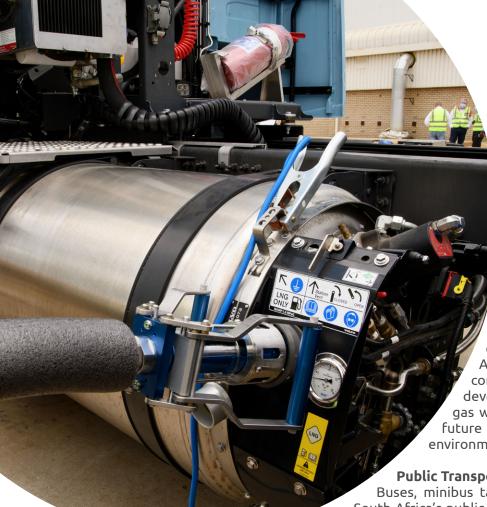
Natural gas is not just important for industry but it can do more for the domestic use. It can be used for water heating, clothes drying, cooking, and mood-setting fireplaces. It can also be used outdoors for barbecuing, gas lighting, and even to heat your swimming pool or hot tub.

The environmental, as well as social and economic benefits, that come with the use of LNG includes helping South Africa meet its targets in reducing greenhouse gas emissions, driving economic growth and thus improving the lives of all its citizens.

DNG Energy will utilise gas infrastructure that comprises pipelines as well as virtual solutions. Underground pipelines mean there is no disruption of supply due to storms or power outages while virtual solutions ensure that natural gas can reach even far-flung areas where pipelines are not available.

We are actively developing gas-to-power plants in Komatipoort, Malelane, Coega, Mossel Bay and Saldanha Bay. These plants will help provide a solution in delivering gas-powered generation as quickly as possible to serve South African communities' energy needs.





**DNG SMART GAS** 

DNG Smart Gas is championing the use of Liquefied Natural Gas (LNG) for road and maritime transport, specifically for the public transport (minibus taxis and buses), logistics (trucks), and shipping sectors.

The supply of a cheaper and cleaner alternative to the traditional fuels of diesel and petrol in the South African market is the first step in DNG's contribution to the nation's sustainable development. The use of LNG as a smart gas will have a tremendous impact on the future of the country with its extensive environmental and economic benefits.

**Public Transport** 

Buses, minibus taxis, and trains are the backbone of South Africa's public transport system. These are essential modes of transport for lower-income groups to commute to work, consider job opportunities, and link people with services.

The cost of transport should not deter or inhibit social inclusion or economic participation by lower-income groups. Taking into account the percentage of personal income spent on commuting, public transport needs to be more affordable.

The minibus taxi industry is the dominant provider of South Africa's public transport system, moving 68% of the country's 15.4 million daily commuters.

#### **Logistics Companies**

Fuel generally accounts for 50% of the total operational cost for logistics companies. Savings generated from implementing this LNG smart fuel solution will have a direct impact on this expense and improve the bottom line through:

- Vehicle conversion;
- Refuelling at service stations; and
- The supply, installation, and servicing of a cryogenic pump and tank equipment for refuelling on their premises.

We offer fleet owners the opportunity to manage their fleets more effectively with technology to track vehicle activity and effect cashless transactions. Lower fuel expenditure can also save fleet owners at least 40% of their budget.

Fleet owners and drivers who convert their vehicles to run on LNG will be able to take advantage of the affordable prices of this fuel alternative. They will realise the economic benefits in a short period. The innovative and economically favourable business model developed by DNG Smart Gas will also mean no capital outlay based on certain conditions.

#### **DNG MARINE**

DNG Marine is a specialist shipping company mandated to collect and deliver LNG to various DNG Energy projects.

DNG Energy, through its business unit DNG Marine, will moor its 8,000 ton LNG barge at the Port of Coega in Algoa Bay in the Eastern Cape, South Africa. It is the largest vessel by weight ever to be built on the African continent.

The strategically located facility on one of the world's most travelled trading routes with 56,000 ships passing through each year will come on line in 2021, providing commercial vessels with access to LNG. Until now, limited infrastructure has been a barrier to adopting LNG as a smart fuel alternative to the shipping industry.

The introduction of IMO 2020 presents significant challenges as IMO requires 0.5% sulphur content in marine fuels for the shipping industry, notwithstanding other ambitious decarbonisation and broader sustainability targets towards 2050.

