



**CSI** Energy Group

**Pursuing Engineering Excellence**



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# Our Mission, Vision and Values

## Our Mission

**“Improving lives through enhanced infrastructure and increased access to energy.”**

Electricity fuels economic development. It powers factories and offices, lights up hospitals and schools, allows surgeons to operate, and students to study at night.

***“Access to electricity . . . is the golden thread that connects economic growth, increased social equity, and preservation of the environment.”***

- Former UN Secretary General, Ban Ki-moon, 2012

## At a glance

- » 7 offices
- » 11 countries
- » 25 years in Africa
- » 500+ employees
- » 50+ senior professionals
- » 200+ projects







## Our Vision

**“To be the best in class and the preferred infrastructure organisation.”**

To achieve this, we believe in being the very best in everything we do and pursuing excellence in every way we can.

For us being the ‘best in class’ means delivering infrastructure of an unequalled quality. It means having the best-qualified and most capable people. It means demonstrating attitudes and business ethics that inspire others. And it means ensuring that our health, safety, and environmental protection systems set the standards for our industry.

We believe that by being the very best, we will continue to attract the most innovative clients, the most capable employees, and the greatest expertise, thus remaining the preferred company for developers in our region.

## Our Values

**Our core values define who we are, what we believe in, and how we conduct ourselves in everything we do.**

CSI’s four key values, as enshrined in our code of conduct, are: accountability, effectiveness, openness and honesty. These are the foundations of our business practices, and guide everything we do.

» **Accountability**

» **Openness**

» **Effectiveness**

» **Honesty**



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# Overview

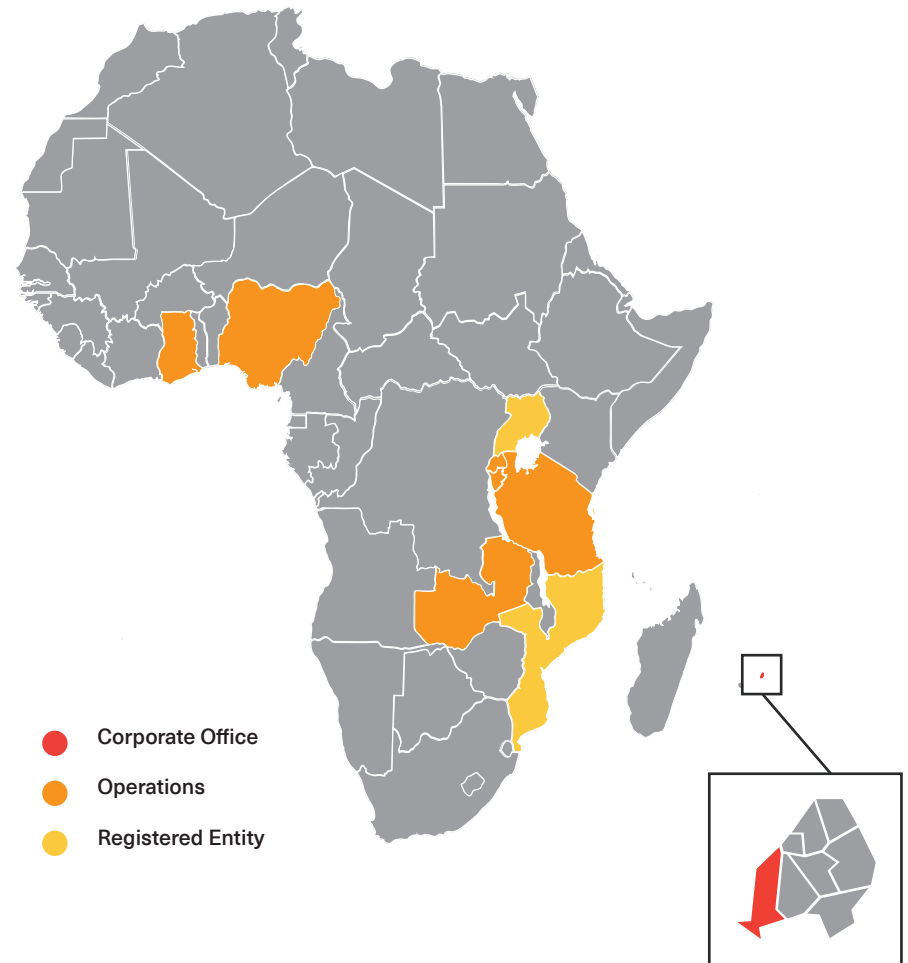
**CSI companies have been the chosen partners of governments and market leaders for more than 25 years, and have supported infrastructure development in 11 countries and 2 continents during that period.**

Our company mission is to improve lives through enhanced infrastructure and increased access to energy, and over the past 25 years we have enhanced the lives of over 50 million people. From remote rural locations to suburban streets, from the heart of our cities to the most challenging and isolated terrains. CSI is committed to creating a brighter future for the communities we work in and the clients we serve.

CSI has successfully completed more than 200 infrastructure projects in Sub-Saharan Africa, working within four key sectors:

- » Oil & Gas
- » Buildings & Commercial Construction
- » Mining & Industry
- » Power & Infrastructure

We pride ourselves on delivering high-quality projects safely, on budget, and on time.

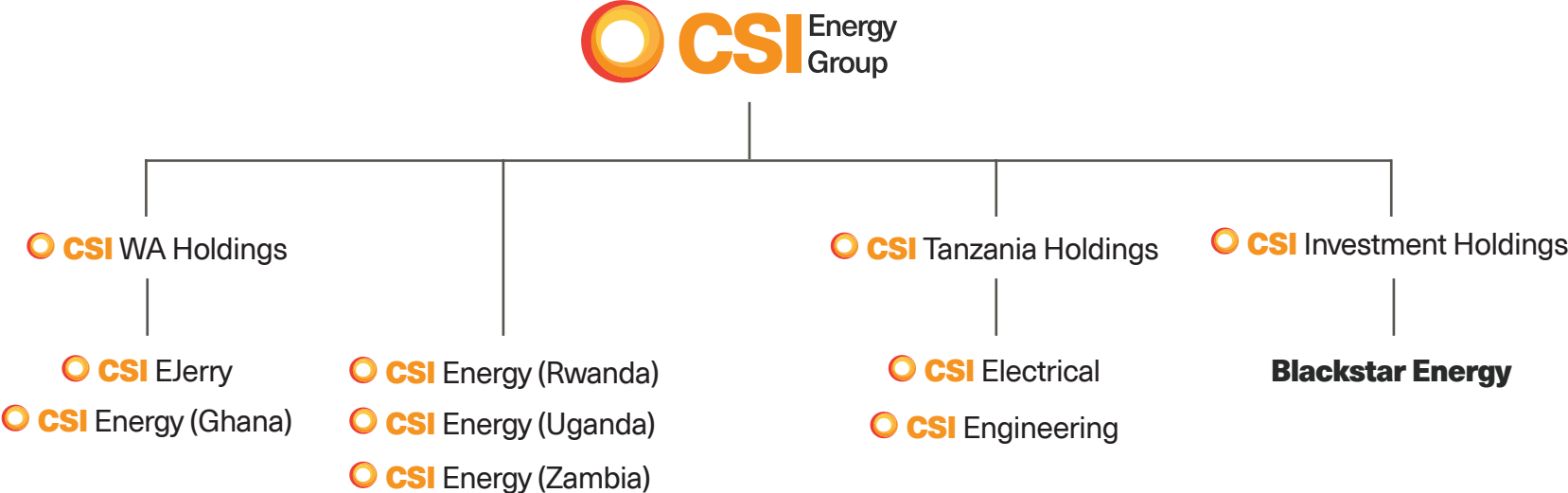


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# Company Structure

CSI Energy Group was established to bring together existing capacity (in CSI Electrical and CSI Engineering) with further expertise from across the region, and provide a one-stop shop for international clients developing energy infrastructure in Sub-Saharan Africa.

