



The background of the entire page is a photograph of a vast desert landscape. In the foreground and middle ground, there are large, rolling sand dunes with distinct ripples in the sand, created by wind. The dunes are bathed in the warm, golden light of a low sun, which is visible as a bright, glowing orb on the horizon behind one of the dunes. The sky above is a clear, pale blue, transitioning into a soft orange and yellow near the horizon. The overall mood is serene and expansive.

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1
**EXECUTIVE
SUMMARY**

EXECUTIVE SUMMARY

In 2007 Dana Gas, PJSC purchased the assets of Centurion Petroleum Co., which consisted at the time of three concessions containing three development leases. This purchase marked the start of a natural gas exploration and development project (the Project) for the re-named company, **Dana Gas Egypt**, in partnership with the Egyptian government entities, EGAS and EGPC.

These concessions, together with three additional concessions, have yielded impressive results. From 2007 until 2019, a period of twelve years, the Project has delivered reliable, affordable energy to Egypt, powering electric generation, providing employment and enabling the Egyptian economy to grow at a pace unequalled in the region.

In order to recognize and commemorate these achievements, Dana Gas asked PwC to lead an in-depth study to assess the socioeconomic benefits enabled by the Project. PwC studied the impact of the Project in its operations through 2018, and projected forward the future contribution to the region until 2035, based on the anticipated further exploration and development in the existing concessions.

This report represents PwC's key findings and highlights the considerable beneficial effect the Project has delivered and will continue to deliver to the people of Egypt.

THE 3 KEY AREAS OF CONTRIBUTION

PwC assessed the contribution to Egypt in three key areas: economy, society, and the environment; locally and globally, taking both an historic and a forward-looking view.

The study reviewed the Project's contribution from 2007-2018 and estimated its future contribution to the country, given the extensive investment the company has made and the potential future investments to develop additional resources.



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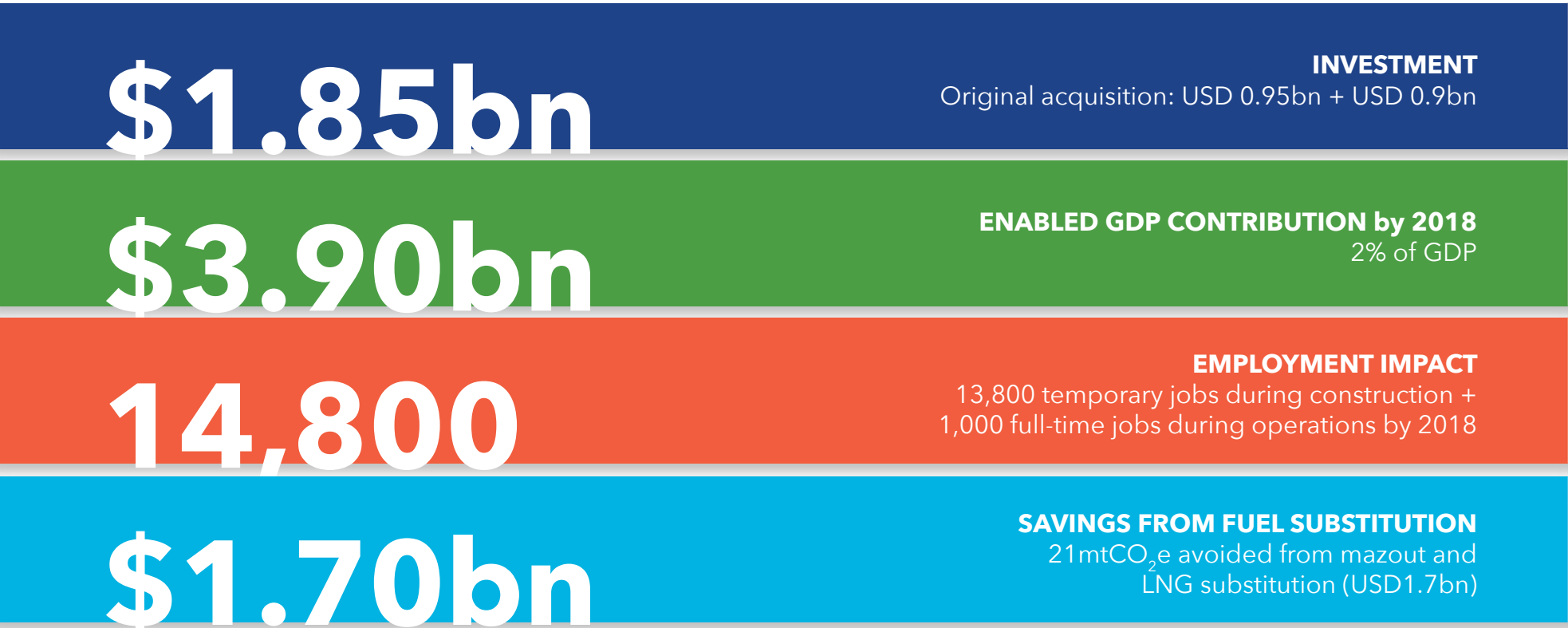


LOOKING BACK • 2007-2018
Twelve years of Partnership, Service and Progress

Capital investment in the gas project infrastructure and day-to-day operations sustains significant economic activity in Egypt. The Dana Gas Egypt Project’s most significant economic contribution by far is through the energy provided to power Egypt’s electricity grid. Electricity generated by gas not only fulfills the electricity needs of the local population, but it also powers activity in all sectors of the economy, including agriculture, industry, commerce and tourism.

By 2018, gas supplies from Dana Gas/WASCO and others accounted for 71% of the energy used for electricity generation in Egypt. PwC estimated that, in 2018, The Project contributed 2% of the economic activity (GDP) of Egypt, thus demonstrating that economic growth of the last 12 years would have been considerably lower without gas production from the Project. In the course of these operations, the Project produced 1,000 full-time jobs, and up to 14,000 temporary jobs during major construction phases. This has had a positive direct economic impact, particularly on local communities in the Nile Delta region.

By supplying clean burning natural gas for generating Egypt’s electricity, the use of alternative, more carbon emitting heavy oil (mazout) is avoided. The Project has also allowed reduced imports of LNG during the period, with its high economic cost and additional environmental cost associated with liquefaction, transportation and regasification. All of this means that less carbon dioxide emissions are released into the atmosphere and the costs to society are reduced since the greenhouse gas footprint of locally produced natural gas is considerably lower than the footprint of these alternative sources of energy.

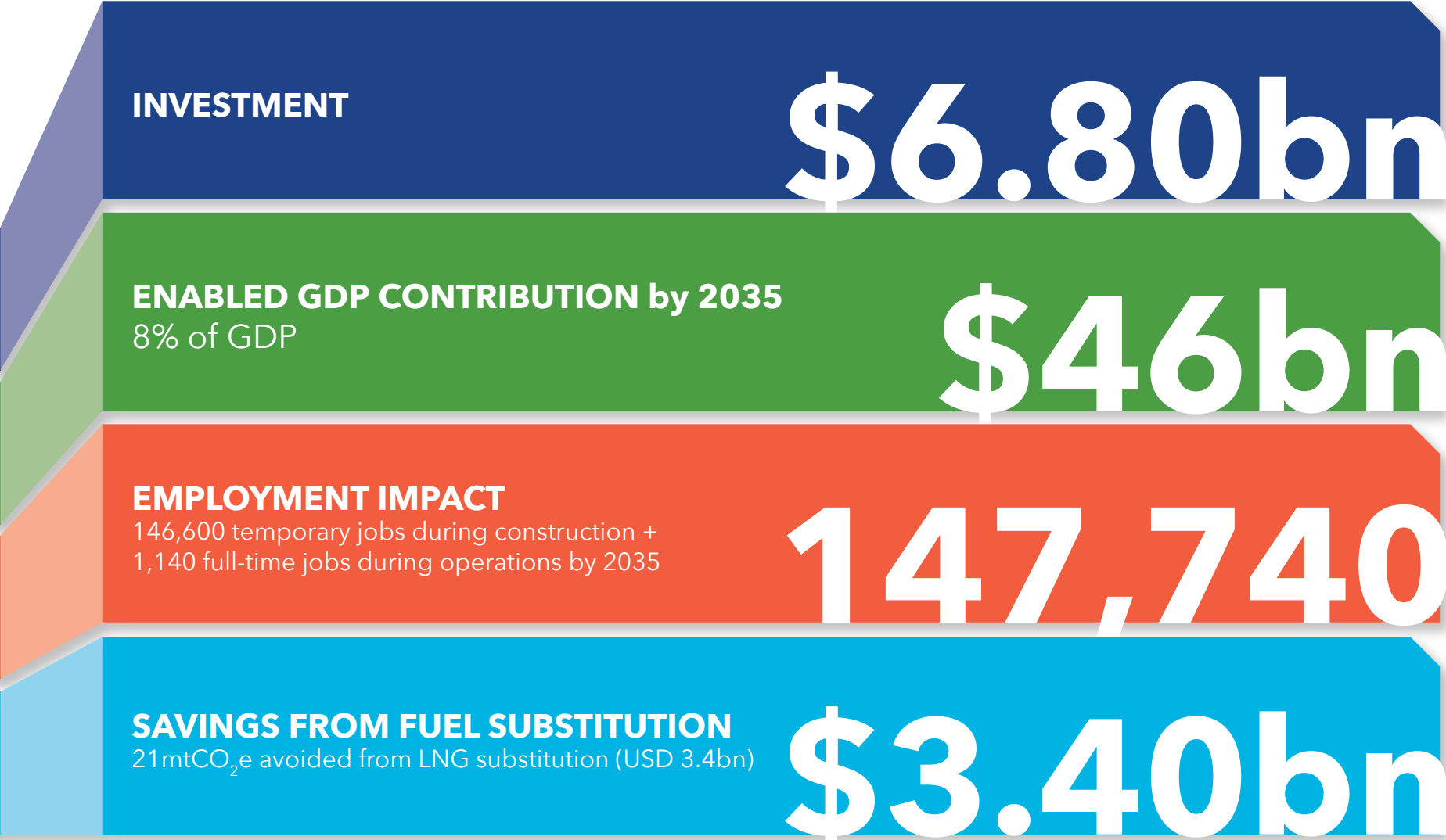


LOOKING FORWARD • 2019-2035
A future of continued contribution and progress

Looking ahead, PwC also assessed the Project’s socioeconomic impact based on projected additional production and investment in likely projects derived from the six existing concessions. The scenario envisions more than quadrupling production from the estimated current capacity of 160 mmscf/d to nearly 1 bcf/d from identified exploration and development prospects.

PwC estimated the expanded operations would contribute between USD \$7.1- \$19.1 billion and enable up to 8% of Egypt GDP by 2035, creating another 20,000 temporary and 1140 permanent jobs in the process. Nearly all of these jobs are located in the Nile Delta and North Sinai communities and will be filled by Egyptian nationals.

The Project would also support Egypt’s commitment to clean and affordable energy expressed in Vision 2030. PwC estimates the Project would save USD \$3.4 billion by continuing to replace dirty alternatives for electricity generation with clean burning natural gas and that would result in greenhouse gas emission savings of 22 million tonnes of CO₂e





2 ABOUT THIS REPORT

ABOUT THIS REPORT

The year 2019 marks 12 years since Dana Gas Egypt was formed and became the International investor and partner to EGAS and EGPC in the JV company El Wastani (WASCO).

As the Company looks back on more than a decade of progress, the professional services firm Price Waterhouse Coopers (PwC) assessed the contribution of the DGE Gas Project to the region, taking into account: Capital investment, Direct operations, the activities of suppliers and contractors, and the impact that consumption of the product, natural gas, has had in Egypt.

PwC also assessed the sustainability impact of the Project’s Corporate Social Responsibility (CSR) and environmental initiatives in the Nile Delta region to guide future activities and assess their impact on society.

In all, PwC evaluated and quantified the contribution of the Dana Gas Egypt Gas Project in three key areas and the impact each area has had on Egyptian society; the three areas are: Economy, Society and the Environment. The assessment takes both an historic and a forward looking view. It reviews the Project’s contribution since inception (2007-2018), and its future expected contribution to the region, from 2019 until 2035. This is based on the anticipated development of the Project and the continued success of various on-shore and off-shore gas wells.

In addition to expressing the impacts of the Project’s activities in quantitative and monetary terms, PwC also assessed them in the context of the United Nations’ Sustainability Development Goals (SDG), mapped against Egypt Vision 2030, analysing how the project helps Egypt achieve these important sustainable development objectives.

This Report reviews the Project’s contribution since inception (2007-2018), and its future expected contribution to the region, from 2019 until 2035.





