

oneSMEC

2016 | Q4 OUR FEATURE | Built Environment





Our CEO | **Andy Goodwin**

SMEC finished 2016 on a high note, with record work-in-hand and a successful new partnership with Singapore-based Surbana Jurong. This partnership will accelerate our growth strategy and help us provide an improved service offering in the urban, industrial and infrastructure space.

SMEC continued to grow steadily during the 2015-2016 financial year, maintaining our sound financial position, with revenue and other income increasing from A\$537.4M to A\$581.9M. These solid financial results represent continued progress towards our strategic goals.

The Annual SMEC Awards took place in November 2016. These awards recognise some of the key projects and employees that have contributed to SMEC's success over the past year. The SMEC Awards formed part of the Senior Management Conference which ran from the 8-11 November in Sydney.

This quarter we launched our first corporate video, which provides a brief insight into our company with an overview of our history, our culture, and our commitment to deliver innovation and technical excellence to help build a better future for our clients and communities around the world. The video is available to view at www.smec.com

With record work-in-hand, and a new partnership adding complementary skills, the outlook for SMEC in 2017 is very positive, and I look forward to this exciting period in our history

Andy Goodwin

Managing Director and Chief Executive Officer

Gold Coast Light Rail Project

Australia



SMEC, in partnership with BMD Constructions, has been awarded a Design and Construction contract by Brisbane City Council (BCC) for the upgrade of the Inner City Bypass (ICB) in Brisbane. BCC is improving the network capacity by widening the roadway to four lanes in each direction between the eastern portal of the Legacy Way Tunnel and the RNA tunnel. The upgrade will help to increase capacity and improve safety on the ICB by reducing congestion-related accidents.

Hoddle Street Design

Australia



SMEC has been engaged by VicRoads to prepare Concept and Detailed Engineering Design for the Streamlining Hoddle Street Project in Melbourne. The Project is the first stage of the Victorian Government's planned transformation of Hoddle Street, which aims to improve the journey along and across Hoddle Street for all road users and introduce innovative Intelligent Transport Systems (ITS) and urban design initiatives along one of Melbourne's busiest arterial roads.

Logan Highway Upgrade

Australia



SMEC, in joint venture with GHD and CPB Contractors, has been awarded a contract by Transurban for the detailed design and construction of the Logan Enhancement Project. The Project comprises the upgrade of parts of the Logan and Gateway Extension motorways, including improving key congestion hot spots and constructing new south-facing ramps at Compton Road. The project will deliver a safer and more efficient motorway network by relieving local traffic congestion and reducing travel times.

Pharmaceutical Plant Master Planning

India



The Surbana Jurong (SJ) Group has been engaged to provide master planning and infrastructure services for South Asia's largest planned state-of-the-art pharmaceutical facility. Telangana State Industrial Infrastructure Corporation awarded SJ the master planning consultancy as well as detailed infrastructure engineering and building design work for the Pharma City project in Hyderabad. The planned state-of-the-art pharmaceutical facility is the first and largest of its kind in South Asia for the pharmaceutical industry. The project covers more than 14,000 acres in Mucherla and surrounding villages in Ranga Reddy and Mahabubnagar districts.

Kuala Lumpur Tram

Malaysia



SMEC has been engaged to conduct a feasibility study on the Kuala Lumpur Tram project for the Land Public Transport

Commission of Malaysia. This project will determine the feasibility of building and operating tram services in the Kuala Lumpur city centre, through the assessment of potential passenger demand, expected economic impacts and benefits, and technical and financial transportation measures required to support the operations of the tram. The study will take into account overall land public transport network integration in Kuala Lumpur, land requirements, engineering design implication, traffic impacts and capital and operating costs of the system.

Waste Management Study

Nigeria



SMEC has been engaged to carry out a Solid Waste Management Pilot Scheme Study in Zaria, Nigeria. SMEC is helping to determine the viability of a broader Solid Waste Management program in the area, ensuring efficient design and management of solid waste management facilities, and appropriate processing and sanitary disposal of solid waste within the Pilot Scheme area. SMEC's scope of work includes: analysis of existing waste management services in the region; strategic framework design; capacity building services; and community and stakeholder engagement.

Land Reclamation Project

Singapore



The Surbana Jurong (SJ) Group has been appointed consultants for a Housing Development Board (HDB) project to reclaim land around the northwestern tip of Pulau Tekong (located off Singapore's northeastern coast). SJ will provide planning and detailed engineering design for the development of the polder including that of its innovative water management system, dikes, pumping stations, drainage structures, electrical and mechanical systems.