CSI Energy Group is registered in Mauritius, and has associate and subsidiary offices spread across Sub-Saharan Africa.



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# Our Leadership

**Our leadership team has worked around the globe, accumulating experience on prestigious projects across Europe, Asia, and Africa.**

We embrace cultural diversity and promote equality. Aspects of our business that we believe have been key to building our dynamic team include, our strong performance across the continent, and our positive impact on the growth and development of sub-Saharan Africa.

We expect our staff to work to the very highest professional standards, to conduct themselves with integrity, and to enforce ethical business practices. They remain our greatest company asset, and we are committed to extending their capacity.



SENIOR MANAGEMENT TEAM

## Christopher Glasson

Chief Executive Officer

A visionary electrical engineering professional with extensive experience in electrical installation and instrumentation works. His leadership has been instrumental and enabled the company to deliver a significant number of complex and high specification projects to international standards for clients in power transmission and distribution, mining, oil and gas and commercial construction sectors.



SENIOR MANAGEMENT TEAM

## Mani Akshaya

Chief Financial Officer

Mani is a chartered management accountant with over 35 years experience in multinational organisations across Africa and Asia. In his capacity as CFO he oversees the financial governance of CSI, helping the company manage risk. He is in charge of monitoring, evaluating, and reporting on all fiscal matters. Mani's exacting standards are essential to the preservation of CSI's good reputation, the achievement of our fiscal goals, and sustained, structured and profitable growth.

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# Our Leadership



SENIOR MANAGEMENT TEAM

## Simon Matthews

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Director-Operations

Simon has worked in power infrastructure development for over 25 years in projects across Europe, Africa and the Middle East. He specialises in complex installations such as substations, distribution lines, and transmission infrastructure. The breadth of his experience and expertise - he erected lattice steel lines in wartime Iraq, and completed the first MV interconnector between Zambia and Tanzania – make him a huge asset to CSI in his capacity as Operations Director.



SENIOR MANAGEMENT TEAM

## Annette Kanora

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Corporate Communications Officer

Annette plays a strategic role in overseeing brand and corporate communications, public relations, stakeholder engagement, corporate social responsibility, and implementing effective internal communications throughout CSI Energy Group. With many years of experience in multi-cultural and multi-national organisations, she brings strong communication and relationship management experience to her role, and a skilled hand to guide the development of our business.



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# Our Leadership



SENIOR MANAGEMENT TEAM

## Tunu Kinabo

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Director-Business Services

Tunu has been building brands, developing effective teams and strategic plans for over a decade. As CSI's Director of Business Services, she provides strategic leadership to our company, planning and guiding effective and professional support services for our projects. Tunu has a Masters in Business Administration, specialising in management and leadership, and has studied and worked in Africa, America and Europe.



SENIOR MANAGEMENT TEAM

## Peter Gathercole

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Director-Business Development

With a substantial network spanning the globe, Peter has installed power plants across 6 countries and 3 continents, working with some of the biggest names in the industry. Passionate about renewable energy, in 2004 he led the gas-to-power project in Mtwara for Artumas, which replaced Tanzania's diesel-fuelled power plants and brought affordable energy to the poorest regions of Tanzania. Peter is tasked with developing CSI's alternative energy portfolio.



# **Our Sectors**

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# Oil and Gas

***“Energy fuels economic development.”***

- Isis Gaddis, Economist, World Bank, 2012

**CSI has been working with the oil and gas industry for over 25 years, successfully delivering projects in both the up and downstream sectors.**

We have been involved in engineering new power plants, modifying existing ones, and commissioning infrastructure for all stages of energy production (from processing to refining to distribution).

As an Engineering, Procurement, and Construction (EPC) contractor we are involved in all stages of a project, taking it from concept to completion, and providing a one-stop shop for our clients.

Our working practices follow international and industry standards, and allow us to deliver high-quality projects with an exceptionally strong safety and environmental performance record.





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# Buildings

*"We shape our buildings, and afterwards, our buildings shape us."*

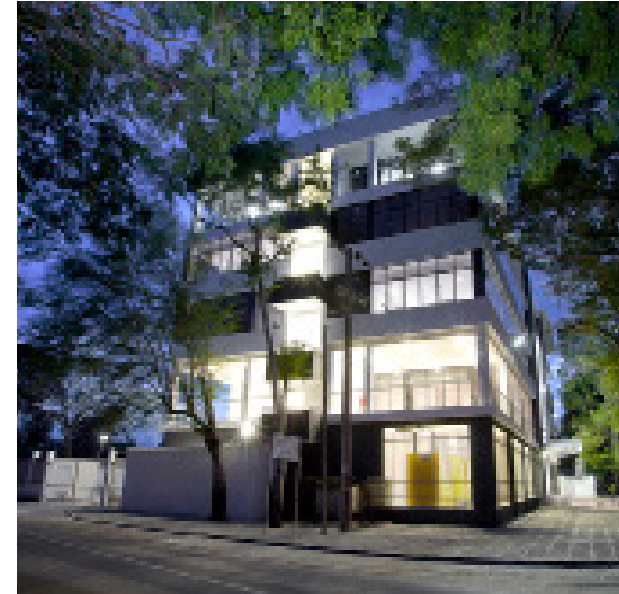
- Winston Churchill, 1944

CSI works with both the public and private sector to construct, refurbish and upgrade buildings across Sub-Saharan Africa.

Our working practices follow international quality, safety and environmental regulations, and we continue to attract clients who value exacting installation standards and a strong life-cycle performance.

From small private developers to owners of vast industrial complexes, we work with a wide range of clients to produce exceptional infrastructure, with a full service scope.

To date, we have successfully improved airports, embassies, offices, hotels and private homes.



# Mining and Industry



*"CSI is highly respected in the region. It has become our contractor of choice for demanding projects, such as complex engineering assemblies and heavy lifting."*

-Project Manager, Jacobsen Elektro

CSI is highly respected in the region. It has become our contractor of choice for demanding projects, such as complex engineering assemblies and heavy lifting.

CSI has long supported the development of the East African minerals sector, successfully improving mining infrastructure across the region.

Our competitive advantage lies in our exceptional expertise, experience and equipment, our ability to offer a full service scope, and our mining specialisms. The latter includes the ability to handle adverse weather conditions, complex and dual lifts, and safely move heavy loads.