3
**EGYPT'S
MACROECONOMIC
CONTEXT**

THE MACROECONOMIC CONTEXT IN EGYPT

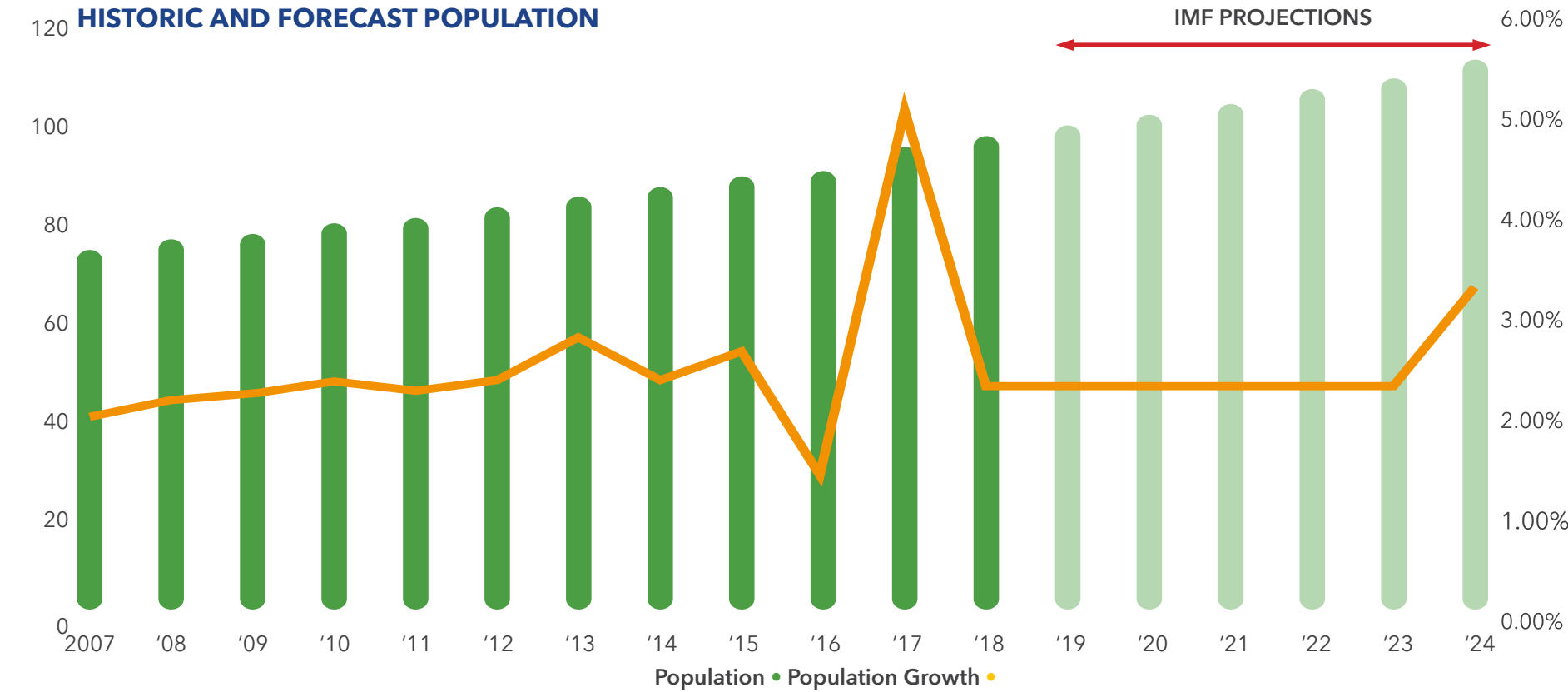
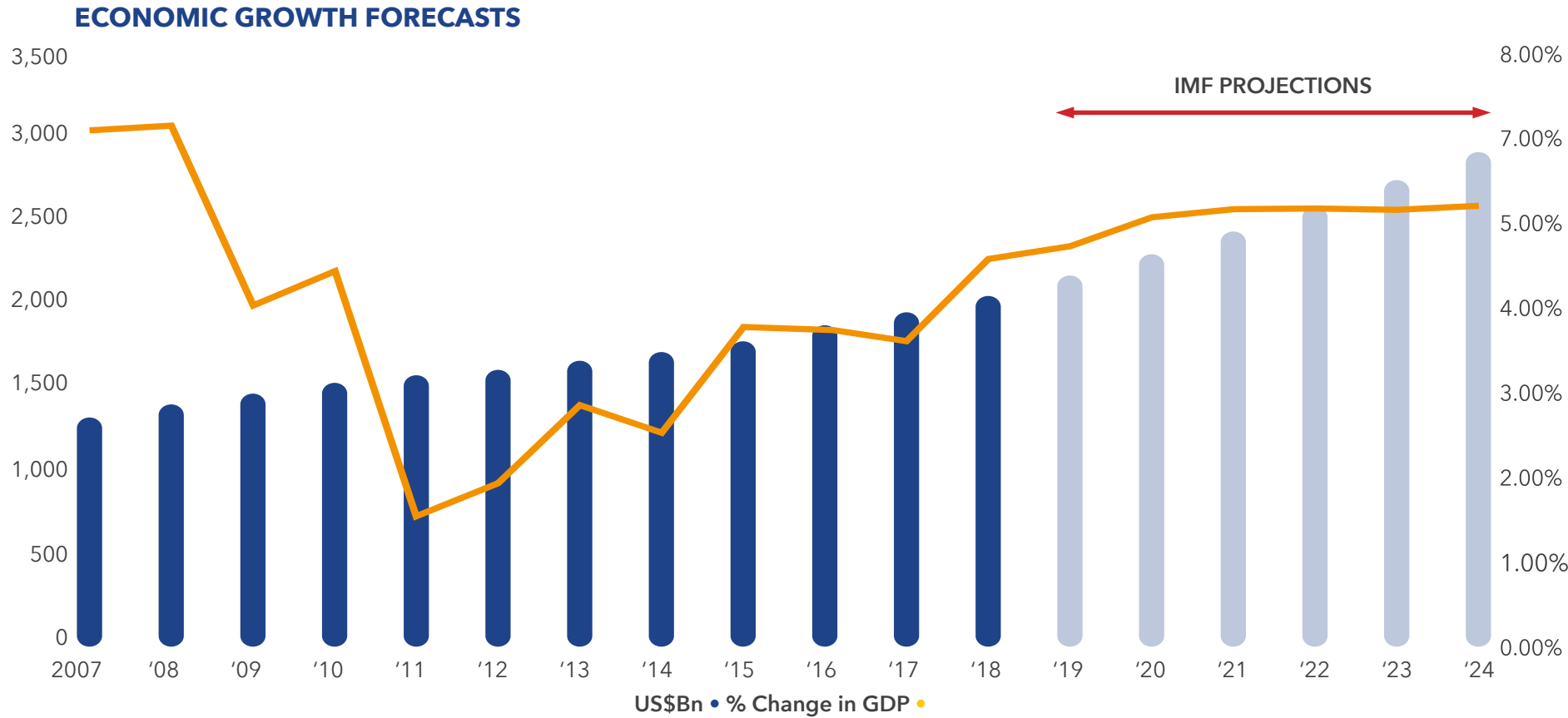
The Arab Republic of Egypt is located in North Africa and borders with Libya in the West, Sudan in the South, the Red Sea, Palestinian territories and Israel in the East, and the Mediterranean Sea in the North. Egypt is one of the largest economies and the most populous country in the Middle East and North Africa (MENA) region, cementing its role as a regional leader. It has long been a key influencer in the Arab world, with its long history, its cultural contribution and political leadership.

As classified by the World Bank, Egypt is a lower-middle income country whose economic activity is concentrated within the services, industrial and agricultural sectors, contributing 55%, 33% and 12% to GDP respectively. In 2016, the Services sector contributed the most to GDP followed by manufacturing (17.1%), wholesale and retail trading (14%), and agriculture, forestry and fishing at (11.9%) respectively.

In 1990, Egypt’s once state-driven economy was liberalized and shifted to a market-based economy, capitalizing on trade, privatization and investment opportunities. This in turn led to enhanced economic prosperity, accompanied by a stabilized currency exchange rate and a significant increase in foreign direct investments.

However, the Egyptian Revolution of 2011 precipitated a challenging transition phase beginning with a severe economic downturn due to a sharp decline in tourism revenue and foreign direct investment (IMF). The subsequent political upheaval and instability adversely impacted foreign investments, economic growth and employment, causing weakened public finances and a shock to investor confidence. The government implemented a subsidy system, mainly for energy products, that contributed heavily to Egypt’s growing budget deficit and hindered the government’s capacity to pay its debts to foreign investors.

Driven by fiscal imbalances and energy shortages in 2014, the Government introduced a comprehensive reform programme which included among other measures a tariff and subsidy phase-out scheme (IRENA). As a result, Egypt’s economy is now recovering strongly. The IMF forecasts economic growth to reach 5.6% in 2019 and 6% in 2021. The growth outlook is based on an improved policy framework, competitive currency, falling interest rates and inflation, rising tourism and continued progress on reforms.



EMPLOYMENT

Macro-economic improvements have had a positive impact on employment. According to the Central Agency of Public Mobilization And Statistics (CAPMAS), Egypt’s unemployment rate fell to 9.9% in the second quarter of 2018, down from 11.98% during the same period in 2017. The rate has been falling steadily due to economic reforms, which has catalysed economic growth.

It is important to note that the labor market in Egypt is characterized by high informality. Informality is defined as lack of job contract and lack of social security. This suggests that employment in Egypt is in fact understated as many individuals employed in agriculture are not contracted nor are protected by social security (Wahba).

ECONOMIC REFORMS TO DRIVE GROWTH AND STABILITY

Government initiatives and reforms, clearly highlighted within Egypt Vision 2030, are expected to improve economic activity and stabilize budget imbalances. The government has implemented a process of subsidy reform, aiming to eliminate subsidies on the country’s heaviest users of fuel, hence driving fiscal development and stabilizing structural trade deficits. In June, 2019 all fuel subsidies were lifted and replaced by a quarterly pricing mechanism (IMF).

Economic reforms undertaken since 2016 with IMF support have restored investor confidence, especially in the energy sector. Following Eni’s (an Italian multinational oil and gas company) discovery of the supergiant Zohr gas field in 2015, Egypt aims to become a major hub for the energy industry in the Mediterranean and a source of LNG export. Natural gas production, which covers 65% of the country’s energy needs, has increased in 2018 and 2019, and production now exceeds the domestic market for natural gas consumption.

Continued economic development will depend on effective implementation of reforms, helping transform Egypt’s economy to a knowledge-based, competitive and diversified market.



Government initiatives and reforms,

clearly highlighted within Egypt Vision

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4

**EGYPT'S ENERGY
LANDSCAPE**

ABOUT EGYPT'S ENERGY LANDSCAPE

Egypt's energy sector is a key driver of economic development. Economic growth is therefore dependent on the stability of energy supply and in recent years growth has been driven by substantial oil production and discoveries of major natural gas deposits.

Since 2011, as result of growing domestic demand and declining production levels due to depletion of domestic oil and gas resources, Egypt became a net hydrocarbon importer, shifting from its historic position as a net hydrocarbon exporter (IRENA).

This resulted in electricity shortages due to the decline in domestic gas production which is used as a main source of electricity. Substitution of heavy oil for electricity generation improved the power supply, but at the cost of increased particulate and CO₂ emissions. Furthermore, subsidised energy prices have had a negative financial impact on government revenues.

As part of the conditions outlined by the IMF's economic reform package, the Egyptian government implemented a reform program that eliminated energy subsidies to reduce spending and strengthen its fiscal position. Developing a sustainable energy sector is a key priority within the Egypt 2030 Vision and major developments are underway in Upper Egypt.

Egypt plays a key role in regional and global energy markets. According to the US Energy Information Administration (EIA), Egypt is the largest non-OPEC oil producer in Africa and the third largest dry natural gas producer in the continent. Crude oil contributes 3.4% to GDP and Natural Gas contributes to 3.2%, respectively (Ministry of Planning 2016). The contribution of Natural Gas is set to double.

Egypt has achieved not just energy independence, but as of 2019, can now return to its status as a regional exporter. Egypt's attractiveness as a gas trading hub has been enhanced by recent reforms in domestic energy policy and its geographic location with export routes to both Europe and Asia. Key to achieving this status is its strategic location at the crossroads of international trade of oil and gas, with two major transit routes: the Suez Canal and the Suez-Mediterranean Pipeline, as well as a gas import route from the Arab Gas Pipeline (SUMED).

In 2017, natural gas represented 53% of the Egyptian energy mix, according to the British Petroleum (BP) 2018 Statistical Review. In addition, natural gas investments represented around 12.1% of Egypt's total inward investments from fiscal year (FY) 2010/11- 2015/16, the Ministry of Planning, Monitoring and Administrative Reform (MPMAR) reported.

NATURAL GAS: CONTRIBUTION TO GROWTH

Reduced production of gas in recent years, coupled with rapidly growing domestic energy demand, has been at core of the supply-demand challenge that the government faces.

Egypt produces 6.9 billion cubic feet of gas daily, 65% of which goes to the electricity sector.