Surbana Jurong Partners with Microsoft

Singapore



The Surbana Jurong (SJ) Group and Microsoft will jointly develop cloud-based "Smart City in a Box" solutions in the Asia Pacific region. This partnership will enable SJ to leverage Microsoft's technology to develop more sophisticated predictive data and stream analytics, cognitive services, sensing technology and machine learning. By bringing SJ's "Smart City in a Box" solutions to the cloud, clients will be able to deploy more solutions easily across more geographies at a lower cost. When implemented, SJ's predictive lift analytics solutions using Microsoft's technology has the potential to disrupt the market and reshape the way lift breakdowns are approached.



SJ and SMEC | Our Partnership Update

We are now six months into our partnership with Surbana Jurong (SJ), and the integration has resulted in wins for both organisations.

In November 2016, senior executives from SMEC and Surbana Jurong met to discuss the business, exploring current and future opportunities, focusing on the growth of both companies.

SJ's Group Chief Executive Officer (GCEO), Mr Wong Heang Fine, visited SMEC Australia offices, taking the opportunity to meet with some employees and clients from across SMEC's business in the Australia and New Zealand Division.

During the visit, SMEC employees enjoyed the opportunity to meet Mr Wong. Taking the time to speak to a number of offices, many SMEC employees were interested to learn about his career background.

Prior to his appointment as GCEO of SJ, Mr Wong held several key leadership positions in major consultancy firms. He was the CEO of CapitaLand Singapore Limited (Residential) and CapitaLand GCC Holdings. Previous to this, Mr Wong was President and CEO of SembCorp Engineers and Constructors.

SMEC and SJ have already harnessed new opportunities as a result of their combined expertise including a master planning project in Guinea, a master planning project in Benin and a major land reclamation project in Hong Kong.

As we head into 2017, we will continue to work together to seize opportunities and strengthen our presence not only in Asia, but across Australasia, Africa, the Middle East and the Americas.

For more information please visit: www.smec.com and www.surbanajurong.com

Our Feature | Built Environment



SMEC provides the expertise and consulting services needed to identify, plan, design, construct and manage the Built Environment.

“ We continue to invest in new technologies to strengthen our capabilities and enhance our services offering for Built Environment projects.

SMEC has a long standing reputation for design quality, functional efficiency, ecological awareness and community engagement and has delivered a range of built environment projects, including residential communities, mixed use developments and industrial precincts for both the public and private sectors.

Surbana Jurong (SJ), is recognised worldwide as an established built environment specialist, having planned and delivered townships that house 80 per cent of Singapore’s population. Together, SMEC and SJ will continue to deliver projects which are inspiring, practical, efficient and socially responsible.

Feature Location | Singapore



Trivella, Atrina & Aspella Public Housing: Designed to be physically, visually and socially connected, this award winning affordable housing development has easily accessible and meaningful public spaces for residents to enjoy. With a focus on people-oriented design, Surbana Jurong created a quality living environment that supports the local community. The development is also seamlessly integrated with its environment and distinctive in its architecture.

River Vista @ Kallang: Located at the junction of the Kallang River and Sungei Whampoa, River Vista @ Kallang provides riverfront living for over 800 homes. The 2.9 ha development features blocks of staggered height that step down towards the river and creates a distinctive skyline and enjoys access to amenities such as jogging tracks, bicycle pathways, playgrounds and plaza areas. The project won several awards including the Fiabci Singapore Property Awards.

Treelodge@Punggol: Treelodge@Punggol, designed by Surbana Jurong, is recognised for its sustainable design which maximises energy efficiency and reduces waste. The project won international awards such as the Green Good Design Award and the Futurac Green Leadership award and was the first public housing development in Singapore to achieve the Building & Construction Authority (BCA) Green Mark Platinum award.

Casa Clementi Public Housing Development: This development is of variable heights with two 40-storey blocks at its ends giving Casa Clementi a landmark presence without impinging on the neighbouring developments. Residents enjoy convenient access to its integrated car park space within the building towers and a landscaped park that is perfect for unwinding after a long day. The development was awarded the Fiabci Singapore Property Awards 2012 and BCA Universal Design Mark Awards 2013.