Our permanent workshop in Dar es Salaam, together with temporary satellite bases, ensure that we can produce parts locally and in close proximity to operational sites, thus increasing efficiencies, reducing costs, and minimising our environmental footprint.

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# Power and Infrastructure

*“Access to electricity is critical to extend economic opportunities and reduce poverty.”*

- Bella Bird, World Bank Tanzania, 2016

**CSI companies have been at the forefront of energy sector developments in the past decades, helping both to electrify Africa and support the regeneration of a post-war Afghanistan.**

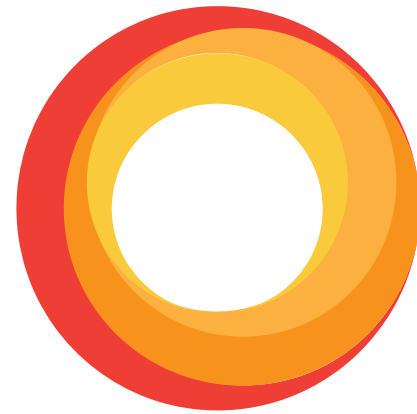
As an Engineering, Procurement, and Construction (EPC) contractor we are involved in all stages of project development, and have expertise in power generation, transmission and distribution.

To date, we have built 2 hydroelectric power plants, 15 individual power plants, and 30 transmission substations.

Our senior managers have also overseen the installation of more than 2,400 kilometres of electrical distribution and transmission lines.

Together our projects generate more than half of Tanzania’s total installed capacity, contributing more than 800 MW to the national grid.





# Capabilities

# Electrical Capabilities



CSI can carry out electrical installations of any type, size, scale and complexity, from high-voltage transmission to low-voltage control. Our electrical capability covers the entire spectrum from generation to distribution to transmission.

In terms of power generation, we have expertise in all forms of thermal power plant systems including those fuelled by light and heavy oils (LFO/HFO), natural gas (both open and combined cycle), geothermal and hydropower. We are also developing our capacity in gas-to-power applications, and investing in technologies that utilise natural resources such as solar, wind, and bio fuels.

Other capacities include:

- » Electrical transmission and distribution infrastructure (both overhead and underground);
- » Substations and switchyards (including greenfield infrastructure and refurbishments up to 400kV);
- » Control and instrumentation systems;
- » Security systems, fire alarms, fibre optics and telecommunication services;
- » A full scope of building services.





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# Engineering Capabilities

**CSI is able to carry out all aspects of the engineering process from specialist material fabrication to structure erection.**

Our 10,000m<sup>2</sup> workshop in Dar es Salaam is equipped with rolling, cutting, bending and welding equipment, which allows us to produce tailor-made materials and parts. All our products are manufactured to international safety standards in a timely and cost-effective manner.

Other capabilities include:

- » Power plant erection;
- » Gas tanks and liquid storage vessels;
- » Structural steel;
- » Pipes and piping systems;
- » Mining plant installations;
- » Installations requiring complex lifting.





# **Our Projects**

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# Power





## 220 kV Extension to Dodoma Substation

### Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	FITCHNER ENGINEERING, GERMANY
<b>CONTRACTOR :</b>	HYOSUNG
<b>VALUE :</b>	US\$ 1.9 MILLION
<b>START DATE :</b>	NOVEMBER 2014
<b>COMPLETION DATE :</b>	OCTOBER 2015

CSI supported the Tanzania Electric Supply Company (TANESCO) to improve high voltage electrical infrastructure, extend grid coverage and increase access to electricity throughout the country.

Partnering with Korean contractor, Hyosung Corporation, CSI was responsible for civil and electrical works to extend 220kV substations in Dodoma and Iringa. Key deliverables included expanding the substation by 35,000m<sup>3</sup> with newly-imported fill material, constructing 300 new-equipment foundations, installing 3No 15 MVA shunt reactors, and erecting 9No new 220kV feeder bays.

The project was executed to international quality and safety standards and is another excellent example of CSI's capacity in the high-voltage power.



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## KIA Substation Expansion

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### Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	BYUCKSAN POWER CO. LTD, SEOUL, KOREA
<b>CONTRACTOR :</b>	GS ENGINEERING & CONSTRUCTION
<b>VALUE :</b>	US \$2.2 MILLION
<b>START DATE :</b>	NOVEMBER 2013
<b>COMPLETION DATE :</b>	DECEMBER 2015

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Continuing CSI Electrical association with GS Engineering and Construction of Korea, CSI is carrying out the expansion of the 132kV substation at Kilimanjaro International Airport. Responsible for the entire substation expansion works including civils, electrical and erection works.

The project is carried out in strict accordance with client's quality, health and safety standards. Project materials are procured from Italy, South Africa, and Europe to ensure that the extension matches the existing substation design and detailing.

Utilizing an entirely Tanzanian installation workforce this project further demonstrates our capability in the High Voltage sector.





# Emergency Improvement of Electrical Supply Facilities, Nigeria

## Project Summary

<b>CLIENT :</b>	TRANSMISSION COMPANY OF NIGERIA (TCN)
<b>ENGINEER/CONTRACTOR :</b>	TOYOTA TSUSHO CORPORATION & HITACHI PLANT CONSTRUCTION
<b>SUB-CONTRACTOR</b>	CSI EJERRY NIGERIA
<b>VALUE :</b>	US \$250,000
<b>START DATE :</b>	SEPTEMBER 2017
<b>COMPLETION DATE :</b>	MARCH 2018

Power capacity in Nigeria does not yet meet demand. As a result, there are frequent power outages across the country, with Abuja and its neighbours only on grid for an average of eight hours a day (JICA, 2016).

This project was designed to build capacity at two critical substations – Apo (in Abuja) and Keffi (in adjacent Nasarawa). CSI was contracted to install, test and commission key infrastructure, including 132kv cabling, circuit breakers, line switches, transformers, lighting arrestors, power capacitors, gantries, overhead lines, control/protection panels, and earthing systems.

CSI's interventions have contributed to a more stable power supply for the region's 3.2 million people, which, in turn, is stimulating economic activities, improving residential lives and supporting national infrastructure.

CSI's interventions have brought more reliable power to infrastructure across the region including Abuja Airport, the city's Assembly and Stadium, and the National Hospital.



# Takaoka Dar

## Project Summary

<b>CLIENT :</b>	TANESCO
<b>CONTRACTOR :</b>	mitsubishi, iwata chizaki, TAKAOKA ENGINEERING
<b>VALUE :</b>	US \$1.37 MILLION
<b>START DATE :</b>	JANUARY 2016
<b>COMPLETION DATE :</b>	MAY 2017

This 17-month project reinforced power distribution across the entire region of Dar es Salaam.

It resulted in the construction of 3 new substations (33/11kV), as well as the rehabilitation and expansion of two additional substations (with 132/33/ and 33/11kV respectively). These efforts boosted the installed distribution capacity of Tanzania's commercial region, by 132kV.

Working with Japanese engineer, Takaoka, CSI was tasked with overseeing the electrical installations for all plants (including transformers, switch gears, power control cables, circuit breakers and surge arrestors).

The project demonstrates CSI's continual support of national development through large-scale energy infrastructure projects.