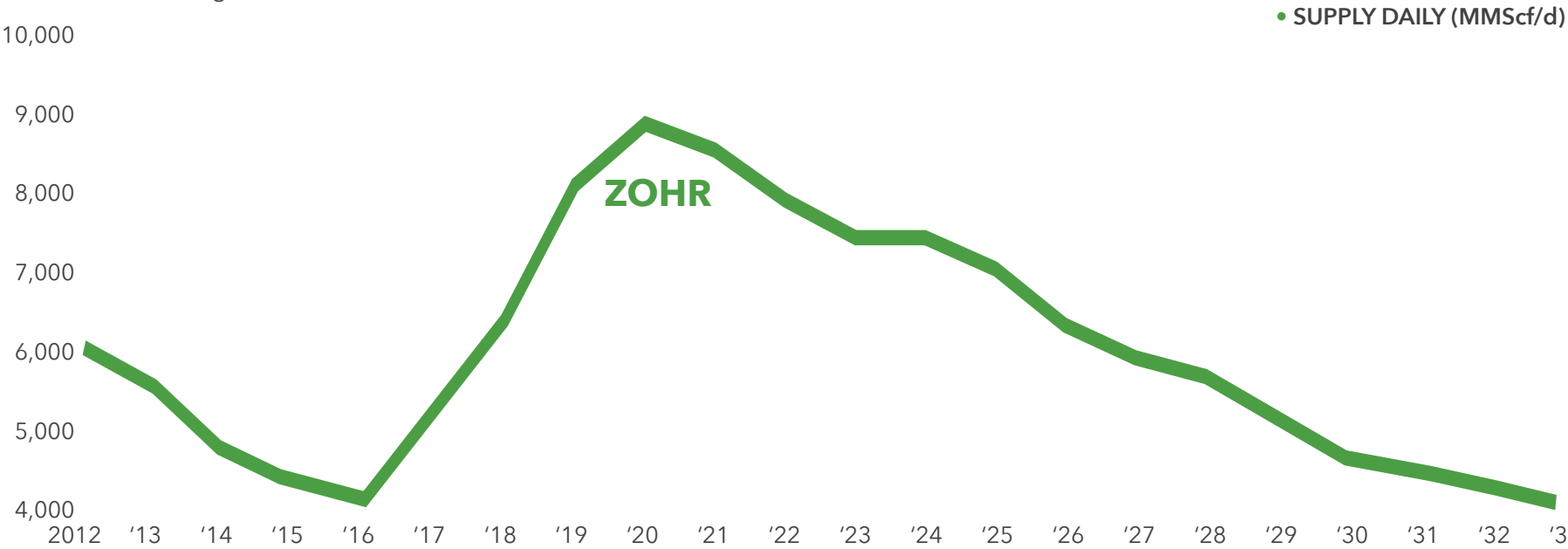
The gas sector has been a main contributor to economic growth as it has led to an improvement in the energy supply, having a spill-over on other sectors i.e. manufacturing. In 2013/2014 the government started implementing a more favorable upstream development policy to reverse the country's declining supply profile. The discovery of the Zohr field in 2015 also helped drive supply within the energy market. The quick ramping up of natural gas production from the Zohr field and the reform of macro-economic policies are expected to continue to accelerate growth and demand for increased electricity supply, due to increased economic competitiveness and investor confidence (Egypt Oil & Gas Research and Analysis).

Egypt's natural gas reserves have been aided by discoveries in the Mediterranean Sea, the Nile Delta, and the Western Desert.

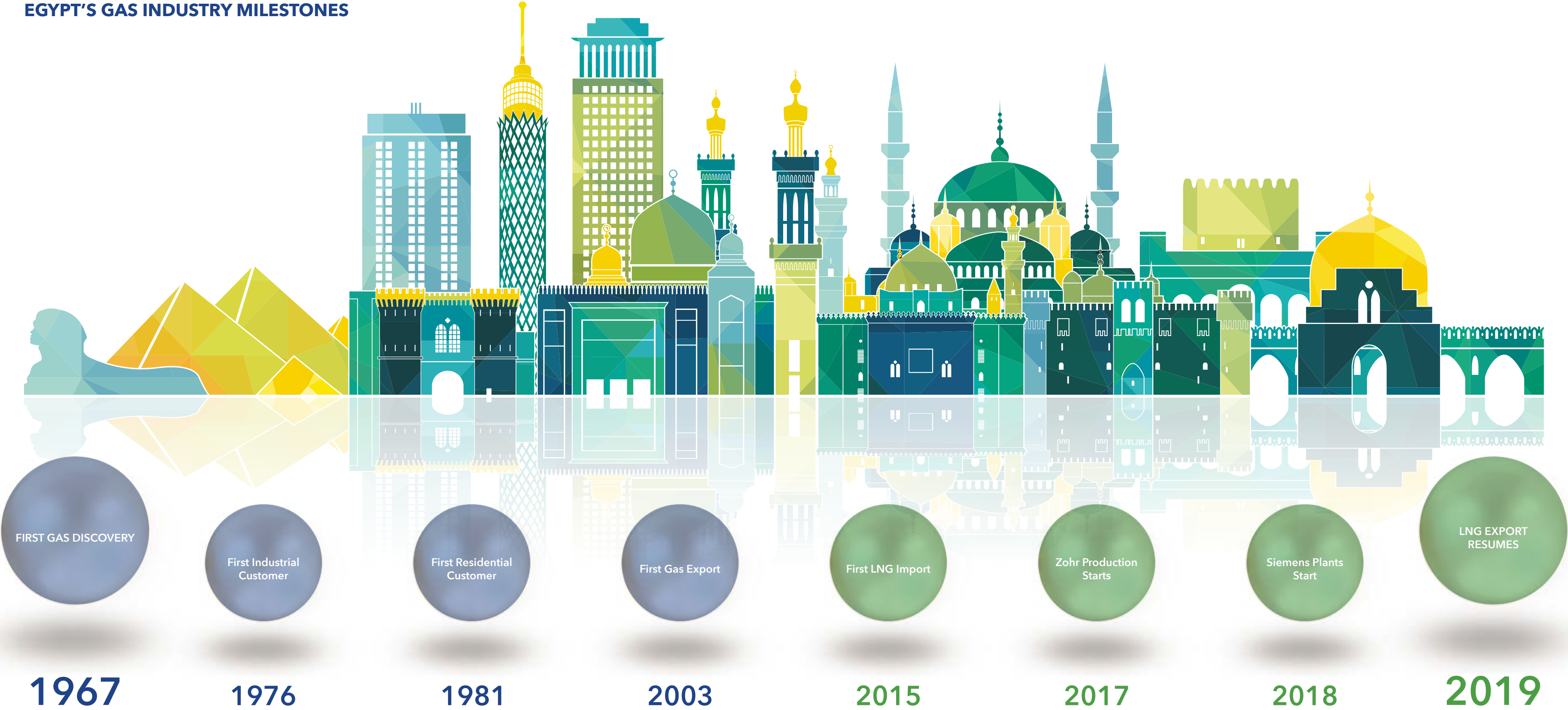
The industrial sector accounts for over 60% of domestic gas use.

NATURAL GAS PRODUCTION

Discovered in 1450 meters water depth by Italian energy company Eni in 2015, Zohr gas field covers an area of 100 square kilometers at a depth of 4,131 meters. Investing around \$10 billion in the project, Eni is estimating total output of the field to be approximately 30 trillion cubic feet of gas.



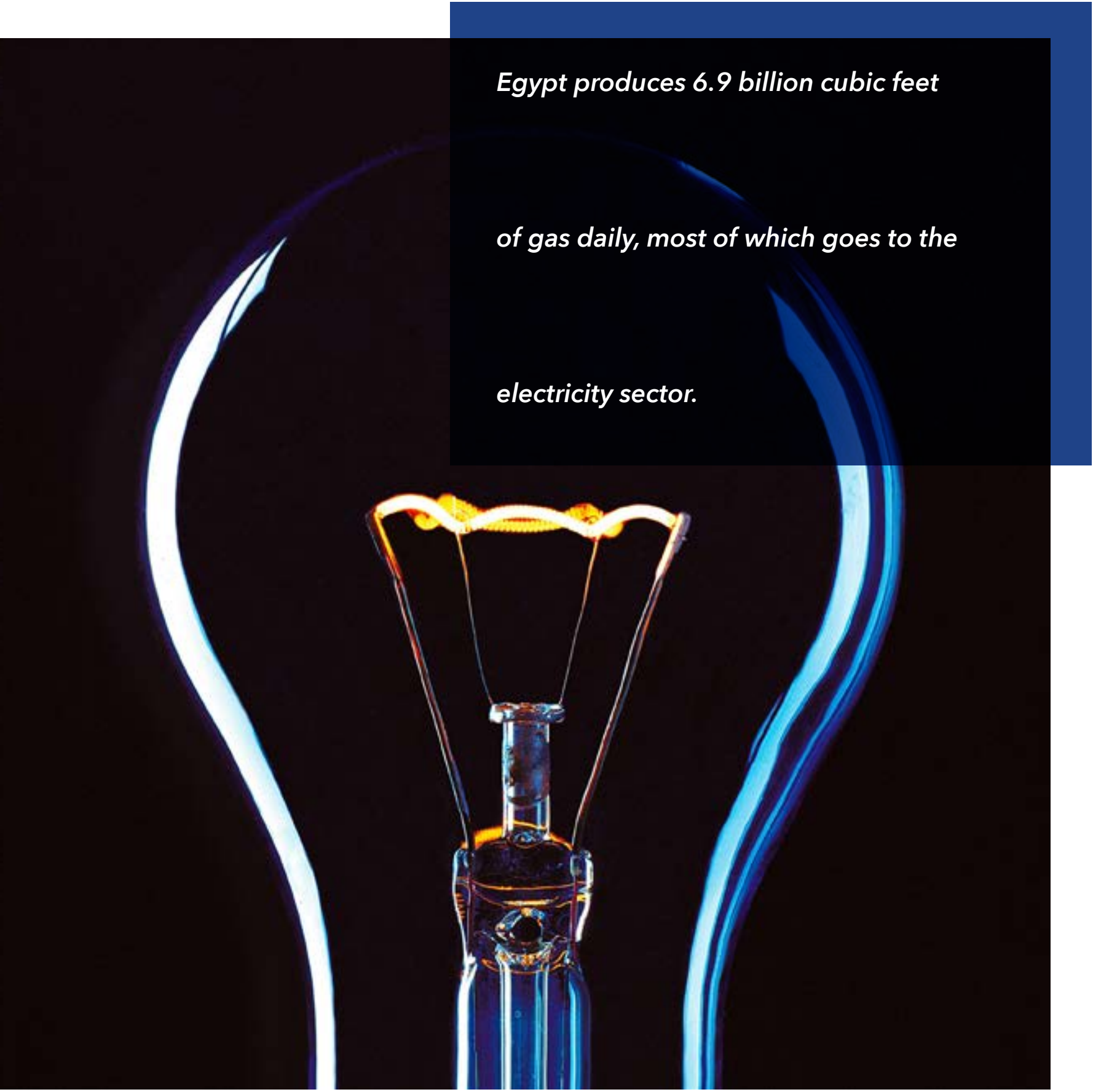
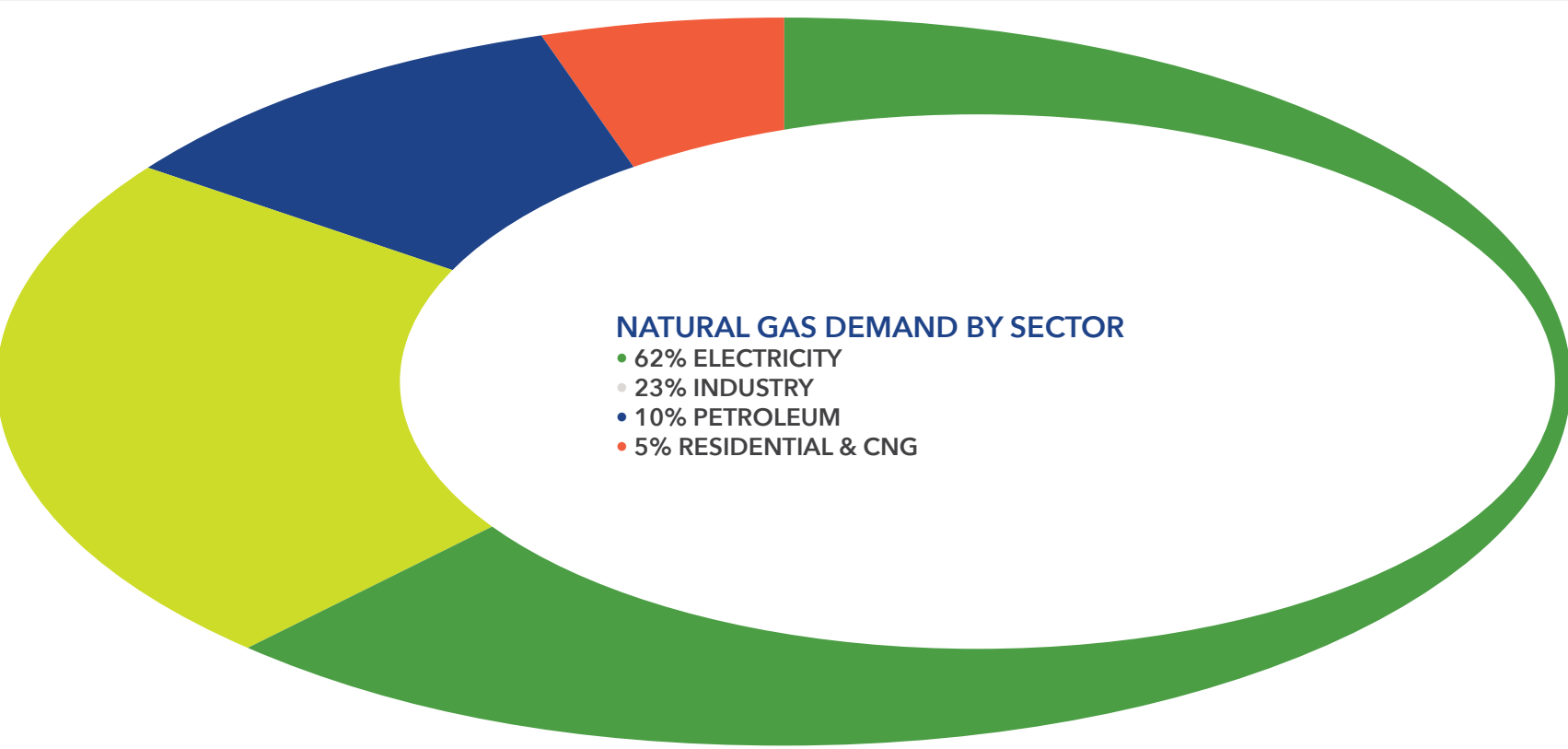
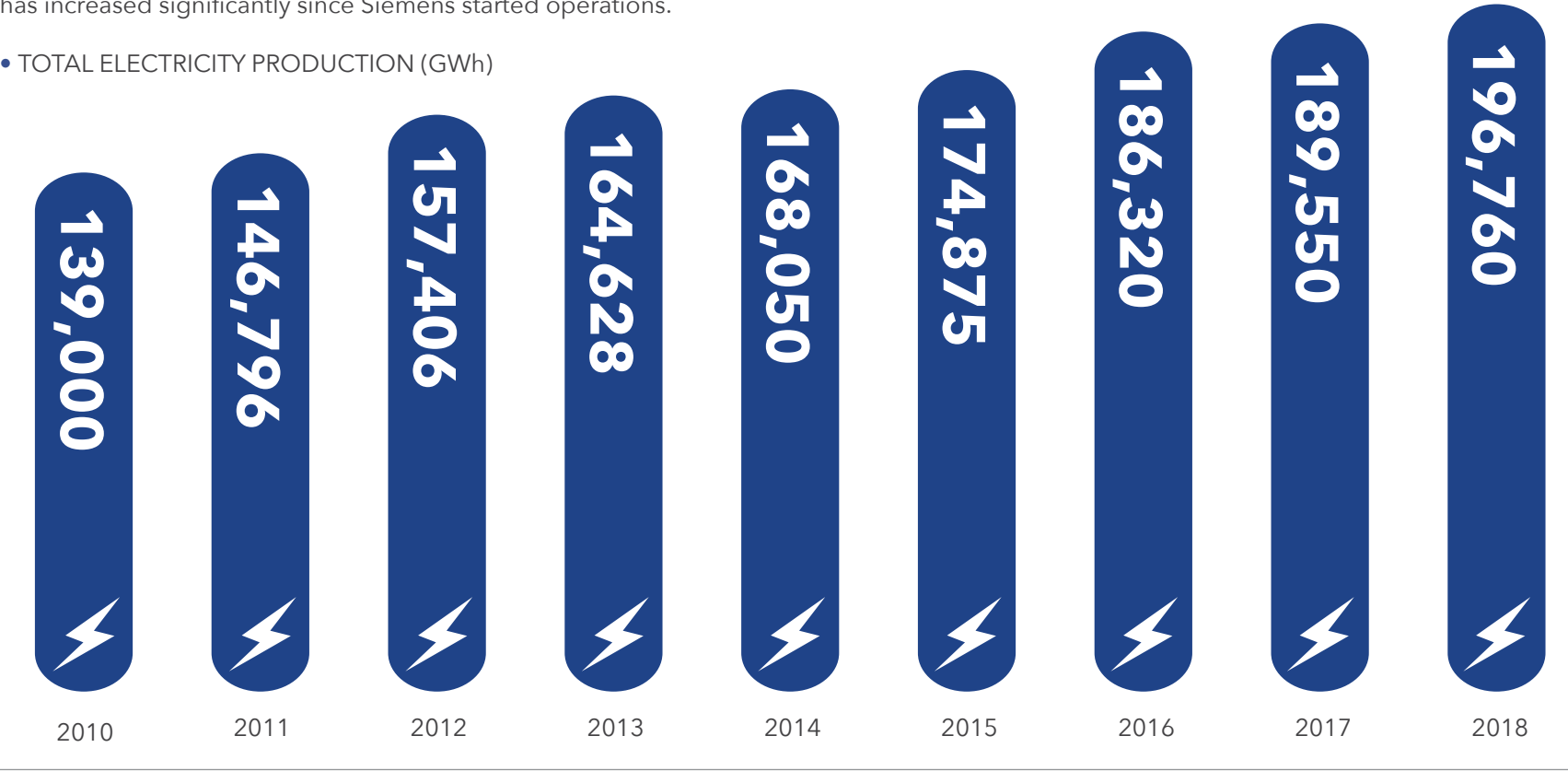
EGYPT'S GAS INDUSTRY MILESTONES