Industry Leader | **George Simic, Director, Built Environment, Australia and New Zealand**



George Simic - Director Built Environment, Melbourne, Australia

George has more than 30 years' experience in the Built Environment/Urban Development industry. George's strengths in the Built Environment sector include project management, strategic planning, urban design and master planning. In his role as Director, Built Environment, George provides key advice and drives strategy to grow our Built Environment business across the globe. George has been integral to SMEC's growth in the Built Environment space, providing leadership for the Australian and New Zealand (ANZ) urban business, Global Built Environment strategies, managing key national clients, and developing new business opportunities.

What aspect of your role do you most enjoy?

I am motivated by the challenge to work closely with the SMEC and Surbana Jurong leadership teams and diversify and build our current ANZ Urban Development business into the largest ANZ Built Environment group. This will provide our valued clients with a fully integrated consulting services model creating, planning, delivering and managing projects from concept to completion. A key component of this growth will include leading significant Mergers and Acquisitions (M&A) transactions, which I am also excited about.

What does the future hold for the industry?

The Building and Urban Development industry is a very important driver of most economies and our growth focus is to be a leader in this industry in key global geographies. Population growth in established economies such as Australia and demand for housing in emerging economies suggest a vibrant and growing industry sector in the timeframe of our 2017 - 2021 Growth Strategy.

Key Project | **Harpley Estate, Australia**



Harpley Estate by Lend Lease Communities is a 500 hectare master planned township in the western growth corridor of Melbourne, Australia.

Working in partnership with Lend Lease Communities, SMEC is providing engineering, planning and surveying services on this development, which comprises over 3,500 residential lots, a primary school, town centre, a large sports field, and 60 hectares of lakes, wetlands and a waterway system offering a unique waterside lifestyle.

Water sensitive urban design is practiced throughout Harpley Estate through bioretention swales, rain gardens and wetlands. All homes in Harpley will be provided with Class A recycled water through purple pipes. Recycled water can be used for toilet flushing and garden use.

The natural environment plays a leading role in life at Harpley. From the century old River Red Gums that have been protected and retained, to the storm water run-off that will be treated through a series of wetlands and harvested to refill Harpley's extensive waterways, Harpley is a community leading the way in sustainable family living.

An extensive network of walking trails will feature throughout the project, connecting to key services and facilities and making it easier to walk or cycle to local amenities reducing the need for cars on the road.

Over 60 hectares of open space will be dedicated to lakes and wetlands with a unique series of interconnected lakes and waterways offering a range of different water experiences from lakeside walking trails to waterfront shopping and dining.

Our Divisions | Resources

The Resources Division has had a very successful final quarter of 2016. As part of SMEC's ongoing integration with Surbana Jurong, the Division continues to build strength and momentum in all regions.

In Australia we have recently completed an options study for Citic Pacific Mining. In Asia Pacific, the Division continues to work on the BP Maintenance Project in Indonesia.

In South Asia Middle East, our work on the Bangladesh Gas Fields Company Limited Gas Compressor Project is ongoing and in Africa, the concept study for the Kumba Iron Ore 10 MTPA facility is nearing completion.

The Division participated at the International Mining & Machinery Exhibition in Kolkata India, from 16 to 19 November 2016. This was a great opportunity to engage with a large number of miners, partners and acquisition targets.

In India, we continue to leverage SMEC's reputation within the Hydropower, Geotechnic and Transport space to extend our Asset Management, Mining and Oil & Gas offering in the country.

John Stocco – Chief Operating Officer, Resources



Feature Project | Aquifer Remediation Project, Kuwait



Kuwait is in the process of rehabilitating and remediating its natural habitats and ecosystems as part of the United Nations managed Kuwait Environmental Remediation Project. SMEC Oil & Gas (a SMEC subsidiary) has been engaged by the Kuwait Ministry of Electricity and Water (MEW) to provide asset management services to assist in the remediation of two damaged aquifers.

Kuwait's only fresh groundwater resources in the Raudhatain and Umm Al-Aish aquifers were contaminated by hydrocarbons and high salinity due to oil spills, long-lasting fires and the seawater used for firefighting. Hydrocarbon contamination was compounded by salinity from the seawater used for firefighting, meaning that sweet groundwater has become undrinkable.

“ The project aims to rehabilitate ecosystems damaged by hydrocarbon contamination and salinity.

In order to rehabilitate the damaged environment and groundwater supply, the United Nations Compensation Commission (UNCC) has awarded the Government of Kuwait

approximately A\$4 billion to carry out the necessary large scale environmental remediation and restoration.