# Kinyerezi I Extension Power Plant (185MW)

## Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	CITEC
<b>CONTRACTOR :</b>	JACOBSEN ELEKTRO AS, NORWAY
<b>VALUE :</b>	US \$3.9 MILLION
<b>START DATE :</b>	AUGUST 2018
<b>COMPLETION DATE :</b>	ONGOING

The commissioning of the Kinyerezi power plant is another important milestone in the growth of Tanzania's domestic energy sector. The plant, located on the outskirts of Dar es Salaam, can run on both natural gas and jet fuel and is powered by four LM6000PF dual-fuel turbine generators. It will add 150 MW to the national grid, thus helping close the gap between Tanzania's energy capacity and requirements.

This project was the second collaboration between CSI and Jacobsen Elektro, with CSI tasked with Mechanical, electrical and piping works for installation of 4, 2, 6 nos of step-up, step-down and chiller transformers respectively, 220kV switchyard, HV equipment and 8 x control panels and cabling and 4 x generators.

This project demonstrates once again CSI's ability to collaborate with partners to deliver turnkey projects for major clients including governments, parastatals, and private companies.



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## Kinyerezi II Combined Cycle Power Plant (240 MW)

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### Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	LAHMEYER ENGINEERING, GERMANY
<b>CONTRACTOR :</b>	TOSHIBA PLANT SYSTEMS AND SERVICES COMPANY
<b>VALUE :</b>	US\$ 15 MILLION
<b>START DATE :</b>	DECEMBER 2016
<b>COMPLETION DATE :</b>	OCTOBER 2018

CSI is proud to be supporting the construction of Tanzania's first combined-cycle power plant. The plant, on the outskirts of Dar es Salaam city, will add 240 MW to the national grid, and is expected to generate almost 15% of the country's total power capacity by 2018. Fuelled by natural gas piped from Mnazi Bay, the plant is expected to save Tanzania up to a billion dollars a year by reducing dependency on oil imports.

CSI has been contracted to erect all the plant's electromechanical equipment including six gas turbines, two steam turbines, heat recovery steam generator (HRSG) units, Balance of Plant (BOP) packages, as well as provide full cabling and piping structures. This landmark project reflects CSI's reputation as the partner of choice for clients seeking engineering and infrastructure excellence.





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## Olkaria 3 Expansion Project 15 MW Geothermal Power Plant

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### Project Summary

<b>CLIENT :</b>	ORMAT TECHNOLOGIES INC.
<b>ENGINEER :</b>	ORMAT TECHNOLOGIES INC.
<b>CONTRACTOR :</b>	CSI ENERGY GROUP
<b>VALUE :</b>	US\$ 2.15 MILLION
<b>START DATE :</b>	NOVEMBER 2017
<b>COMPLETION DATE :</b>	APRIL 2018

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CSI is proud to support Kenya's ambitious goals for electrification and energy mix where the country is aiming to expand its geothermal power production capacity to 5,000 MW by 2030.

Upon completion, the Olkaria 3 Expansion Project will render 154 MW, bringing the country's total installed geothermal capacity to 651 MW and the overall installed capacity to a little over 2,500 MW.

CSI's scope covers mechanical and piping installations including air cooler condenser, turbine and generator, motive fluid tank, firefighting systems, steam gathering piping installations, insulation works and modification of early generation plant and existing plant ties ins.



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## Reinforcement of Power Distribution on Unguja

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### Project Summary

<b>CLIENT :</b>	ZANZIBAR ELECTRICITY CORPORATION (ZECO)
<b>ENGINEER :</b>	YACHIO ENGINEERING CO LTD, JAPAN
<b>CONTRACTOR :</b>	MITSUBISHI CORP/ TAKAOKA ENGINEERING
<b>VALUE :</b>	US \$1.3 MILLION
<b>START DATE :</b>	NOVEMBER 2011
<b>COMPLETION DATE :</b>	FEBRUARY 2013

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This project has improved the quality of electrical supply for the entire population of Unguja Island (some 1.3 million people).

Working with Japanese giants, Mitsubishi and Takaoka, CSI was the chief electrical subcontractor on this project and responsible for: the installation, commissioning and completion of five 5/25 MVA power transformers (11-33kV); lengthy distributions lines (62 km of 33 kV overhead transmission lines and 22km of conductor lines); cable terminations (120 of 33kV); control cubicles (11-33kV); and protection for three electrical switchyards.

This highly successful initiative - also part of Tanzania's Rural Electrification Expansion Programme, was completed in 14 months with a predominantly Tanzanian workforce, and demonstrates the high quality of work that can be achieved by a locally-grown company employing local staff.





## Ubungo II Power Plant (100 MW)

### Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	POWER ENGINEERS, USA
<b>CONTRACTOR :</b>	JACOBSEN ELEKTRO AS, NORWAY
<b>VALUE :</b>	US \$1.45 MILLION
<b>START DATE :</b>	2010
<b>COMPLETION DATE :</b>	2011

The Ubungo II Power Plant was constructed over a 14-month period and has doubled the capacity of the Ubungo I plant. The two power stations together upgrade the previous oil-dependent plant, and both are fuelled by a pipeline which brings natural gas from the fields of Songo Songo Island, some 225km away.

Working with Norwegian EPC contractor, Jacobsen Electro AS, CSI was tasked with overseeing mechanical erections and assembly for the entire plant. This included installing 3 Siemens SGT 800 gas turbines, generators, Balance of Plant (BOP) packages, as well as air-intake, fire-fighting and water-processing systems.

The three gas turbines have a total capacity of 100 MWs, and each unit is installed with an 11kV/132 kV transformer. The accompanying 132 kV switchyard extension is interconnected with the existing Ubungo Substation through a 350-metre 132 kV underground XLPE cable.



## Kilimanjaro Electrification Project

### Project Summary

<b>CLIENT :</b>	TANESCO
<b>ENGINEER :</b>	YACHIO ENGINEERING CO LTD, JAPAN
<b>CONTRACTOR :</b>	MITSUBISHI CORP / AICHI ENGINEERING
<b>VALUE :</b>	US \$2.632 MILLION
<b>START DATE :</b>	FEBRUARY 2012
<b>COMPLETION DATE :</b>	MARCH 2013

In 2011, only around 2% of rural Tanzanians had access to electricity. To address this, a national Rural Electrification Expansion Programme began with the aim of expanding access to all by 2021

As part of these efforts, CSI partnered with Mitsubishi and Aichi to construct and upgrade six substations in the Kilimanjaro region. Key deliverables included: the installation and commissioning of six 25/30 MVA power transformers (11-66kV), the construction of feeder bays (33-66kV), the installation of control cubicles (11-33kV) and the completion of almost 200 cable terminations (11-66kV).

This project demonstrates CSI's ability to carry out infrastructure developments to rigorous international specifications and standards, to finish projects ahead of schedule and to have a major impact on the lives of local communities: an estimated 1.5 million people now have access to electricity as a result of this project.