Therefore, it is increasingly evident that LNG as a transition fuel plays a vital role in this pathway.

The development of the LNG bunkering infrastructure in Algoa Bay's global maritime hub is a natural step in expanding Africa's LNG value chain.

DNG Marine will source, own, and operate several FSUs, FSRUs and LNG carriers that will maintain a sufficient level of LNG to fulfill project requirements. Our vessels will be South African registered, and our crew will be locally recruited.

DNG Marine can import about 8.5m cubic meters of LNG annually into South Africa, which we anticipate by the end of 2022.

As we strive to achieve the highest training standards to meet international maritime requirements, DNG Marine's support of local maritime training centres will aid skills development and job creation for the youth.

#### **DNG INDUSTRIAL**



#### **DNG INDUSTRIAL**

The range of standard equipment manufactured and supplied by DNG Cryogenics features:

- Cryogenic Storage Vessels
- Cryogenic Road Tankers
- Cryogenic Vaporisers
- Vacuum Insulated Piping
- Food Preservation
- Cryobiology
- Transformer Conditioning
- Process Control Equipment

DNG Cryogenics also carries out turnkey projects and prototype developments. From cylinder filling to bulk storage and liquid transfer systems, the design and installation of projects meet the customer's needs. For example, DNG Cryogenics can supply a complete cylinder filling plant with pumps, vaporizers, and manifolds. There is also the option for stations to be permanently installed on-site or skid mounted.

DNG Cryogenics is an approved supplier to several local and international gas companies. All equipment supplied undergoes stringent testing before going into service to meet all client, code, and health and safety criteria.



#### **DNG RENEWABLES**



# FAST FACTS ABOUT LNG

- 1. Liquefied Natural Gas (LNG) is the cleanest burning fossil fuel. It produces less emissions and pollutants than either coal or oil.
- 2. LNG is a price-competitive source of energy that can drive economic growth and improve the lives of all citizens.
- 3. The use of LNG will help South Africa meet its targets in reducing greenhouse gas emissions by as much as 30% to 40%. It is particularly attractive as a transport fuel as it burns cleaner than petrol and diesel.
- 4. LNG is odourless, colourless, non-corrosive, and non-toxic. It is not flammable or explosive as a liquid.
- 5. LNG can be turned back into natural gas in a process called re-gasification. Once re-gasified, it can be used in the same traditional ways as natural gas for heating and cooking. It can also be used for onsite power generation.
- 6. The use of LNG can help meet high demands in energy and prevent energy shortages.
- 7. LNG is transported in double-hulled ships specifically designed to handle the low temperature of the liquefied natural gas. These carriers are insulated to limit the amount of LNG that boils off or evaporates. The boil-off gas is sometimes used to supplement fuel for the carriers.

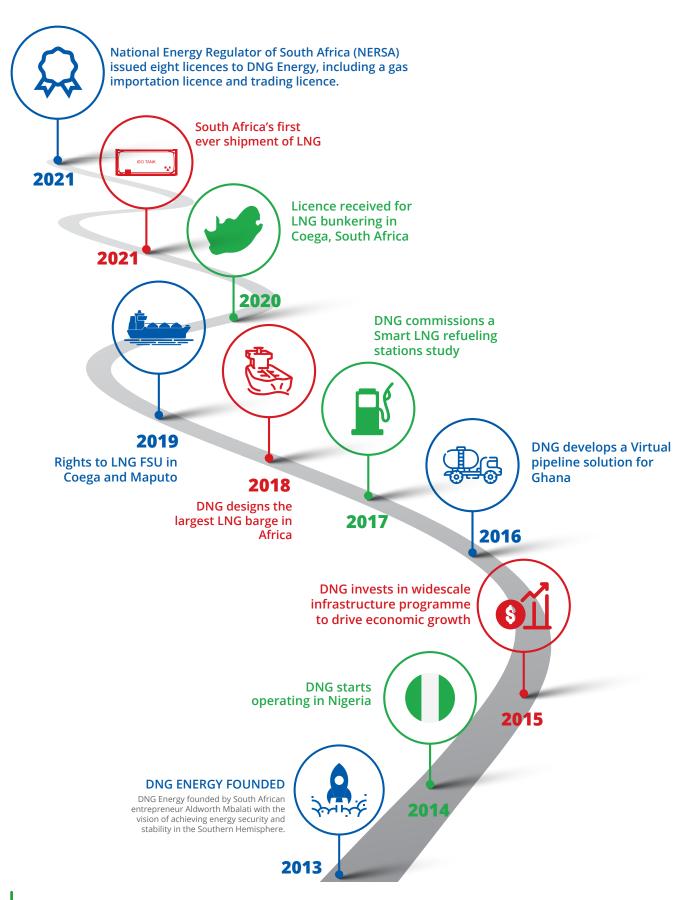
8. LNG is received at most terminals. It is transferred to insulated storage tanks that are built to specifically hold LNG.