Under the UNCC program, managed by Kuwait National Focal Point, the Kuwait Government is implementing the Kuwait Environmental Remediation Projects, through its Ministry of Electricity and Water (MEW).

SMEC has a long history of involvement in the UNCC program in Kuwait, including undertaking studies on the groundwater quality, and development of groundwater models for the area on behalf of MEW. These studies, combined with results of other studies, indicated that there is a possibility of remediation of the groundwater resources through implementation of different remediation techniques.

SMEC Oil & Gas has provided designs for two remediation options for consideration, a pump-treat-reinject option and an in-situ remediation option. SMEC Oil & Gas also prepared detailed design and tender documents for prospective contractors to implement these two remediation techniques.

Once a remediation technique is successfully implemented at a pilot scale, the technique will be rolled out across the nation, improving and securing water supply for future generations.



Asset Management Diagnostics

Chile

SMEC was engaged to provide asset management assessment services for several silver-gold mines in Chile. The mines feed a single conventional flotation plant that produces silver-gold concentrate. Through a comprehensive diagnostic process, SMEC identified opportunities to improve processes and developed a program to: define new roles; optimise planned maintenance and shutdowns; improve scheduling practices; monitor maintenance progress; and critically review plant assets.



Jurong Rock Caverns

Singapore

The Surbana Jurong Group provided engineering and construction management services for the Jurong Rock Caverns (JRC). The JRC provides 480,000 cubic meters of storage space for liquid hydrocarbons and provides infrastructural support to the major chemical companies operating there including Chevron Phillips, ExxonMobil and Shell. Phase 1 of the project freed up approximately 60 ha of usable land above ground and created 1.47 million cubic metres of storage space below ground.



Horizon Bulk Liquid Terminals

Singapore

The Surbana Jurong Group successfully completed the US\$200 million bulk liquid terminal on a 39 ha site at Banyan, Jurong Island, for Horizon Terminals Singapore. The terminal is currently one of the largest independent bulk liquid storage terminal facilities in the region, and is a key partner in the development of Singapore's oil logistics infrastructure. The terminals house 30 storage tanks varying from 21 to 55 m in diameter, with a total storage capacity of 840,000 cubic metres.



Enterprise Resource Planning

Australia

This project is a landmark business transformation initiative implementing the global rollout of an Enterprise Resource Planning (ERP) system for our client, one of the world's leading suppliers of iron ore with operations in northern Western Australia. The project has established common, efficient and effective core processes and metrics across the organisation. This includes the implementation of globally common data and the establishment of common processes that can be supported by this integrated system.

Our Divisions | Australia and New Zealand

The Australia New Zealand Division completed 2016 on a high note, posting record work-in-hand and securing a number of project wins including the Newcastle Light Rail project and the Northern Beaches Bus Line Program in New South Wales.

Meanwhile, we are continuing our work on significant projects in the Division. In the Northern Region, SMEC is providing Independent Verification services for the Gold Coast Light Rail-Stage 2 Project. In the Central Region SMEC is engaged on a number of important infrastructure and urban development projects across New South Wales.

In the Southern Region, SMEC is delivering a number of significant projects, including the Darlington Upgrade Project in Adelaide (as part of a Design Joint Venture).

We are also pleased to announce that Tim Chapman has been promoted to Regional Director for Southern Region. Tim previously held the position of Regional Manager at SMEC Canberra.

Hari Poologasundram – Chief Operating Officer, Australia and New Zealand



Feature Project | Canberra Light Rail, Australia



Canberra Light Rail will deliver a modern transport system that can meet the requirements of the growing, changing city.

The idea to construct a Light Rail network started with community consultations conducted for transport options in Canberra. These consultations led to a commitment from the ACT Government to fully investigate light rail as a public transport option for the city.

“ Canberra Light Rail will deliver an integrated transport system for Australia's National Capital.

A new government agency was established, Capital Metro Agency (CMA), to administer the Light Rail project. The CMA is responsible for the ongoing planning, design and delivery of the Light Rail and is now part of the new transport agency, Transport Canberra. There are also ongoing plans for a Canberra-wide Light Rail network.

SMEC has been engaged by John Holland Group and CPB Contractors (JHCPBJV) to provide design services for roadworks along Flemington Road from the Federal Highway to Gungahlin, design of the civil and structural elements within the service depot, structural elements of the tram stops, and structural design of the required bridges and culverts.

The project includes two terminus at Alinga Street and Gungahlin Place, 11 intermediate stops, a service depot, 12 km of track and an anticipated 14 light rail vehicles with a service time of less than six minutes during peak periods.