## Core Water Supply Network and Backbone Rehabilitation in Lusaka Water Supply, Sanitation and Drainage (LWSSD)

### Project Summary

<b>CLIENT:</b>	MILLENNIUM CHALLENGE ACCOUNT ZAMBIA
<b>ENGINEER/CONTRACTOR:</b>	UWP-CONSULTING / DENYS
<b>SUB CONTRACTOR:</b>	CSI ENERGY GROUP - ZAMBIA
<b>VALUE:</b>	USD 3.1 M
<b>CONSTRUCTION PERIOD:</b>	JULY 2017, ON-GOING

The Millennium Challenge Account – Zambia Limited intends to support the Lusaka Water Supply, Sanitation and Drainage Project by the execution of the Core Water Supply Network and Backbone Rehabilitation in Lusaka (CP 1 & 2). CP1 consists of the rehabilitation of Iolanda water treatment plant, transmission and distribution centres and includes the rehabilitation of existing infrastructures, including civil works, electrical & mechanical works to enable improvement of the water treatment process to reinstate the design capacity to 110,000 m<sup>3</sup>/d from the present capacity of about 98,000 m<sup>3</sup>/d. CP2 strengthens the primary water distribution system in Lusaka in order to efficiently transfer water received from Iolanda Water Treatment Plant to the distribution centers within Lusaka city. About 16KM of DN700 and DN900 pipeline is to be executed.

In 2017, CSI Energy Group was awarded the contract to execute the full engineering, supply and installations for electrical services that comprises the installation of new 3.3kV medium voltage switchboards, medium voltage soft starters for pumps, low voltage MCC's (Motor Control Centre) including the underground and overhead 3.3kV ACSR conductors, and installation of instrumentation equipment and its complete cabling system.



## Reinforcement of Power Supply to Accra Central, Ghana

### Project Summary

<b>CLIENT :</b>	GHANA GRID CO. LTD.
<b>ENGINEER/CONTRACTOR :</b>	TOYOTA TSUSHO CORPORATION & HITACHI PLANT CONSTRUCTION
<b>SUB-CONTRACTOR</b>	CSI ENERGY GHANA
<b>VALUE :</b>	USD 530K
<b>START DATE :</b>	JANUARY 2018
<b>COMPLETION DATE :</b>	OCTOBER 2018

Power capacity in Ghana does not yet meet the demand. As a result, there are frequent power outages across the country. This project was designed to build capacity at Accra centre to assist in the reduction of this problem.

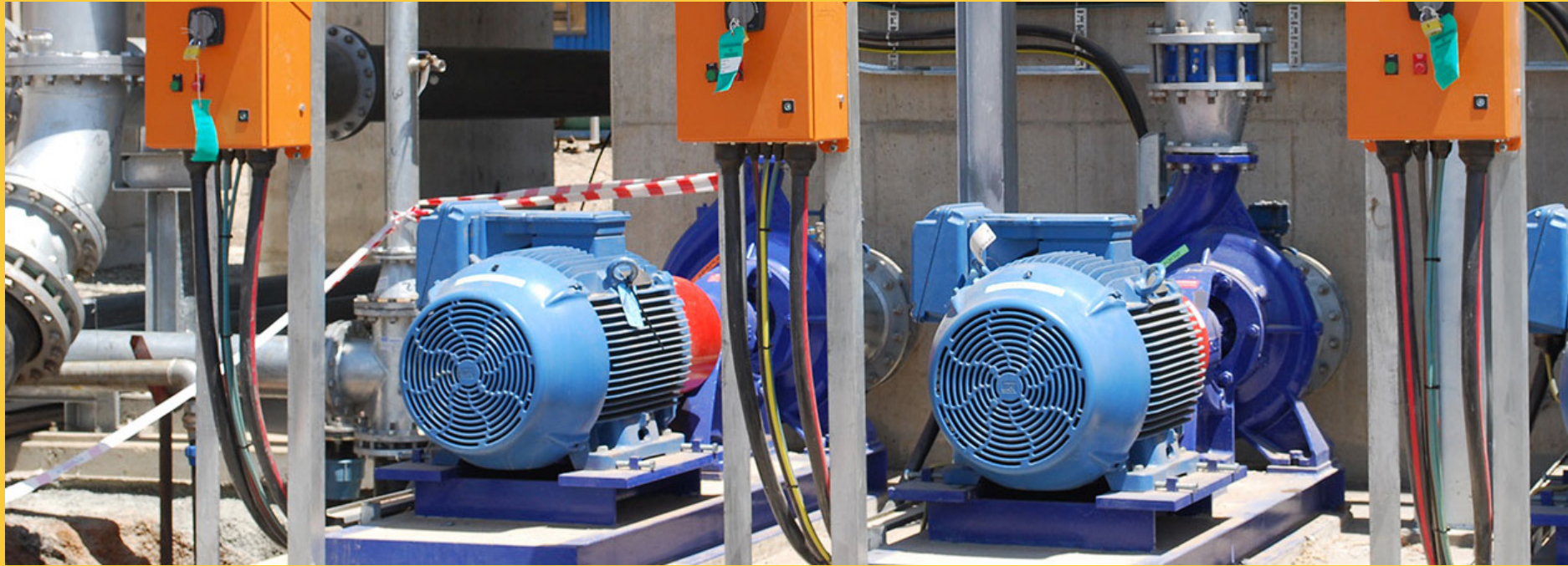
In 2018, CSI Energy Group in collaboration with Toyota Tsusho Corporation & Hitachi Plant Construction was awarded the contract to execute several installation activities on grid in Ghana. Our work included the installation of 161 kV Gas Insulated Switchgear ( GIS ), 161/34.5kV/125MVA Transformer, 33/0.4kV 200kVA Transformer, SCADA system, Energy meter panel control & protection panel, Low voltage AC System (AC Board), DC system (Distribution Board, Battery Charger and Battery), 161kV power cable, 33kV power cable, Low voltage, Control and instrument cables, Telecommunication cable and accessories(Fiber optic cable) cable trays, supports and accessories and earthing system.

CSI interventions have contributed to a more stable power supply in the region, which, in turn is stimulating economic activities, improving lives and supporting national infrastructure.

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# Mining & Industry





## Bulyanhulu Gold Mine: Installation of Bulk Air Cooling System

### Project Summary

<b>CLIENT :</b>	AFRICAN BARRICK GOLD
<b>ENGINEER :</b>	BLUHM BURTON ENGINEERING
<b>CONTRACTOR :</b>	BLUHM BURTON ENGINEERING
<b>VALUE :</b>	US \$260,000
<b>START DATE :</b>	SEPTEMBER 2012
<b>COMPLETION DATE :</b>	NOVEMBER 2012

The construction of the Bulyanhulu refrigeration plant has improved working conditions for hundreds of underground workers in this remote northern Tanzania mine.

Installed in 2012, the new bulk air-cooling system channels cold air from the surface refrigeration plant, down a ventilation shaft to underground working areas, which are some of the deepest in Tanzania. CSI carried out the installation (which included medium and low voltage instrumentation, data cabling and reticulation works) in just three months using a 15-strong crew of electricians and boilermakers.

Partnering with Enikon, as well as South African design contractor, Bluhm Burton Engineering, this project is another excellent example of CSI's ability to deliver international quality installations on schedule and without a safety incident.