ELECTRICITY PRODUCTION

The majority of Egypt's electricity is derived from gas, through gas-fired power plants as well as combined cycle. The gas generation capacity has increased significantly since Siemens started operations.

• TOTAL ELECTRICITY PRODUCTION (GWh)





5
**DANA GAS'
PRESENCE IN EGYPT**

DANA GAS' PRESENCE IN EGYPT

In 2007 Dana Gas, via its subsidiary Dana Gas Egypt (DGE), entered the Egyptian market. Dana Gas acquired full ownership of three on-shore concessions located in the Nile Delta - the El Manzala, West El Manzala and West El Qantara concessions. These concessions today consist of 14 development leases with gas and condensate production from 30 separate pools. Natural gas production averaged 155 MMscf/day during the first half of 2019, together with 4800 bbls/d of condensate and 240 tonnes/d of LPG.

In 2018, 5 additional wells including the horizontal well, Balsam-8, added 41 MMscf/d of gas to production capacity. And in 2019 the first offshore well was drilled in the highly prospective North El Arish Block 6 offshore concession. The increasingly favorable investment climate in Egypt is underpinning future investment plans in natural gas extraction.

Therefore, Dana Gas Egypt (DGE) now has an established presence in the Egyptian Energy Market. The Dana Gas' Egypt project has had a considerable impact since 2007, contributing to the supply of natural gas which in turn drives economic growth and strengthens Egypt's position in the Energy market, globally.



FUTURE OUTLOOK

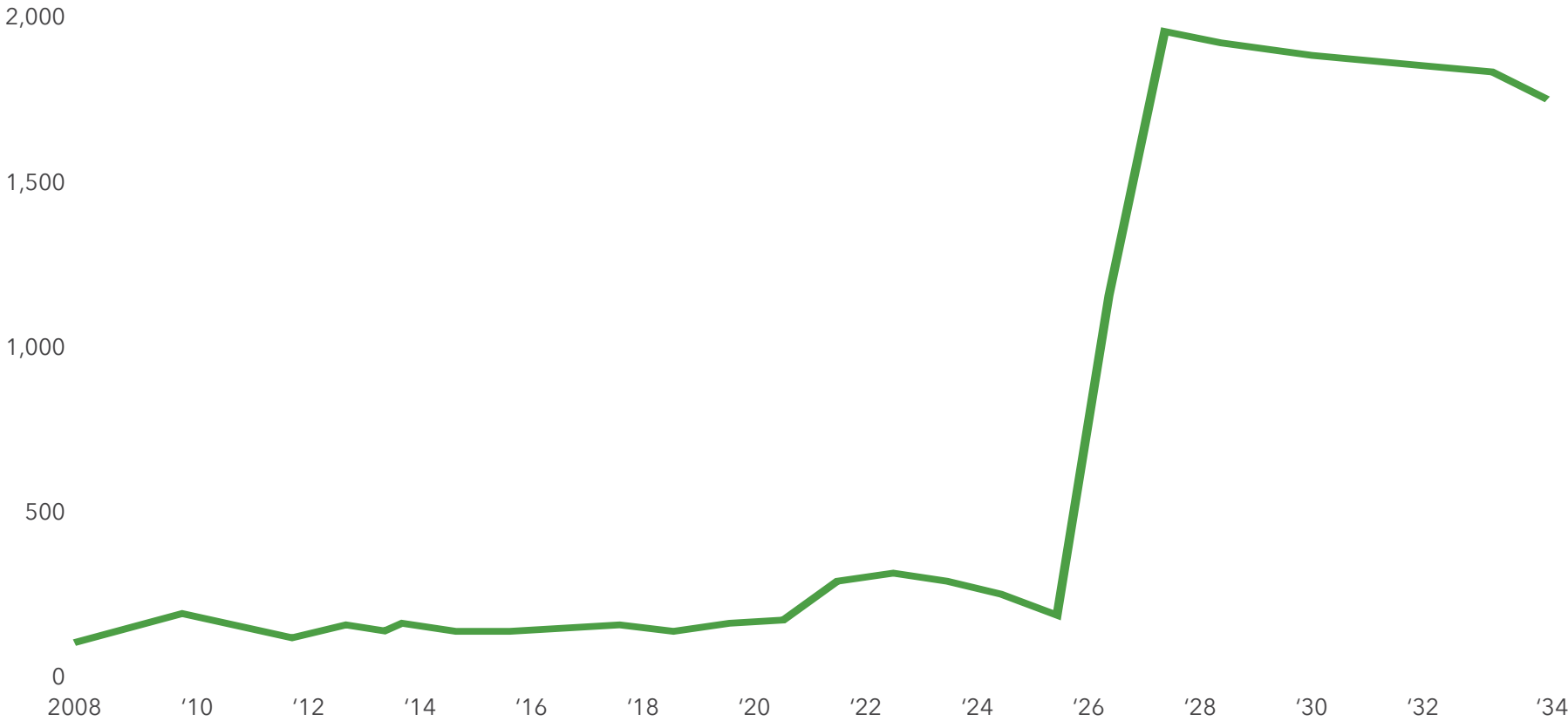
The medium term growth plan is developed to increase production from existing onshore Nile Delta development leases within El Manzala, West El Manzala and West El Qantara. In addition to drilling new prospects in onshore Nile Delta exploration acreages of North El Salhiya and El Matarya.

The 5 year forward investment plan for the onshore Nile Delta involves multiple campaigns to drill 5 wells, comprising 1 horizontal development well in the Balsam Field, 3 shallow exploration prospects (South EL Basant, Dafodil and Ganat) and 1 deeper exploration prospect (Lina-1). Production enhancement plans include 8 workovers and 4 well interventions to maintain asset integrity. In addition the plans include gas compression projects to maximize the recovery of reserves and provide continued utilization of processing facilities at El Wastani plant.

The long term growth plan is also directed at fully exploring the substantial prospects in the East Mediterranean offshore North El Arish Concession (Block-6). The Merak-1 exploration well drilled in 2Q 2019 at the Miocene prospect can be re-entered to drill a deeper target at the Oligocene prospect. Merak-1 Oligocene is planned in 2Q 2021.

A 3D seismic survey is planned to cover the Thuraya prospect. The estimated cost of drilling these prospects is circa USD 300 million. In case of successful exploration drilling, total investment to develop these fields would surge up to USD 6.2 billion and, cumulative production could reach 10 TCF of gas and 120 million barrels of condensate and LPG.

HISTORIC AND POTENTIAL FUTURE PRODUCTION (MMscf/day)





6

**DANA GAS'
CONTRIBUTION
TO EGYPT**



6.1 ECONOMIC CONTRIBUTION

ECONOMIC CONTRIBUTION

The Project contributes to Egypt in three ways: through the economic activity supported by capital investment, through the value generated through operations, and through the supply of energy to other sectors in the economy.

Capital investment impacts the economy through the expenditure on local goods and services, such as the purchase of hardware, hiring of labour, and services of project developers.

Upon the acquisition of the assets for the Project, a significant infrastructure was already in place. However, between 2007 and 2018, continued capital expenditure generated a further impact of USD914m.

In addition to capital investment, the Project contributes to GDP through its continued operations. This contribution can be divided into 3 types.

The first is the direct contribution the project makes, through the value generated through its operations, measured through the gross profit and wages from the Project.

The second relates to the indirect contribution of the project, through the economic activity in its local supply chain, and measured through the gross profit and wages of its suppliers.

The third, and final, tier of impact relates to the induced impact, which is driven by the wages earned by the Project's employees and those in its supply chain.

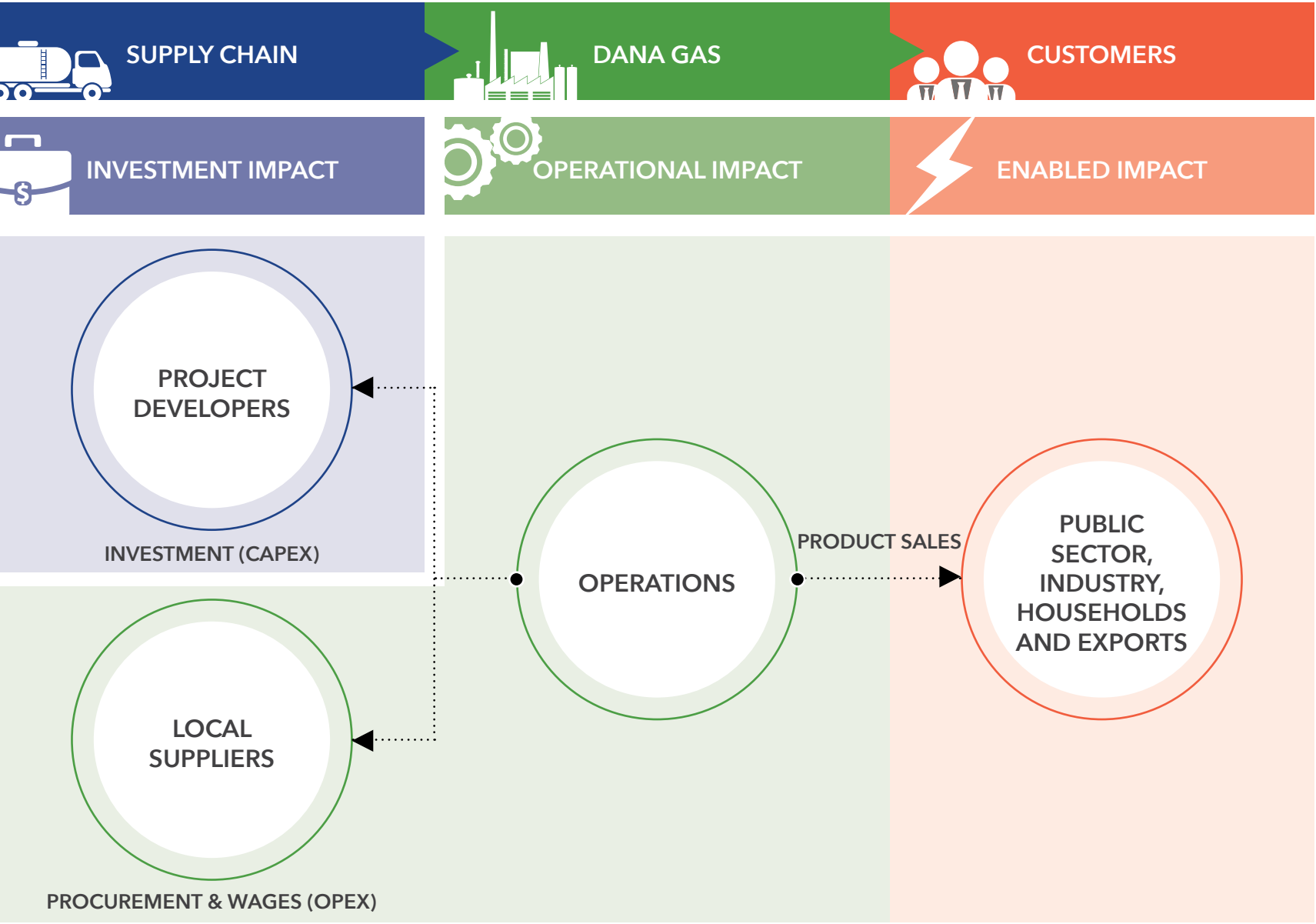
Jointly, these contributions accounted for approximately USD157m in 2018. Going forward, this is estimated to increase to nearly USD1.9bn, due to the scaling up of production.