The ACT Government has committed to building a second route, running south from Alinga Street to the Woden Town Centre and using the Commonwealth Avenue Bridge to cross Lake Burley Griffin. Construction is planned to begin shortly after the completion of the first stage.

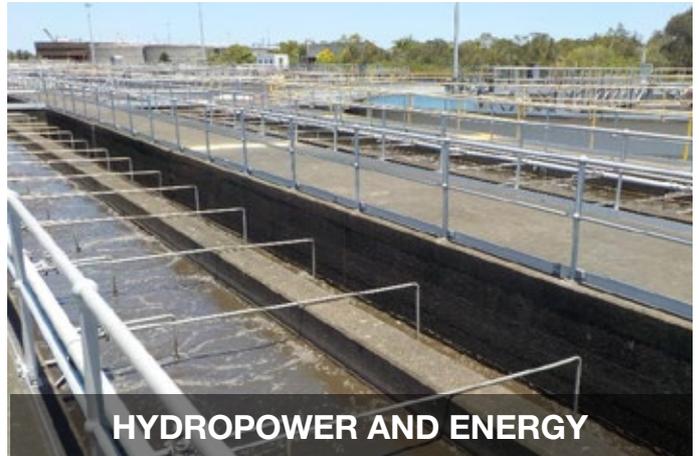
Canberra Light Rail is expected to bring local employment and a new industry in light rail operations, maintenance and hospitality over the next 20 years. This will drive growth, generate vibrancy, diversity of employment and long-term sustainability.



TRANSPORT

Inland Rail Program Queensland

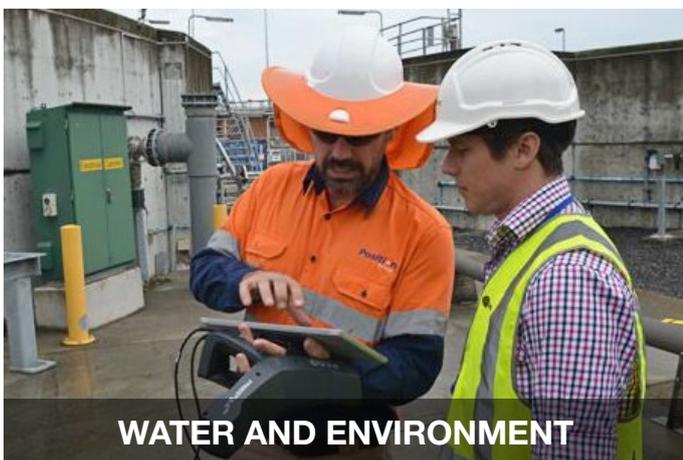
The Inland Rail Program aims to deliver major inland rail infrastructure to connect Melbourne and Brisbane. The Program has entered the continuity phase, in which consultants are retained for a further six month period, to undertake additional designs and infill fieldwork. During this phase, the SMEC Arup Joint Venture (SAJV) Technical Advisor will assist in the preparation of the Phase 2 tender documentation, to facilitate a request for tender in excess of A\$100 million in early 2017.



HYDROPOWER AND ENERGY

Sewerage Treatment Plant Critical Upgrade Queensland

SMEC was engaged to help improve the power distribution network at Luggage Point Sewerage Treatment Plant (LPSTP) in Queensland. SMEC rationalised the submissions into a program of projects that would achieve the objectives while delivering the best value to the client. SMEC has delivered the first draft of this program, which incorporates special measures to supply power to critical loads throughout the plant in the event of a plant-wide power outage.



WATER AND ENVIRONMENT

Stormwater Treatment Solution Victoria

SMEC was engaged to prepare the detailed design drawings and manage the construction of an innovative storm water treatment solution for higher density urban environments in outer metro Melbourne, Victoria. The project has a unique design which involves a formal contemporary straight-edged geometric system. The design includes open water ponds, sand filters and bio-swaes all linked through the pedestrian circulation system and road network.



URBAN AND SOCIAL DEVELOPMENT

Olivine Estate Victoria

SMEC was engaged by Mirvac to provide surveying and engineering consulting services for Olivine Estate, located in Melbourne's Northern Growth Corridor. Olivine estate is Mirvac's newest master planned community. SMEC's role includes input and review into the development of the Precinct Structure Plan (PSP), survey and subdivision, infrastructure design, stakeholder consultation and negotiation, project management, contract administration and construction surveillance.