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# Buildings



## Best Western Plus Peninsula Hotel

### Project Summary

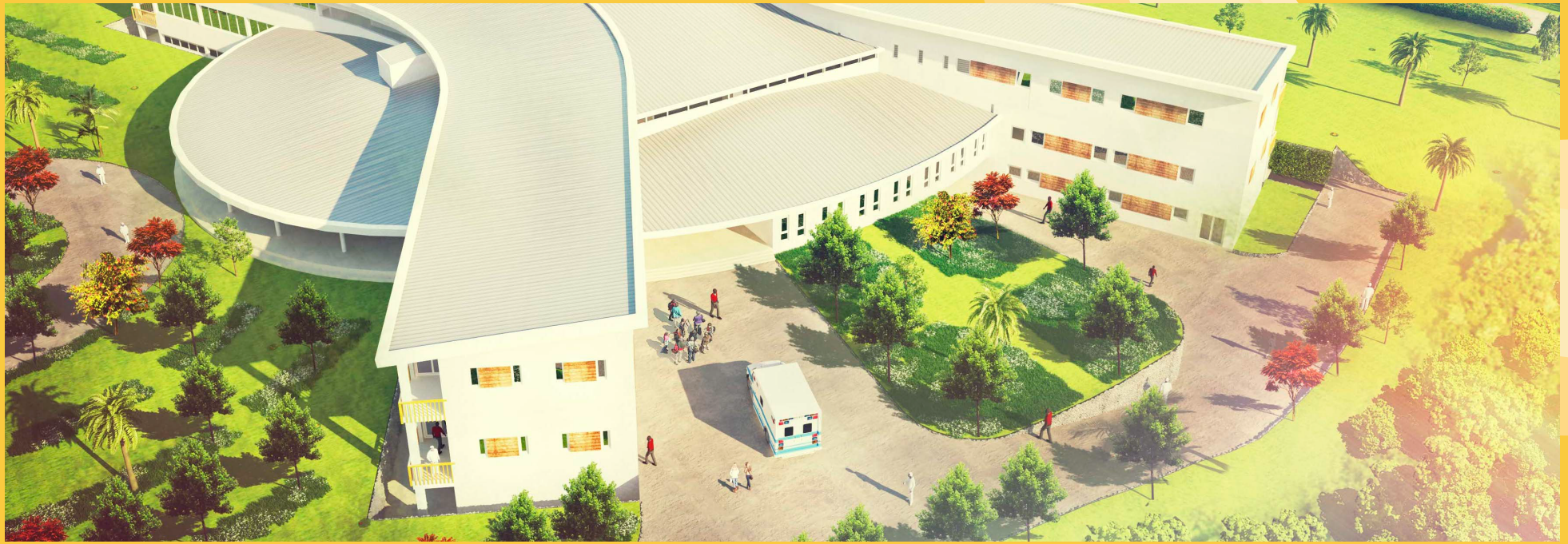
<b>CLIENT :</b>	NEW MASAKI HOTELS
<b>ENGINEER :</b>	M.L ENGINEERING CONSULTANCY
<b>CONTRACTOR :</b>	RT CONSTRUCTION LTD
<b>VALUE :</b>	US \$0.28 MILLION
<b>START DATE :</b>	FEBRUARY 2010
<b>COMPLETION DATE :</b>	APRIL 2012

The Best Western Peninsula is a modern boutique hotel, which opened its doors in January 2011 to accommodate both tourists and business travelers.

Working closely with our client's architects and interior designers, CSI was responsible for the design, installation and commissioning of mechanical, electrical and plumbing services throughout the hotel, including through bedrooms, suites, restaurants, bars, shops, conference / banqueting rooms, business and reception areas, as well as health and fitness centers.

This was CSI's first design-and-build project in Tanzania, and showcases our ability to deliver a broad range of service utilities to the design-standards required by the luxury hotel market.





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## Women's Health Pavilion and Surgical Training Centre (WHP), Burundi

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### Project Summary

<b>CLIENT :</b>	VILLAGE HEALTH WORKS
<b>ENGINEER/CONTRACTOR :</b>	JAROS, BAUM AND BOLLES (JB&B) / ROKO CONSTRUCTION
<b>SUB CONTRACTOR :</b>	CSI ENERGY GROUP – BURUNDI
<b>VALUE :</b>	USD 4.8MIL
<b>CONSTRUCTION PERIOD:</b>	JULY 2017, ON-GOING

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In 2006, Village Health Works (VHW), a New York-based non-profit organization founded by a Burundian doctor, established a health care facility located in Kigutu, Burundi, VHW is rapidly expanding, with plans for a new Women's Health Pavilion, a 120-bed state-of-the-art hospital and teaching facility that will provide emergency obstetrics care and to meet the specific needs of the people around the villages.

CSI Energy Group's scope is for full MEP works (mechanical, electrical and plumbing) extending from design and engineering to material supply and installations while working closely with Kigali based contractor – Roko Construction.





# Mount Meru Hotel

## Project Summary

<b>CLIENT :</b>	MOUNT MERU HOTEL
<b>ENGINEER :</b>	COWI TANZANIA LTD
<b>CONTRACTOR :</b>	HOLTAN (EA) LIMITED
<b>VALUE :</b>	US \$1.1 MILLION
<b>START DATE :</b>	NOVEMBER 2009
<b>COMPLETION DATE :</b>	MARCH 2011

Mount Meru is one of the most prestigious hotels in Arusha, and an iconic landmark of the city. The six-floor hotel was built in 1978, and by 2010 required a complete refurbishment and modernization.

Working under principal contractor, Holtan East Africa Ltd, CSI was responsible for upgrading the electrical installations (including low and medium voltage power and lighting) throughout the hotel's 178 sleeping rooms, 4 presidential suites, restaurants, bars, conference / banqueting halls, spa, health and fitness centers.

This project demonstrates CSI's capacity to design, source, fabricate and install high-quality electrical infrastructure to the standards required by the luxury tourism industry. His Excellency, President Kikwete, officially reopened the hotel in December 2010.



## TACAIDS Headquarters: A New Building

### Project Summary

<b>CLIENT :</b>	TANZANIA COMMISSION FOR AIDS (TACAIDS)
<b>ENGINEER :</b>	COWI TANZANIA LTD
<b>CONTRACTOR :</b>	HOLTAN EAST AFRICA LTD
<b>VALUE :</b>	US \$1.9 MILLION
<b>START DATE :</b>	NOVEMBER 2011
<b>COMPLETION DATE :</b>	MARCH 2013

The new headquarters of the Tanzania Commission for AIDS (TACAIDS) is a landmark building, the first in Tanzania – and perhaps the whole of East Africa – to be lit entirely by LEDs and to have a supplementary photovoltaic power supply to off-set national grid consumption. Working with Holtan East Africa, CSI has used eco-conscious design, construction and engineering, to help TACAIDS reduce its environmental footprint.

Notable installations in the new 4000m<sup>2</sup> office space include solar-generated hot water, a potable water drinking plant, and photovoltaic cells to power life safety services. The project is an excellent example of CSI's success with eco-conscious designs and engineering solutions.