However, by far the most significant contribution made by the Project is through enabling economic activity through the supply of energy. Energy is a key input for every sector in the economy and, as such, supports economic activity throughout Egypt. The Project contributes to current GDP and to future growth.

The energy produced over the historic period is estimated to have supported up to 2% of Egypt's economic activity, as measured through GDP. This is expected to grow, due to various planned investments, and reach up to 8% of the economy by 2035.

In addition to sustaining economic activity, the Project also supports cost savings in the electricity system, by avoiding imported LNG. From 2020 through 2035, it is estimated these savings will amount to a further USD37bn.

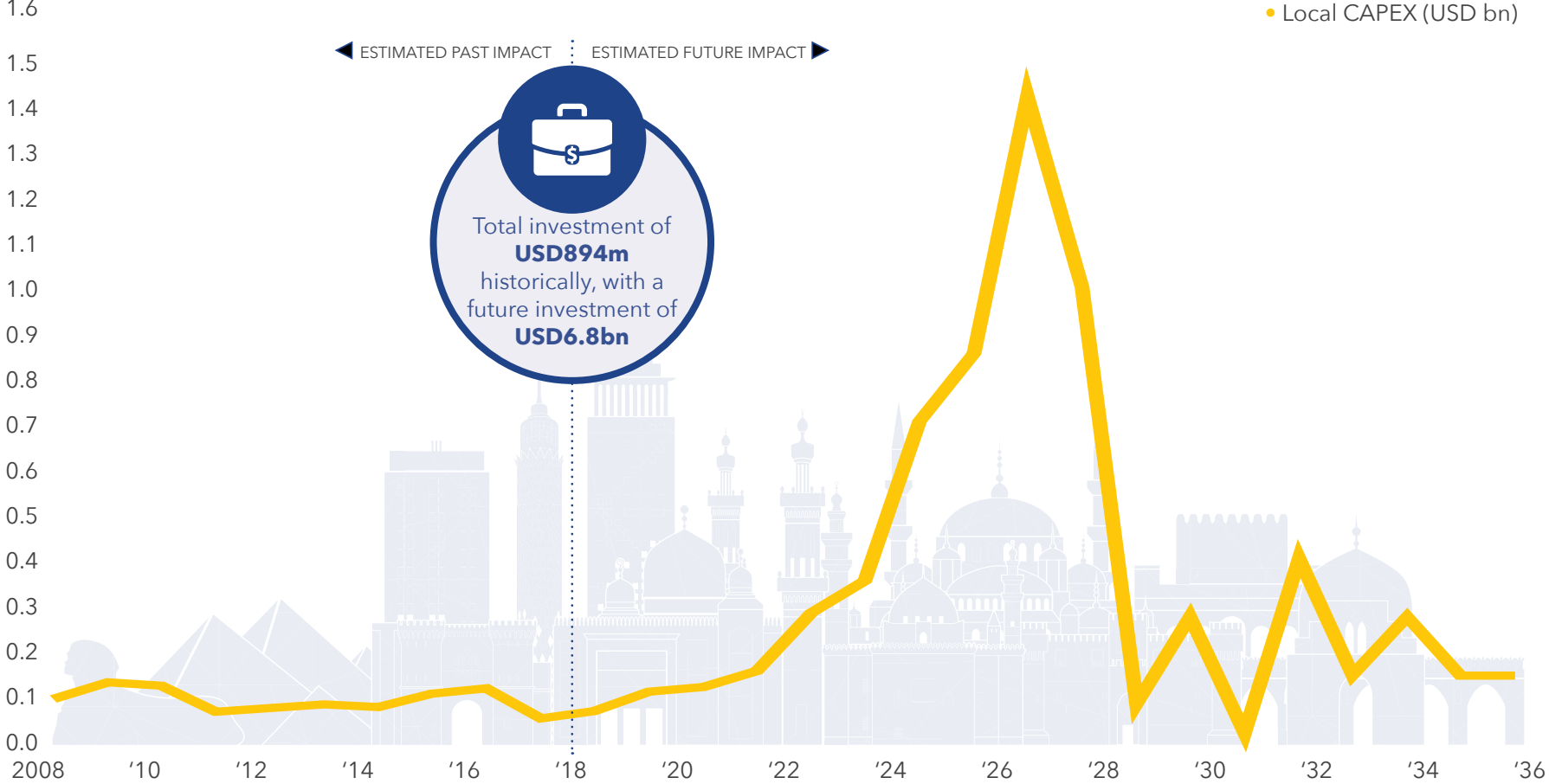
ECONOMIC CONTRIBUTION ALONG THE EGYPTIAN VALUE CHAIN



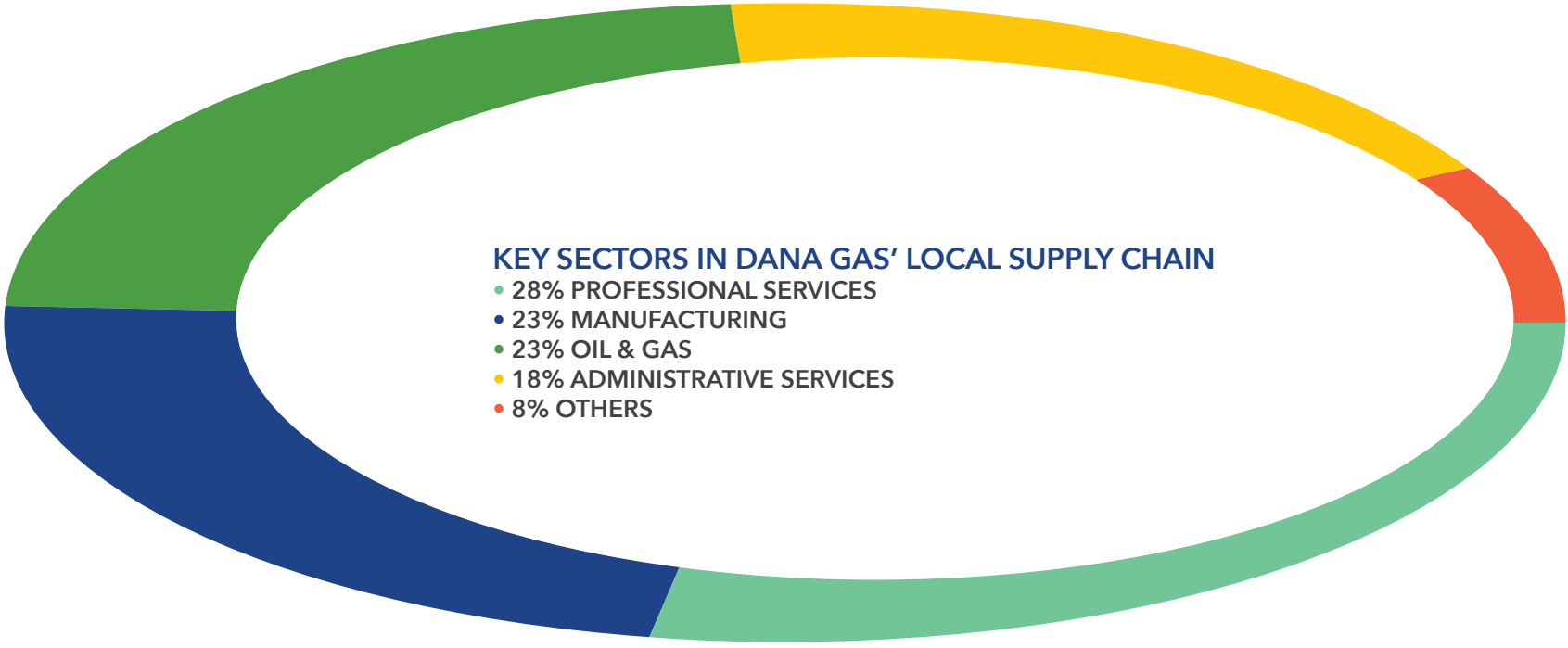
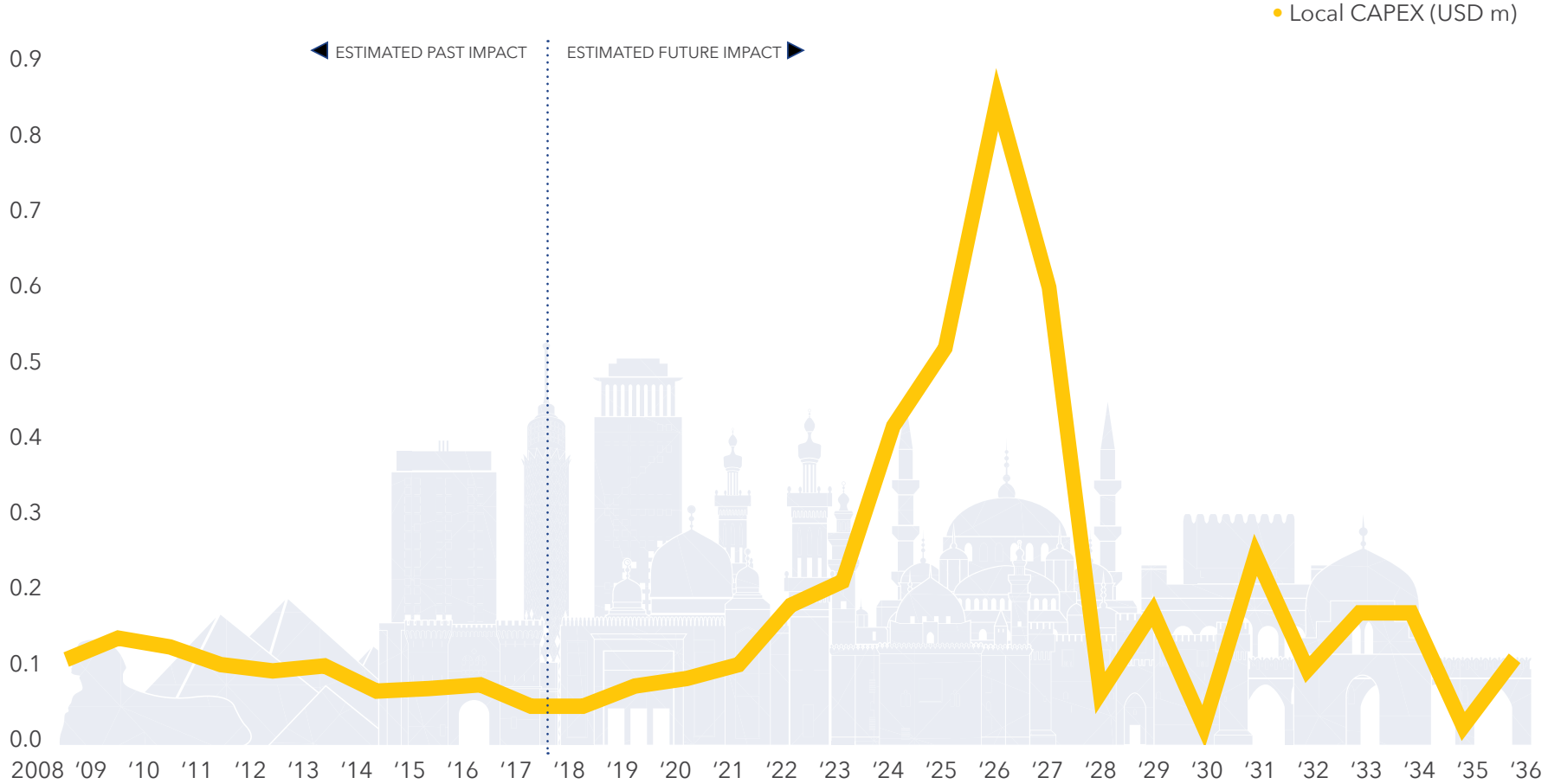
ENABLED IMPACT *Cost savings and enabled GDP*



CAPITAL INVESTMENT ECONOMIC IMPACT
Dana Gas' investment and its associated impact on GDP



OPERATIONAL ECONOMIC IMPACT
Enabling activity in the wider economy





6.2
IMPACT ON SOCIETY

IMPACT ON SOCIETY

In addition to its economic contribution, the Project also has an impact on Egyptian society. This is predominantly through the employment it supports along with the Corporate Social Responsibility program it has.