Our Divisions | Asia Pacific

The Asia Pacific Division closed the year on a high with significant project wins.

In Malaysia, SMEC has been engaged by Prasarana Malaysia Berhad to conduct an asset review, condition assessment and design consultancy for the improvement and remedial works for the underground section of the Kelana Jaya light rail transport system.

In Indonesia, SMEC was appointed by the Directorate General of Railways of the Ministry of Transportation for the construction supervision of the Light Rail Transit in South Sumatra, which will provide faster, more convenient travel along the Sultan Mahmud

Badaruddin II International Airport - Palembang Grand Mosque - Jakabaring Sport City route. This rail line is being built in preparation for the next Asian Games, scheduled from 18 August to 2 September 2018.

SMEC's partnership with Surbana Jurong has expanded the Division's technical capability, project experience and expertise, with a particular focus on our businesses in Malaysia, Vietnam and Myanmar, and we look forward to a successful year ahead.

Kalai Arumugam – Chief Operating Officer, Asia Pacific



Feature Project | Maubin to Pyapon Road Rehabilitation Project, Myanmar



SMEC has been engaged by the Government of Myanmar's Ministry of Construction to provide detailed design, construction supervision and project implementation support on the Maubin to Pyapon Road Rehabilitation Project in the Ayeyarwady Region, Myanmar.

The project aims to improve access to the Ayeyarwady Delta by rehabilitating the roadway between Maubin and Phyaon, the principal north-south artery on the eastern edge of the Ayeyarwady Delta. The project will provide an essential transport link to economic, health, education, and employment opportunities for local communities and will make the nearby agricultural areas more accessible, improving the lives of many of the local population.

SMEC is working as part of a Joint Venture (JV) with Oriental Consultants Global (Japan), Pyunghwa Engineering Consultants (Korea) and Suntac Technologies (Myanmar).

The JV's services include: finalising the detailed engineering design of 55 km of highway between Maubin and Pyapon; verifying contractor designs for replacement of two major bridges; and construction supervision of road rehabilitation works.

Road rehabilitation works are complicated by poor ground conditions, with year-round standing water, which worsens in wet seasons. As a result, a major component of rehabilitation works will include soil stabilisation of existing and new embankments.

“ The Road Rehabilitation Project will connect communities and will help to improve economic outcomes for local residents. ”

SMEC is also providing Project Implementation Support (PIS) services to the Ministry of Construction (MOC) and the Project Management Unit (PMU) for the installation and commissioning of: a Management Information System; Financial Management System; Project Management System; and Contract Administration System.

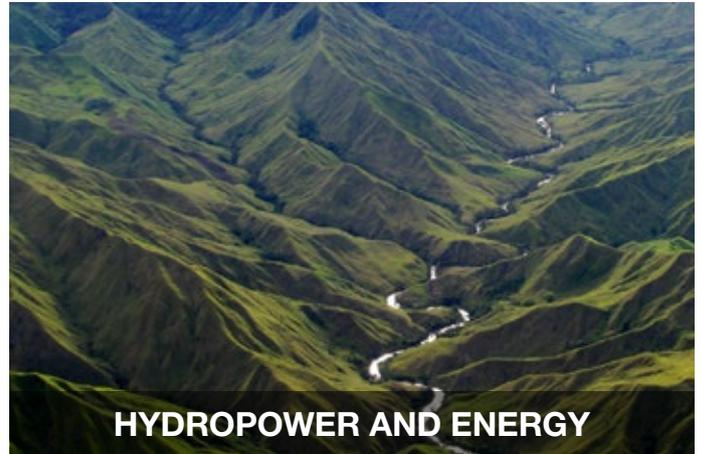
This PIS component will assist the MOC and PMU in the implementation of the Environmental Management Plan, Resettlement Plan, social safeguards, and complaint resolution procedures.



TRANSPORT

Malolos Commuter Rail Philippines

SMEC is part of a Joint Venture (JV), led by Oriental Consultants Global Company Limited, providing basic and detailed design of civil works on the Tutuban to Malolos Commuter Railway Project. Funded by the Japan International Cooperation Agency (JICA), the Project is a 37 km long commuter railway line that connects Malolos in the Province of Bulacan to Tutuban in Manila. The project aims to alleviate serious traffic congestion in and around metropolitan Manila.