## JNIA Terminal 3 Dar es Salaam, Tanzania

### Project Summary

<b>CLIENT :</b>	TANZANIA AIRPORT AUTHORITY
<b>ENGINEER :</b>	ARAB CONSULTING ENGINEERS
<b>CONTRACTOR :</b>	BAM INTERNATIONAL BV
<b>VALUE :</b>	US\$ 28 MILLION
<b>START DATE :</b>	FEBRUARY 2015
<b>COMPLETION DATE :</b>	ONGOING

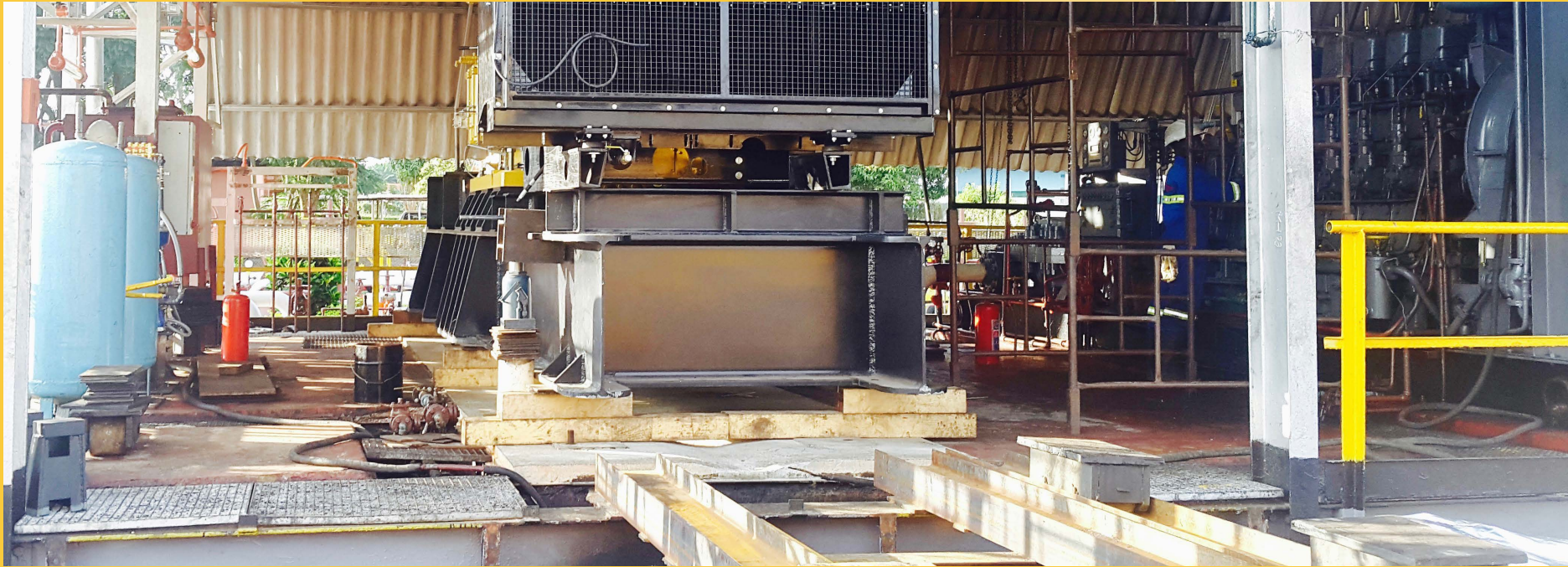
CSI working with BAM International of the Netherlands is carrying out the entire electrical installation to the new 35,000m<sup>2</sup> terminal at Julius Nyerere International Airport. CSI specific scope for the project being carried out on a design and build basis includes medium voltage, main distribution, lighting, small power, earthing and lightning protection, fire detection, public address and evacuation systems amongst others.

With over 12,500 meters of cable trays and 125,000 meters of cables being installed, CSI Electrical further demonstrates its capacity to carry out projects to international health, safety and quality standards.

Designed to serve 6million passengers the project stands as a shining example of CSI status as best in class electrical contractor in East Africa.

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# Oil & Gas



## Rehabilitation & Upgrade of Chinsali Pumping Station

### Project Summary

<b>CLIENT :</b>	TAZAMA PIPELINES LTD (OWNED BY THE GOVERNMENT OF ZAMBIA & TANZANIA)
<b>CONTRACTOR :</b>	MANTRAC TANZANIA LTD
<b>SUB-CONTRACTOR :</b>	CSI ENGINEERING, PART OF CSI ENERGY GROUP
<b>VALUE :</b>	US \$800,000
<b>START DATE :</b>	February 2017
<b>COMPLETION DATE :</b>	September 2017

The 1,710km Tazama pipeline was built in 1968 to transport crude oil from the port of Dar es Salaam to refineries in Tanzania and Zambia. Although parts of the pipeline were rehabilitated in the early 1990s, two decades later Tazama was dilapidated, prone to leakages and operating well below capacity.

In 2013, the Governments of Zambia and Tanzania commissioned Mantrac to rehabilitate the entire pipeline, with CSI sub-contracted to upgrade three pumping stations. Works on the Chinsali station (in Muchinga Province, Zambia) included the replacement of old engines with new 3508 CAT units, together with the commissioning of SPX BB3 pumps and VOITH fluid coupling turbos.

Improvements at Chinsala – together with upgrades at six other stations – are expected to ameliorate the capacity of Tazama, pushing it from its current handling (600,000 tonnes) to a potential 1.1 million tonnes per year.





## Rehabilitation & Upgrade of Elfons Pass Pumping Station

### Project Summary

<b>CLIENT :</b>	TAZAMA PIPELINES LTD (OWNED BY THE GOVERNMENT OF ZAMBIA & TANZANIA)
<b>CONTRACTOR :</b>	MANTRAC TANZANIA LTD
<b>SUB-CONTRACTOR :</b>	CSI ENGINEERING, PART OF CSI ENERGY GROUP
<b>VALUE :</b>	US \$740,000
<b>START DATE :</b>	February 2015
<b>COMPLETION DATE :</b>	September 2015

The 1,710km Tazama pipeline was built in 1968 to transport crude oil from the port of Dar es Salaam to refineries in Tanzania and Zambia. Although parts of the pipeline were rehabilitated in the early 1990s, two decades later Tazama was dilapidated, prone to leakages and operating well below capacity.

In 2013, the Governments of Zambia and Tanzania commissioned Mantrac to rehabilitate the entire pipeline, with CSI sub-contracted to upgrade three pumping stations. Works on the Elfons Pass pumping station (in the town of Mikumi) included the replacement of old engines with new 3508 CAT units, together with the commissioning of SPX BB3 pumps and VOITH fluid coupling turbos.

Improvements at the Elfons Pass – together with upgrades at six other stations – are expected to ameliorate the capacity of Tazama, pushing it from its current handling (600,000 tonnes) to a potential 1.1 million tonnes per year.