 LNG is very efficient to transport. This makes it possible for natural gas deposits that are isolated from infrastructure such as pipelines to have their product recovered and transported by tankers.

 There are 91 LNG receiving terminals worldwide. South Africa and Mozambique will soon be joining the list of countries with their own receiving terminals.

11. LNG also allows for convenient storage of natural gas during off-peak times. This is called "peak-shaving" and it refers to the storage of surplus natural gas in LNG form during periods of lower energy consumption. Once energy demands rise, then it can be regasified and used to help meet the higher demand. This helps prevent energy shortages.

## **KEY MILESTONES**



# **DNG ENERGY LEADERSHIP**

#### **BOARD OF DIRECTORS**





Lord Peter Hain is a campaigner, politician, and author. He spent his childhood in South Africa, moving to the UK in 1966 when his anti-apartheid parents were forced into exile.

He has been active in politics for over 50 years. His childhood experience and parental influence were instrumental in his lifelong interest in, and commitment to, supporting a prosperous and vibrant Africa.

He was a Member of Parliament in Britain between 1991 and 2015, and a senior Minister for 12 years, serving in the Cabinet under the leadership of Tony Blair and Gordon Brown respectively. He has held the positions of Secretary of State for Wales, Secretary of State of Northern Ireland, Secretary of State of Works and Pensions. Minister of State Foreign and Commonwealth Office, Minister of State (Europe), and Minister of State (Energy and Competitiveness in Europe), among others. He was also a Leader of the House of Commons and Lord Privy Seal.



**Tinyiko Mhlari Non-Executive Director** 

Tinyiko Mhlari is a qualified Chartered Accountant. She completed a Bachelor of Commerce in Financial Accounting cum laude from the University of Pretoria. She also holds a Bcom Accounting honours from the University of KwaZulu-Natal as well as a Higher Diploma in Taxation from the University of Johannesburg. She joined KPMG in 2005 where she completed her articles. Upon completing her articles, she joined Amalgamated Beverages Industries (ABI), the soft drinks division of South African Breweries in 2008 as a financial planner where she was involved in financial management and management accounting, and obtained substantial experience in cost management, financial accounting and financial reporting.

She co-founded PSTM Chartered Accountants (Pty) Ltd as well as PSTM Auditors Inc. in 2010 where she still serves today as an executive director. The companies serve both the public and private sectors in audit, tax and advisory services. Tinyiko serves on various boards as a non-executive director over and above serving as an executive director at PSTM.

#### **BOARD OF DIRECTORS**



#### Aldworth Mbalati **Group Chief Executive Officer**

Aldworth Mbalati is Group Chief Executive Officer of DNG Energy, the company he founded in 2013. His interest in the energy industry stems from his belief that affordable energy is the strongest catalyst for sustainable growth, unlocking opportunity, and supporting trade. He also knows that today's decision on energy usage will shape the quality of life for generations to come.

He spent the first four years of his career working in real estate before deciding to co-invest in a coal investment company where he focused on learning everything about the energy industry. From this time on, he has been actively involved in promoting and supporting new energy sources.

In 2009, he founded African International Energy (AIE) plc, an independent power producer providing renewable energy to the African market.

AIE was involved in generating electricity using natural gas, fuel cell technologies, underground coal gasification, coal to power, and renewable resources such as wind, solar and hydro-electric power.

He exited his investment in AIE upon its de-listing on the Frankfurt Stock Exchange to set up DNG Energy with the goal of helping to advance South Africa's economic growth and meet its environmental protection obligations by providing a cleaner and cheaper fuel alternative.

"Gas must play an important role if South Africa is to meet its economic, political and social objectives of reducing poverty."











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