HYDROPOWER AND ENERGY

Baime Hydropower Project Papua New Guinea (PNG)

SMEC was engaged by the PNG Forest Products to undertake the feasibility study and Environmental and Social Impact Assessment (ESIA) for the Baime Hydropower Project in Morobe Province, PNG. SMEC's services include: procurement of subcontractors for the management of topographical survey and geotechnical investigations; re-appraisal of the pre-feasibility study; optimisation of project layouts; and undertaking a full bankable feasibility study.



WATER AND ENVIRONMENT

Nam Mang Upstream Hydropower Project Laos

The Nam Mang Upstream Hydropower Project is a major hydropower project located in Xaysomboun Province, funded by the Government of Laos. The project consists of an embankment dam of approximately 80 m high, a headrace tunnel and powerhouse with an installed capacity of approximately 50 MW. SMEC is providing consulting services to support a local engineering team with feasibility study development, including guidance on dam assessment, design criteria and design review.



URBAN AND SOCIAL DEVELOPMENT

Disaster Management Project Cambodia

Cambodia experiences drought and flood incidents that impact a significant portion of its population every year. As global climate conditions continue to change, Cambodia will experience increasingly unpredictable flood and drought occurrences that may overwhelm the country's limited capacity and resources. SMEC will provide consultancy services to the Government of Cambodia aimed at strengthening the capacity of Government departments to implement projects to address disaster risk management.

Our Divisions | South Asia and Middle East

The South Asia Middle East Division has been successful in securing several major project wins this quarter including the Cross-Border Road Network Improvement Project in Bangladesh, two road projects in Kuwait and the Dedicated Rail Freight Corridor Project in India.

Works have commenced on the multi-lane tunnel under the Karnaphuli River in Bangladesh and Karot Hydropower Project in Pakistan.

The Division's partnership with Surbana Jurong is already a success with the recent win of our

first joint submission on a city master planning development project, the Pharma City project in Hyderabad in India.

This project win, and the combined capabilities of SMEC and Surbana Jurong, will help to present numerous opportunities to the Division in the year ahead.

George Lasek – Chief Operating Officer, South Asia and Middle East



Feature Project | Rohtang Tunnel, India



Rohtang Tunnel is being built under the Rohtang Pass in the eastern Pir Panjal range of the Himalayas on the Leh-Manali Highway.

The Government of India through the Border Roads Organisation (a tri-service Defence Ministry agency specialising in road and bridge construction in difficult terrains) engaged SMEC to provide engineering consultancy services and expertise on the challenging project.

“ The Rohtang Tunnel will create an all-weather route connecting communities and improving trade and travel routes. ”

SMEC has prepared detailed design documents for the project and is continuing to offer advisory services throughout the construction phase.

At approximately 9 km in length, the tunnel will be one of the longest road tunnels in India and is expected to reduce the distance between Manali and Keylong by 60 km.

The tunnel will be used in winter to avoid dangerous, snowbound roads in the region. However, snowfall also presents a major challenge to the construction works. As such, much of the works are undertaken outside of the snow season.

As the Rohtang tunnel is expected to carry heavy traffic, vehicular management and pollution management is a priority. To address this, safety cameras have been included in the design to be placed at a regular intervals and connected to two monitoring rooms on both ends of the tunnel.

Pollution sensors will monitor air quality in the tunnel, and fresh air will be injected into the tunnel to improve air quality as necessary. The tunnel will have a semi-transverse ventilation system, where large fans would separately circulate air throughout the tunnel length. The tunnel will also have a public announcement system to allow for emergency announcements along the entirety of the tunnel's length.

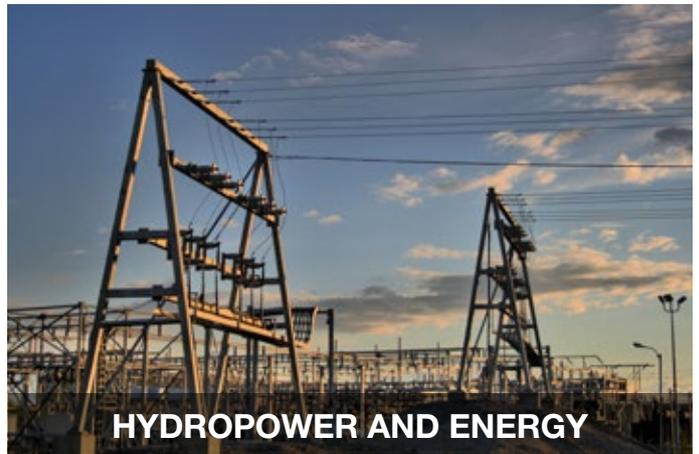
Once complete, the Rohtang Tunnel will create an all-weather route to Leh, Lahaul and Spiti valleys in Himachal Pradesh, connecting communities normally isolated by adverse weather, and improving trade and travel routes in the region.