## Rehabilitation & Upgrade of Kigamboni Pumping Station

### Project Summary

<b>CLIENT :</b>	TAZAMA PIPELINES LTD (OWNED BY THE GOVERNMENT OF ZAMBIA & TANZANIA)
<b>CONTRACTOR :</b>	MANTRAC TANZANIA LTD
<b>SUB-CONTRACTOR :</b>	CSI ENGINEERING, PART OF CSI ENERGY GROUP
<b>VALUE :</b>	US \$540,000
<b>START DATE :</b>	February 2013
<b>COMPLETION DATE :</b>	September 2013

The 1,710km Tazama pipeline was built in 1968 to transport crude oil from the port of Dar es Salaam to refineries in Tanzania and Zambia. Although parts of the pipeline were rehabilitated in the early 1990s, two decades later Tazama was dilapidated, prone to leakages and operating well below capacity.

In 2013, the Governments of Zambia and Tanzania commissioned Mantrac to rehabilitate the entire pipeline, with CSI sub-contracted to upgrade three pumping stations. Works on the Kigamboni station (in Dar es Salaam) included the replacement of old engines with new 3508 CAT units, together with the commissioning of SPX BB3 pumps and VOITH fluid coupling turbos.

Improvements at Kigamboni – together with upgrades at six other stations – are expected to ameliorate the capacity of Tazama, pushing it from its current handling (600,000 tonnes) to a potential 1.1 million tonnes per year.



# Mtwara Port Rehabilitation

## Project Summary

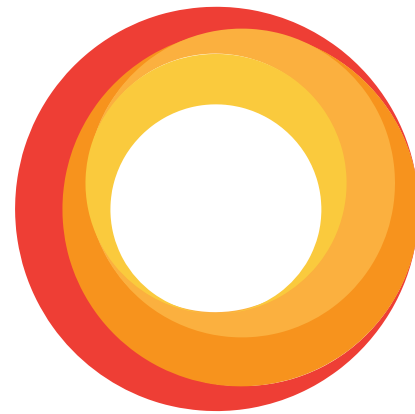
<b>CLIENT :</b>	BG INTERNATIONAL LTD
<b>ENGINEER :</b>	COWI TANZANIA LTD
<b>CONTRACTOR :</b>	BG INTERNATIONAL LTD
<b>VALUE :</b>	US \$1.56 MILLION
<b>START DATE :</b>	NOVEMBER 2012
<b>COMPLETION DATE :</b>	OCTOBER 2013

Limited infrastructure, isolation and underdevelopment in the region of Mtwara have created numerous problems for those arriving to explore for oil and gas. Since 2011, CSI has been working to support infrastructure improvement for both government partners and industry giants, and in 2012, was contracted to upgrade the electrical and mechanical installations in the port of Mtwara.

This project was intended to support the commissioning of a second mud plant as well as a new 33kV distribution system, and improve working operations for the multinationals working there.

Key deliverables included the installation of a 1.5 MVA substation, the installation of mechanical process pipelines and piping systems (for cement, fuels and lubricants etc.), tank erection, fire-fighting reticulation (including new pump sets and boosted cold water), as well as perimeter fencing and flood lighting.





# Sustainability

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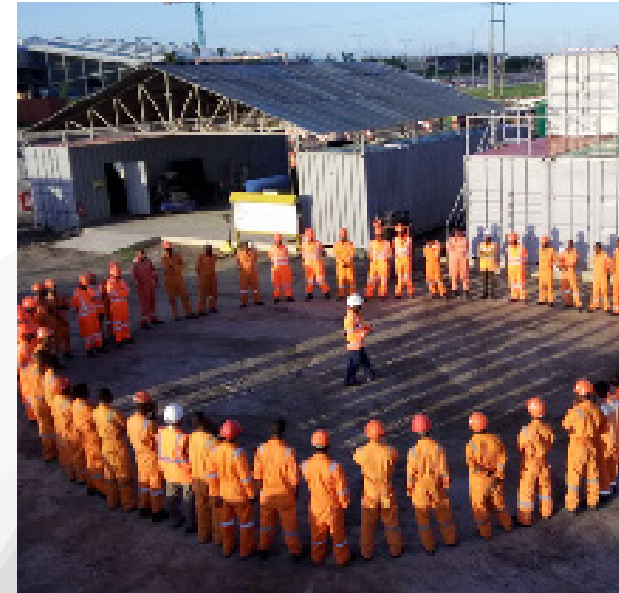
# Corporate Governance

***“Sustainability is not a technical choice, but a moral one. It’s not a question of whether it’s possible to be sustainable, but rather whether we choose to be. Running a sustainable business is the key to growth and stability both internally and externally.”***

- Chris Glasson, CEO, CSI Energy Group

CSI is guided by the principles of good governance including transparency, accountability, honesty, efficiency, innovation, and sustainability. These principles inform our organisational policies and frameworks, which, in turn, define the very high standards we expect of all our staff.

25 years in Africa, we have a deep understanding of the potential impacts of our work. As a result, we are committed to consulting with community stakeholders, understanding and adapting to local contexts, and identifying risks and opportunities in each infrastructure project. Through these principles we believe we can best enhance the social wellbeing and the economic vitality of the communities and countries in which we work.



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# Quality, Health, Safety & Environment



**Our company policies outline our ethics, our responsibilities, and the conduct we expect within our organisation. They allow us to effectively manage risk and to remain accountable to our clients and communities.**

Three core policies commit us to safeguarding the health and safety of our employees, to protecting the environment, and to providing quality infrastructure that enhances the lives of local people. All our company offices have international quality and safety management systems aligned to (ISO 9001 and OHSAS 18001) and we are currently progressing towards an accredited integrated management system (ISO 9001/14001 and 18001).

We continually strive to improve our operational effectiveness, to meet – and indeed exceed - our best practice commitments, and ensure that our agreed systems, policies and procedures guide every step of every project.

Our Executive Team assumes overall accountability for health and safety, but each and every one of our employees is responsible for implementing company policies and best practices within their operational area.

Regular training ensures that our staff have a clear understanding of their roles and responsibilities in terms of creating a safe and healthy workplace.

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# CEG Foundation

*“The future lies in the hands of our young. It is they who will mould our communities, our economies and our nations. An investment in our children and young people, therefore, is also an investment in the future.”*

- Foundation Chairperson, Noella Simitony

**Our Social Investment Foundation aims to improve the health, education, and life skills of the most vulnerable children and young people, including those living with learning disabilities, albinism, cancer and HIV/AIDS. The Foundation was established in 2017 as an independent entity tasked with managing and expanding community programs previously coordinated within CSI Electrical.**

The Foundation is managed by four nominated trustees, and supports programs that deliver the greatest impact in the most cost-effective manner.

Five percent of the consolidated profits of the CSI Energy Group are channeled into the Foundation.



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# Clients

CSI has a reputation for exceptional customer service and many of our clients return again and again. We are known for our local expertise, our international standards, and our African reach.

We are proud of the numerous accolades and awards our clients and peers have bestowed on us. For the past two consecutive years, for example, we have been voted one of the top 100 mid-sized companies in Tanzania, in recognition of our role as a market leader whose rapid growth is helping to drive development in the region.

We work with a wide range of partners – from state utilities to small private developers, from industry leaders to local cooperatives.









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