The contribution of the Project to the economy supports employment generation. The Project's investment requirements have stimulated short-term employment opportunities in sectors like construction. Historically, this is estimated to have supported 13,800 job years.

This contribution is expected to be more significant going forward, with an estimated 146,600 job years of employment due to planned investments.

The continued operations also support employment in Egypt. In 2018, around 1,000 people were employed through the Project's operations. This is expected to increase to approximately 1,140 people by 2035.



EGYPT'S VISION 2030

Egypt Vision 2030 represents a progressive milestone towards economic and social prosperity, reviving the role of Egypt as a regional leader. Egypt Vision 2030 aims to achieve inclusive development by focusing on Sustainable Development Strategy (SDS), aiming to enhance the country's competitive advantage and investor confidence.

According to the Sustainable Development Strategy: Egypt Vision 2030, *“By 2030, the new Egypt will achieve a competitive, balanced, diversified and knowledge-based economy, characterized by justice, social integration and participation, with a balanced and diversified ecosystem, benefiting from its strategic location and human capital to achieve sustainable development for a better life for all Egyptians.”*

SDS has followed the United Nations sustainable development principles as a general framework for improving the quality of lives and welfare, focusing on three main dimensions; economic, social, and environmental dimensions.

EMPLOYMENT IMPACT

CAPITAL INVESTMENT IMPACT



*Job years of direct, indirect and induced employment

OPERATIONAL IMPACT



Eight goals out of the seventeen are consistent with corresponding pillars in Egypt's sustainable development strategy: health, energy, social justice, education and training, urban development, economic development, the environmental pillar, transparency and efficient Government institutions.

CORPORATE SOCIAL RESPONSIBILITY

The Government of Egypt is committed to achieving the Sustainable Development Goals (SDGs). Egypt Vision 2030 strategy is aligned with the 17 SDGs, as well as the African Agenda 2063, and acts as the governing framework for all development programs and projects that will be implemented until 2030.

In addition to supporting employment, the Project has rolled out several Corporate Social Responsibility (CSR) programs. These are distributed amongst the Project's four priority pillars: community, education, health, and awareness. The program started at the point of acquisition and has generated a substantive pipeline of initiatives since.

Recent activities include the support of a women's empowerment group in Dakahlia Governorate, a visit to a special needs orphanage, a blood donation campaign, and a technical session for students at the American University in Cairo (AUC).

The next few pages set out case studies of key initiatives across these 4 pillars.



CATEGORIES	OUTPUTS AND ACTIVITIES SUPPORTED BY DANA GAS EGYPT HISTORICALLY (2007-2019)
HEALTH	<ul style="list-style-type: none">• Physically renovated 10 health units across Egypt• Provided multiple health units with medical equipment and supplies• Built 1 ambulatory center• Trained local Doctors and nurses to enhance the quality of the medical service• Funded the Building and furnishing of 2 clinic centers• Provided 2 ambulance units• Funded 6 heart operations• Funded 10 eye operations• Initiated a blood donation campaign in 2019 with the Ministry of Health
EDUCATION	<ul style="list-style-type: none">• Trained 180 teachers from different schools in Dakahlia and Damietta Governorates to become fully certified in advanced teaching practices in collaboration with the American University of Cairo.• Held 2 soccer tournament competitions between best performer students from different schools• Integrated IT Labs in 13 different schools across multiple governorates• Provided Training in schools on the IT Labs• Provided tablets to the best 15 Qualified Students (Primary & Secondary) across multiple schools• Supporting Egypt's top free online education portal: Skool.com.eg• Furnished 1 public Nursery• Physically renovated 2 schools• Provided schools across 3 different governorates with the needed equipment and materials• Contributed to the development and support of young entrepreneurs in the Egyptian public universities through the provision of career development and soft skills to university graduates from public universities to enhance their capacity.
COMMUNITY	<ul style="list-style-type: none">• Built 1 Mosque in Damietta Governorate• Sponsored the animal Feed project model which supported local communities to create physical assets that are a basis for general use or local service provision• Built a Bakery Project in Dakahlia• Provided Damietta Orphanage Center with the Needed equipment and Materials• Distributed toys and school's supplies to kids and tablets to universities students.• Provided toys and school equipment to children at a Cancer Hospital• Purchased 4,600 Ramadan Boxes (Dry Food) that has been distributed across Three Governorates in 2018 and 2019 to support the community around DGE facilities• Supported 30 Women who benefited from provision of Income Generation Projects in Dakahlia Governorates
AWARENESS	<ul style="list-style-type: none">• Contributed to the development of training activities and public awareness on CSR through the National Egyptian Center for Corporate Social Responsibility.• Sponsored multiple CSR events such as the AmCham Egypt and UNDP Conference, the CSR-HSSE Event and Egypt's First Business Summit on Climate Change• Conducted educational sessions to university students on the Oil and Gas industry• Raised awareness and Funds for Paralympics athletes• Partnered with more than 15 partners, including the top universities, corporations, and foundations in the region, to produce a regional study on the responsible business practice in the region.• Launched of Dana Gas Egypt's first Social Investment report 2009-2014





IMPACT ON HEALTH

Egypt is focusing attention on the universal right to healthcare, aiming to provide each citizen with the right to enjoy a healthy life and to receive comprehensive healthcare with quality standards. SDGs prioritize the development of the health sector as an integral aspect to achieving sustainable development, based on the notion of investing in human capital.

One of the main aims of Egypt’s Vision 2030 strategy is to develop a health insurance system, aiming to increase the percentage of citizens covered from 58% to 100% by 2030.

The Government of Egypt works persistently on improving the health services provided to its citizens, despite being constrained by the availability of financial resources, a growing population, and the need for better governance.

Dana Gas has focused its Corporate Social Responsibility (CSR) on health through various medical campaigns. In 2018, Free medical check ups were held in the rural village of Abu Greeda, where households had limited access to the right medical support and supplies. Dana Gas sponsored six heart and ten eye operations after they held medical examination of 105 people in the village of Abu Greeda.



LIST OF CSR ACTIVITIES BY THEMATIC AREA

	VALUE	YEAR	2030 TARGET
Maternal mortality ratio (per 100,000 live births)	133	2016	70
Under-five mortality rate (per 1,000 live births)	27	2014	18
Neonatal mortality rate (per 1,000 live births)	14	2014	8
Tuberculosis incidence (per 10,000 people)	13,000	2016	NA
Suicide mortality rate	52	2015	NA
Death rate due to road traffic injuries (per 100,000 population)	13.2	2016	8

HEALTH: MEDICAL CAMPAIGN

Medical Campaign	Free medical check ups were held in the rural village of Abu Greeda, where households had limited access to the right medical support and supplies.
Context	We sponsored 6 heart and 10 eye operations after we held medical examination of 105 people in the village of Abu Greeda, Faraskur, Damietta (2018).
Activity	Provided free Medical Check Ups Sponsored Heart operations Sponsored Eye operations
Results	105 people were examined in 2018. We sponsored the following necessary operations: <ul style="list-style-type: none">6 heart operations10 eye operations
Some quotes from those who have undertaken the surgery	<p>“Dana Gas changed my entire life by encouraging me to do free heart Checkup and sponsoring my heart operation, I was really suffering from artery tightness and now I can breath smoothly”</p> <p>“I was suffering from eye cataract which is a clouding of the lens in my eye which leads to a decrease of my vision. I started to see faded colors, blurry vision, halos around light, trouble with bright lights, and trouble seeing at night. Dana Gas encouraged me to do the free examination and sponsored my operation; simply my vision improved within a few days after the surgery and now I can take care of my family and do everything independent”</p>





In addition to its economic contribution, the Project also has an impact on Egyptian society.



In addition to supporting employment, the Project has rolled out several Corporate Social Responsibility (CSR) programs.



IMPACT ON EDUCATION

At the core of Egypt’s 2030 Agenda lies human capital. As in the case of health, education has been receiving increasing attention of late since having a quality education has so many virtuous spillovers on employment, poverty and demographic transition.

The SDGs outline the necessary reforms required to improve the education system in Egypt. The strategy’s education pillar is divided into three levels; general education (primary and secondary), technical education, and higher education (university and postgraduate education).

Egypt has the largest education system in the Middle East and North Africa, with 20 million students in pre-tertiary education. Relatively high enrolment rates for primary and secondary education may reflect the adequacy of the education system; yet the high and increasing (from 42.7 in 2016/2017 to 43.7 in 2017/2018) average number of students per class raises concerns about the quality of the education being provided. High class densities have an adverse impact on comprehension and knowledge transfer. Egypt recognizes that the real challenge is to improve the quality of the education system.

Dana Gas have been working towards achieving quality education in Egypt through various training programs and career development programs. Dana Gas provided training to teachers to become fully certified in advanced teaching practises in collaboration with the American University of Cairo and conducted programs focusing on career development and soft skills training to university graduates from public universities.



	VALUE	YEAR	2030 TARGET
Illiteracy rate (%) (10 years and older)	25.8	2017	7
Class density	43.7	2017/18	30
Quality of primary education (score)	2.4	2017/18	NA
Primary education enrolment rate (net %)	98	2017	NA
Internet access in schools (score)	3.2	2017	NA

EDUCATION: TEACHER TRAINING PROGRAM

Teacher Training Program	Training was provided to teachers to become fully certified in advanced teaching practises in collaboration with the American University of Cairo (2018)
Context	We sponsored the training of 180 teachers from different schools around our facilities in the governorates of Dakahila and Damietta, upskilling their teaching methodologies and personal development skills.
Activity	Collaborated with the American University of Cairo Hosted a course in Advanced Teaching Practices Ensured best practises and lessons were passed on
Results	80 teachers completed the program and were fully certified in advanced teaching practices. 100 teachers are currently enrolled. DG agreed with the School’s Management to arrange for In-house training Course from the Teachers whom have been certified from the AUC to the other teachers in the school . DG will continue providing the program through the AUC as we received overwhelming positive feedback from the teachers, schools, students and parents in our community. Teachers became fully aware on how to encourage the students to learn more and deliver the message in different ways.

EDUCATION: THE KEY INITIATIVES - EGYPTIAN JUNIOR BUSINESSMEN (EJB)

The Key Initiative - EJB	Conducted programs focusing on career development and soft skills training to university graduates from public universities, in collaboration with the Egyptian Junior Businessmen (EJB) association. (2013)
Context	We contributed to the development and support of young entrepreneurs within various public universities, helping students to enhance and further develop their skills.
Activity	Collaborated with public Egyptian universities Hosted career development and soft skill training Ensured best practices and lessons were passed on
Results	<div><div>The program focused on the provision of career development and soft skills training for university graduates from public universities to enhance their capacity and employability</div><div>Number of Beneficiaries : 800 Students.</div><div>Approximately 550 students were employed once the program finished (Jobs created for 70% of the students)</div></div>



IMPACT ON THE COMMUNITY AND AWARENESS

Egypt’s high population growth rate and high population density has caused a deterioration in the quality of urban life and in the environment. Slums, traffic congestion, pollution, encroachment on agricultural land, and poor economic and social conditions of rural-to-urban migrants are among the adverse results of high population density in the cities.

SDGs recognize the need for integrated and sustainable urban planning practices. SDGs are based on the principle of regional development, aiming to increase inhabited areas, improving the quality of urban life and maximizing the utilization of Egypt’s strategic location. The Ministry of Egypt’s Voluntary National Housing, Utilities and Urban Communities has developed the National Urban Development Plan 2052 (NUDP) to push the development of several mega-projects such as the Suez Canal axis development project and the Golden Triangle project in Upper Egypt.

Dana Gas have been focusing on the community and raising awareness as such, through various job creating projects. For example, the quality of life in a rural village of Dakahila was enhanced to a certain extent through the provision of jobs and services by the opening of the bakery. The Number of Jobs created by the Bakery Project is 5 from the local community.

Other projects include distributing dry and stable food during the holy month of Ramadan. 2,000 individuals living within our facilities in Dakahlia & Damietta benefited from the provision of dry food within the month of Ramadan in 2018.




COMMUNITY: BAKERY PROJECT

Bakery Project	The quality of life in a rural village of Dakahila was enhanced to a certain extent through the provision of jobs and services by the opening of the bakery.
Context	The Project sponsored the building of a bakery, as part of the ‘Bakery Project’ in Dakahila and handed it over to the Kheir Misr Local Association to fully operate and overlook, aiming to improve the quality of life of households.
Activity	Built the actual bakery and provided the machinery required Hired staff to run and manage the bakery Finalised the maintenance of the bakery
Results	<div><div>The bakery is currently working 100% efficiently, with upgraded machinery DG purchased in 2017</div><div>The Number of Jobs created by the Bakery Project is 5 from the local community</div><div>We received very positive feedback from our community for the ongoing support of the bakery.</div><div>The community is encouraged there is local ownership of the assets, providing high quality bread, and employment opportunities for the local population.</div><div>The bakery opening was on January 2015.</div><div>DG concluded the project with handover completed in December 2018.</div></div>

COMMUNITY: RAMADAN BOXES

Ramadan Boxes	4,800 Ramadan boxes were purchased and distributed within two governorates, Dakahlia & Damietta, in order to support the communities around the gas plant facilities (2018 and 2019).
Context	Our employees distributed 4,800 Ramadan boxes filled with dry food during the holy month, in parallel to the Governor's plans, helping feed underprivileged individuals of the community.
Activity	Prepared Ramadan boxes filled with dry food Distributed the Ramdan boxes inline with the Governors plan and direction Employee engagement in the packaging, delivery and distribution

Results



4,800 individuals living within our facilities in Dakahlia & Damietta benefited from the provision of dry food within the month of Ramadan in 2018 and 2019.

AWARENESS: TECHNICAL SESSIONS

Technical Sessions	Sessions on the Oil & Gas industry were held for the students of the Faculty of Science in El Mansoura University, Dakahlia (2018)
Context	We conducted Oil & Gas industry sessions aiming to enhance student exposure on our operations and the industry as a whole. Sessions were held by our engineers in El Mansoura University.
Activity	Collaborated with El Mansoura University Hosted Oil & Gas Technical sessions

Results

Purpose of the technical session is to increase the students awareness about the processes involved in the oil and gas industry and encouraging them to be part of this industry which helps the country in achieving its strategic hydrocarbon and energy goals and increases the role of DGE in the local communities.

No. of beneficiaries is 120 students attending the technical sessions in both Damietta and Dakahlia Universities



6.3 **STEWARDSHIP OF THE ENVIRONMENT**

STEWARDSHIP OF THE ENVIRONMENT

Lastly, in addition to its economic and social contribution, the Project also generates environmental benefits. These accrue largely through the use of locally produced natural gas as an energy source, due to its displacement of the use of other fuel types.

Importantly, during the early days of the investment, the Project produced natural gas that displaced mazout, heavy fuel oil. At later stages of the project, the project supported the substitution of imported LNG. Whilst this fuel has a similar carbon intensity when burned, the avoidance of transport and treatment of LNG helps reduce greenhouse gas emissions.

As a result of this, it is estimated the project contributed towards avoiding nearly 21 mtCO2e historically and is estimated to avoid a further 22 mtCO2 going forward.

As comparison, an average passenger car emits approximately 4.6tCO2 per year, implying that, on average, the project saved emissions equivalent to over 380,000 cars a year.

When valued in societal terms, this has led to societal cost savings of USD1.7bn historically and is estimated to save USD3.4bn going forward.

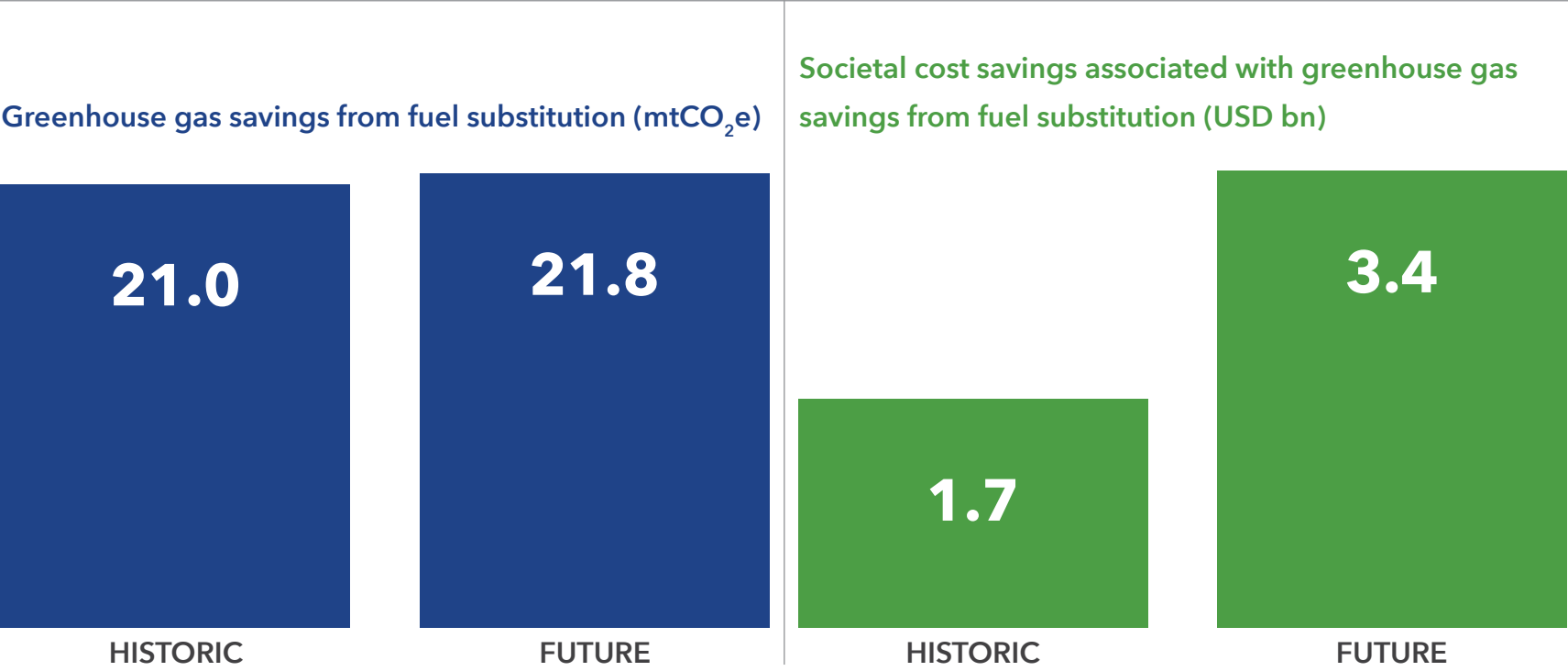
In terms of the direct carbon footprint, the emissions from flaring amounted to just under 40,000 tCO₂ between 2014 and 2018. The company is evaluating technologies to reduce or eliminate this adverse impact.

EGYPT'S COMMITMENT TO CLEAN AND AFFORDABLE ENERGY

Egypt's commitment to clean and affordable energy is an integral part of Egypt's Vision 2030. The Government has accordingly created an energy strategy that is geared towards transforming the country's energy sector into one that plays an important role in the economy while ensuring a reliable, efficient and eco-friendly usage of domestic resources.



	VALUE	YEAR	2030 TARGET
Proportion of population with access to electricity (%)	99.7	2016	100
Renewable energy share in total energy production (%)	2.28	2016	NA
Contribution of energy sector to GDP (%)	17.1	2017	25
Contribution of energy investments to total investment (%)	24.1	2017	NA
Amount spent on oil subsidies (EGP bn)	35	2017	0





LIST OF ACRONYMS

Bbls	Barrels
Capex	Capital Expenditure
CO ₂	Carbon dioxide
CSR	Corporate Social Responsibility
GDP	Gross Domestic Product
GHG	Greenhouse gas
GVA	Gross value added
kbpd	Thousand Barrels per Day
LPG	Liquified Petroleum Gas
MMscfd	Million standard cubic feet per day
MOP	Ministry of Petroleum & Mining
Opex	Operating expenses
SCC	Social cost of carbon
SDGs	Sustainable Development Goals

SUMMARY OF MODELED IMPACTS

Operational Impact	2018	2035
GDP (USD bn)	\$2.40	\$19.10
Employment	1,000	1,140

Construction Impact	2018	2035
GDP (USD Mn)	\$17	\$176
Employment	13,800	146,600

Enabled Impact	2018	2035
Value (USD bn)	\$3.90	\$46.00
%of GDP	2%	8%

Fuel Cost Savings	2018	2035
Value (USD bn)	\$4.30	\$37.40

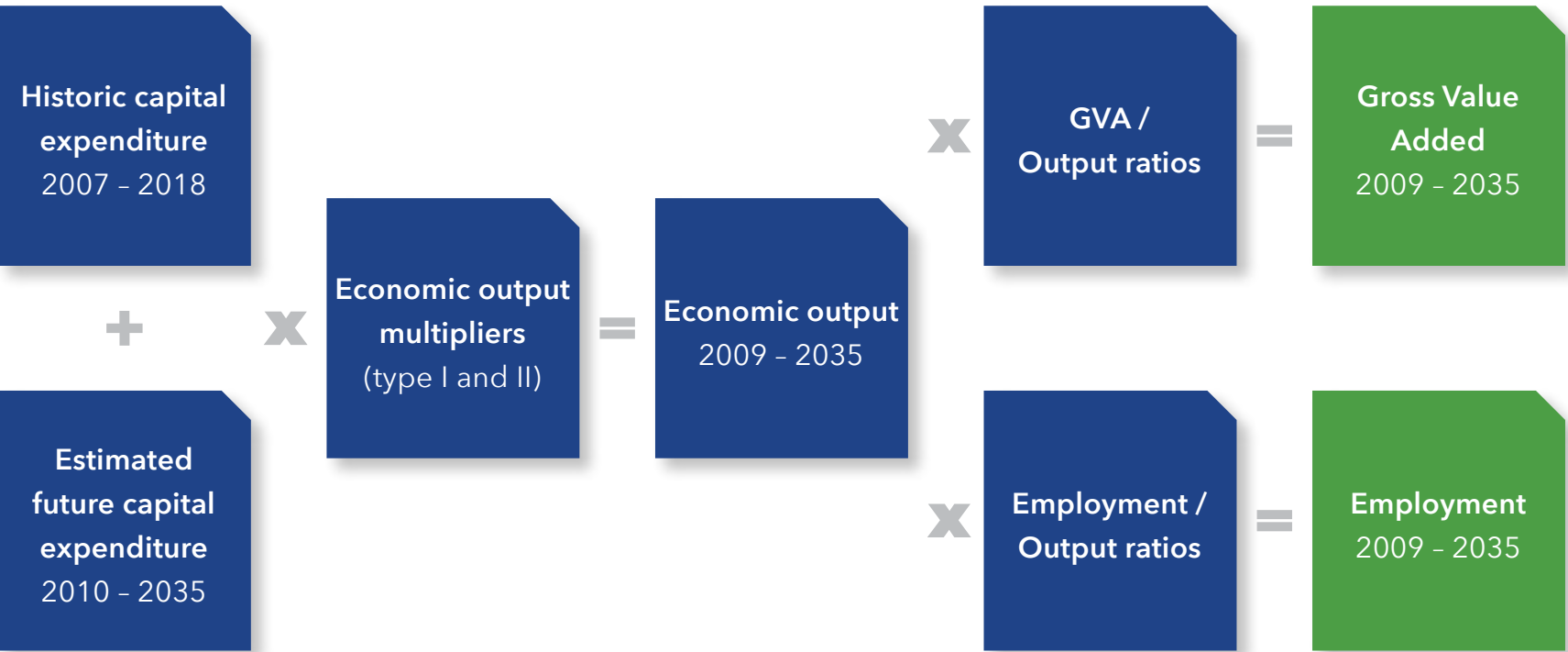
Carbon Savings	2018	2035
Carbon savings MntCO ₂ e	21.00	21.80
Carbon cost savings	\$1.70	\$3.40

METHODOLOGY: CONSTRUCTION IMPACT

SUMMARY OF APPROACH

- The impact of our investment in Egypt is estimated using multipliers. The overall historic and future capital expenditure is first adjusted for the portion spent locally. Subsequently, we map capital expenditure items against their relevant economic sectors.
- We initially estimate the impact of capital expenditure on gross output using type I and type II output multipliers. Economic output is subsequently converted into Gross Value Added (GVA) and employment using GVA/Economic output and Employment/Economic output ratios, respectively.

Simplified calculation steps



Key assumptions

The multipliers and the GVA and the Employment ratios are assumed to remain constant over time.

Key data sources used

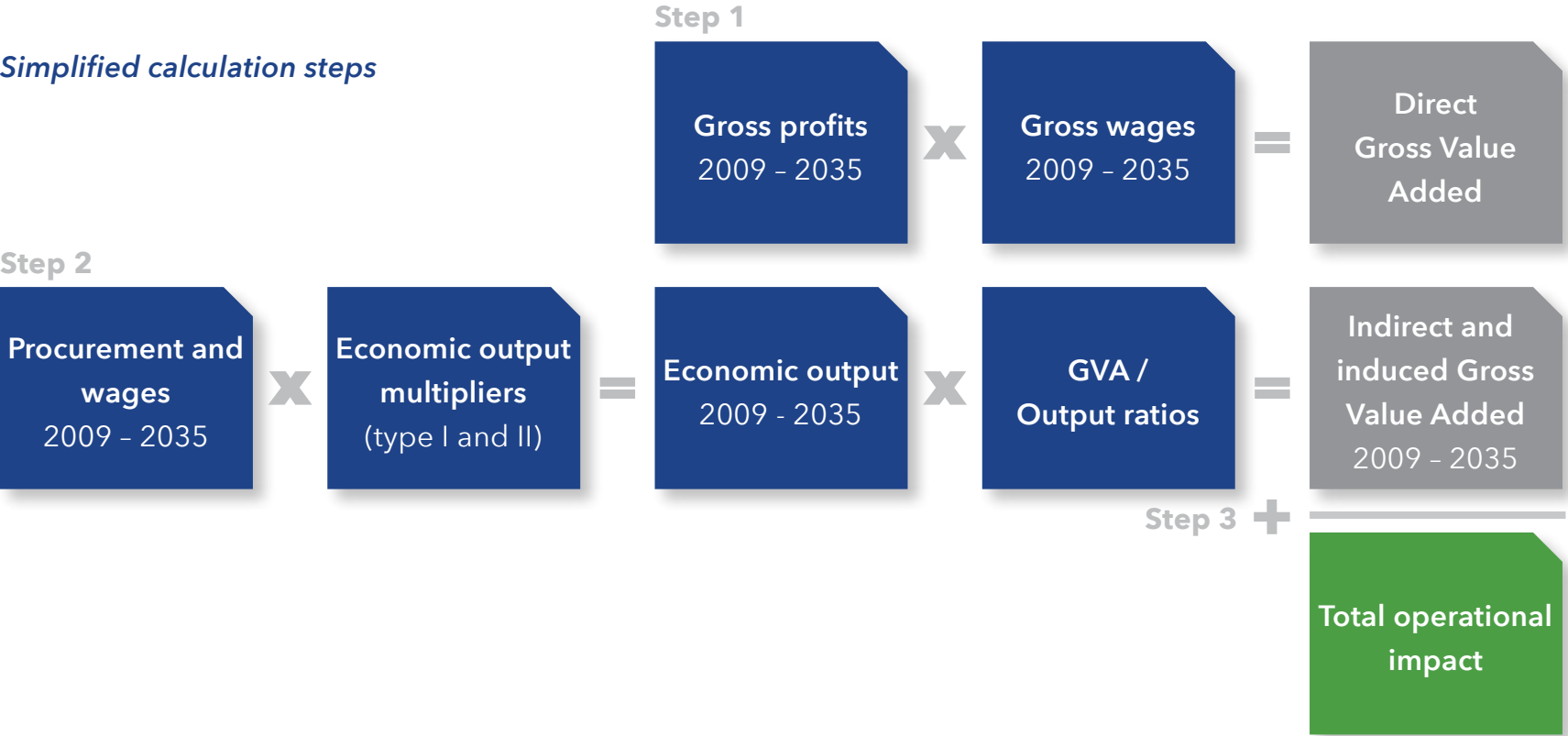
Input-output table	CAPMAS
Employment data	ILO
Capital expenditure data	Dana Gas Egypt

METHODOLOGY: OPERATIONAL IMPACT

SUMMARY OF APPROACH

- The impact of our operations is estimated by adding our direct operational, indirect supply chain, and induced household expenditure impact. Direct operational impact is estimated by adding gross profits and gross wages from our financial forecasts.
- The indirect and induced impact are estimated using procurement and wage data. We adjust this for expenditure with local suppliers and staff and map it against the relevant economic sectors. Subsequently, we apply type I and type II output multipliers and convert it into GVA and employment.

Simplified calculation steps



Key assumptions

The multipliers and the GVA and the Employment ratios are assumed to remain constant over time.

Key data sources used

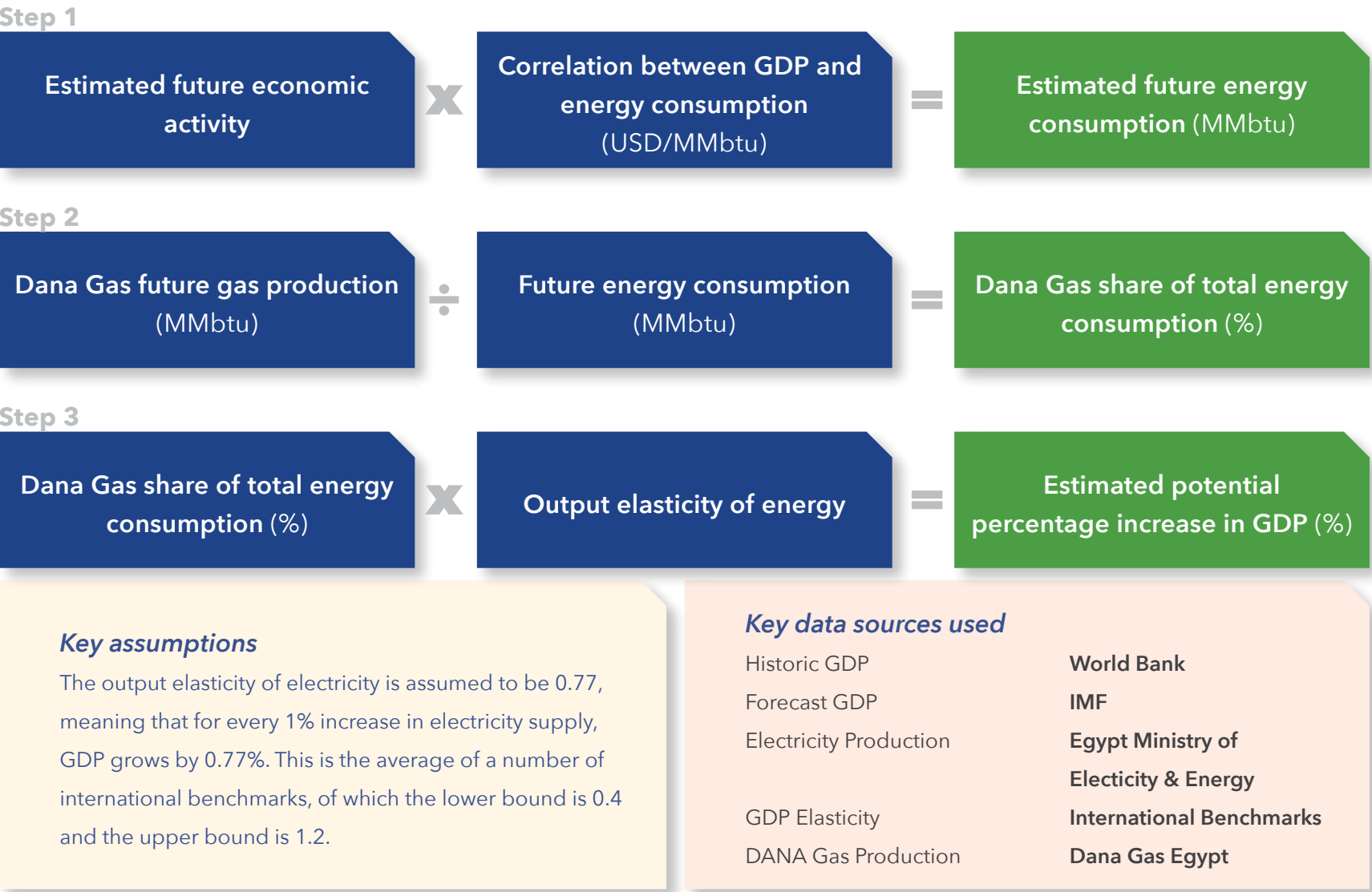
Input-output table	CAPMAS
Employment data	ILO
Procurement data	Dana Gas Egypt
Gross wages	Dana Gas Egypt
Gross profits	Dana Gas Egypt

METHODOLOGY: ENABLED IMPACT

SUMMARY OF APPROACH

- Energy is a key enabler of economic activity. The increase in the supply of energy is therefore a key stimulator of economic growth. To assess our enabled impact, we assess the relationship between energy supply and economic growth.
- Based on economic growth forecasts, and future Dana Gas production, we then estimate what share of future growth is supported by the increase in Dana Gas energy production destined for the domestic market. The conversion of this into its contribution to GDP is done using an output elasticity between economic output and energy consumption.

Simplified calculation steps

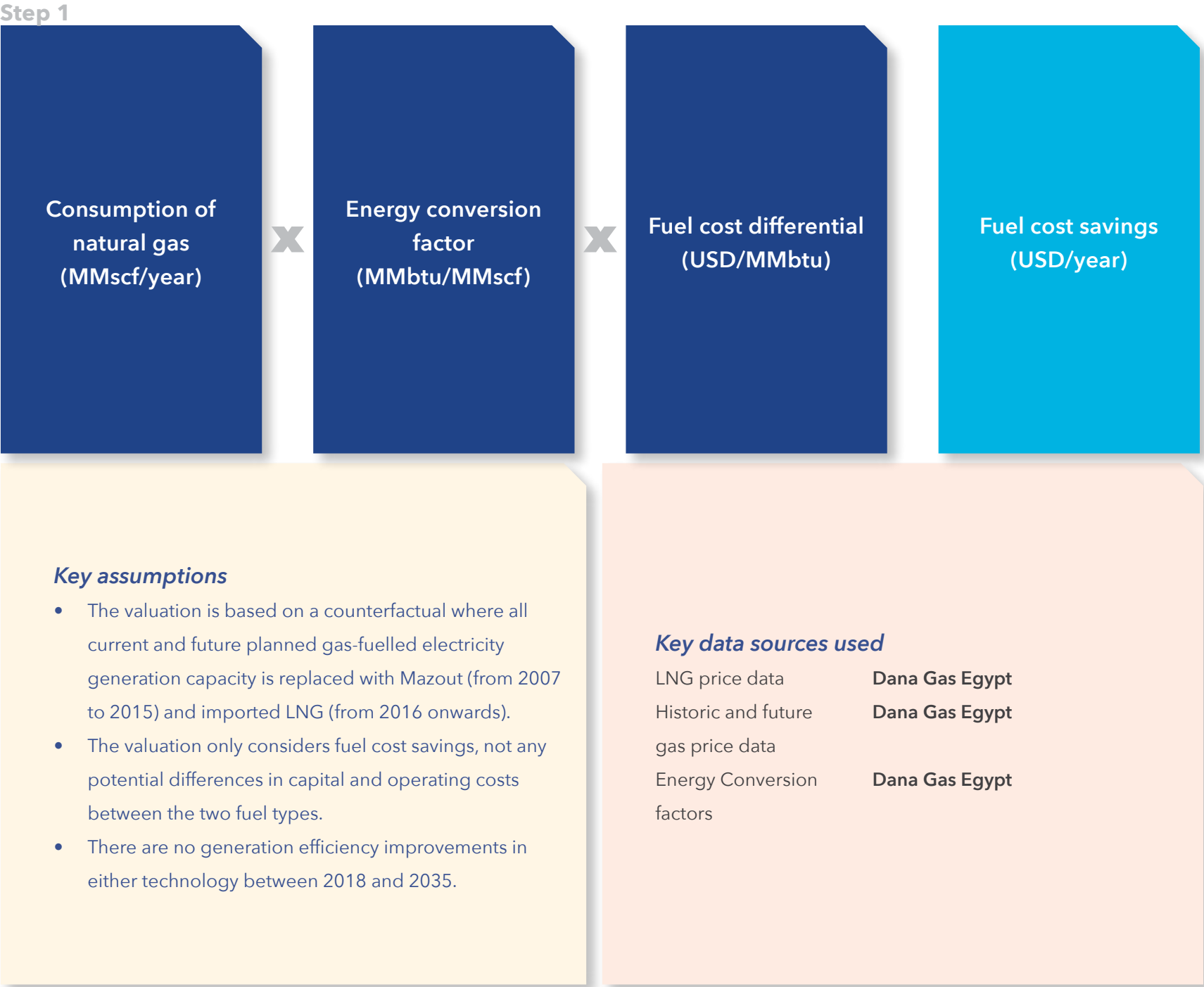


METHODOLOGY: FUEL COST SAVINGS

SUMMARY OF APPROACH

The cost of natural gas is compared to the cost for generating the same amount of energy with the alternative fuels.

Simplified calculation steps



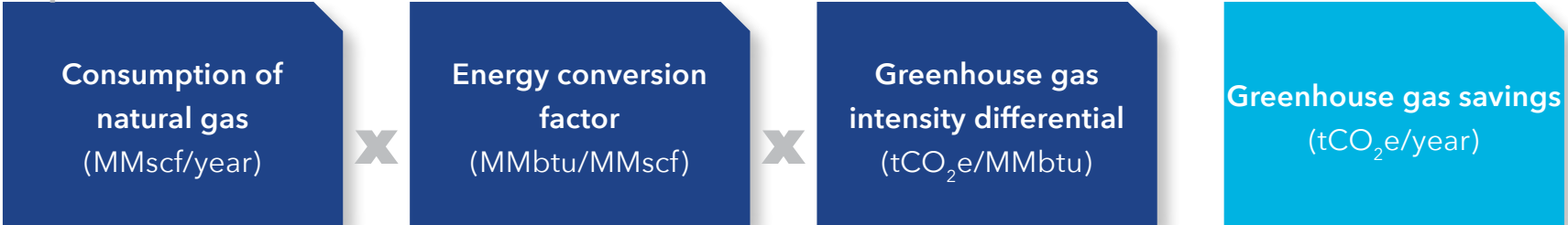
METHODOLOGY: CARBON SAVINGS

SUMMARY OF APPROACH

- We assess carbon savings by comparing the greenhouse gas emissions associated with generating historic and estimated future generation by Mazout (from 2007 to 2015) and imported LNG (from 2016 onwards) against that of natural gas produced locally.
- These physical greenhouse emissions savings are then valued using an average Social Cost of Carbon, which places a value on the social damage incurred from such emissions.

Simplified calculation steps

Step 1



Step 2



Key assumptions

- The greenhouse gas emissions intensity includes both the emissions generated in burning, extracting, and transporting the fuel.
- The Social Cost of Carbon is valued at US\$102 per tonne. The Social Cost of Carbon grows at 3% per annum between 2018 and 2035. This is based on a meta-analysis of academic and other literature compiled by PwC.
- There are no generation efficiency improvements in either technology between 2018 and 2035.

Key data sources used

CO₂ emission factor

Social cost of Carbon

Department for
Business, Energy and
Industrial Strategy
PwC valuation
coefficient

DOCUMENTS AND DATA SOURCES USED

- Central Agency for Public Mobilization and Statistics (CAPMAS), Open Data for Africa (<http://egypt.opendataforafrica.org/tadpaqq>)
- Egypt Ministry of Electricity and Energy (2019), Statistics (http://www.moee.gov.eg/english_new/report.aspx)
- International Energy Agency (2019), Data and Statistics (<https://www.iea.org/data-and-statistics>)
- International Labour Organisation (ILO) (2019), ILOSTAT (<https://ilostat.ilo.org/>)
- International Monetary Fund (IMF) (2019), World Economic Outlook Database (<https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx>)
- UK Department for Business, Energy and Industrial Strategy (2019), Government emission conversion factors (<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>)
- World Bank (2019), World Bank Open Data (<https://data.worldbank.org/>)







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