TRANSPORT

Western Bangladesh Bridges Upgrade Bangladesh

To promote a reliable and efficient road transport network in Bangladesh, the Government of Bangladesh Roads and Highways Department is undertaking major upgrades to bridges across the nation. The project will comprise the construction of 60 bridges across western Bangladesh. SMEC, as part of a Joint Venture (JV) with Oriental Consultants Global, will provide consulting services on the upgrade project including: detailed design; tender assistance; and construction supervision.



HYDROPOWER AND ENERGY

Energy Sector Development Investment Program Afghanistan

Having progressed to Tranche 4, the Energy Sector Development Investment Program (ESDIP) in Afghanistan seeks to improve energy security, establish a sustainable power supply and increase regional power trade, which will in turn bolster economic development and improve the quality of life for the Afghanistan population. SMEC is acting as Owner's Engineer to the Afghani power utility company, Da Afghanistan Breshna Sherkat (DABS), during the delivery of this Asian Development Bank funded project.



WATER AND ENVIRONMENT

Water Sector Improvement Project India

SMEC was engaged by the Government of Andhra Pradesh to provide rehabilitation and modernisation services on the Andhra Pradesh Water Sector Improvement Project (APWSIP). This Project, funded by the World Bank, aimed to rehabilitate and modernise two main canals, 16 branch canals and 158 major distributaries in the Andhra Pradesh region. SMEC's scope of works included: engineering design, monitoring and evaluation; and third party quality control and quality assurance.



URBAN AND SOCIAL DEVELOPMENT

Rural Electrification Upgrade Project Bangladesh

SMEC was engaged by Rural Electrification Board (REB) to provide consultancy services to the Rural Electrification Upgrade Project in Rajshahi, Rangpur, Khulna and Barisal, Bangladesh. The main objective of the project was to enhance the capacity of the rural distribution network and improve stability of the power supply to increase economic growth of rural areas of western Bangladesh. SMEC's services included: feasibility studies; detailed design; and construction supervision.

Our Divisions | Africa

The Africa Division has completed 2016 with strong growth and record work-in-hand. All regions have performed well with substantial project wins.

In South Africa, the Division has ended the year on a high with 15 new project wins in December.

The West Africa region has maintained its strong growth, winning a Project Management Consultant role in Ghana.

In East Africa, SMEC has been engaged on major transport works in Tanzania, while our business in Malawi and Ethiopia continues to grow.

The East Africa Kenya region secured projects across the energy, transport and water sectors, while the Southern Africa region has successfully delivered a number of projects across these sectors.

We welcome Chike Uchendu, to the role of Deputy Regional Director for Africa. Based in SMEC's Nairobi office, Chike will focus on growing our private sector service offering; leading our drive towards setting new operational standards for Health and Safety; and Quality Management of all African operations.

Tom Marshall – Chief Operating Officer, Africa



Feature Project | Rural Electrification Project, Tanzania



SMEC is providing consulting services to help improve electricity access across rural Tanzania.

In order to increase the provision of modern energy services and promote access to modern forms of energy in rural areas, the Government of Tanzania, through the Rural Energy Agency (REA) is implementing the Phase III Rural Electrification Project. This project covers the supply and installation of Medium Voltage (MV) and Low Voltage (LV) lines; distribution transformers and connecting customers in unelectrified rural areas in Tanzania.

“ The Rural Electrification Project will increase electricity access throughout rural Tanzania.

Tanzania has a population of nearly 50 million people, but only 58% of the nation has access to electricity, and only 47% in rural areas.

This Project forms part of the Government of Tanzania's goal to increase access to electricity, providing power to 75% of all Tanzanians by 2025. This will be achieved by working closely with key partners and collaborators from the private sector, Non-Governmental Organisations (NGOs), community-based organisations and Government agencies.

SMEC was engaged to provide preliminary survey and verification services. SMEC is also conducting conceptual distribution system design, detailed design and will prepare technical specifications, bidding documents required for procurement of contractors to carry out the Project.

SMEC will also assist the REA during the bidding process, providing comprehensive bid services including: bid evaluation; contract negotiations; and awarding contracts including contract signing.

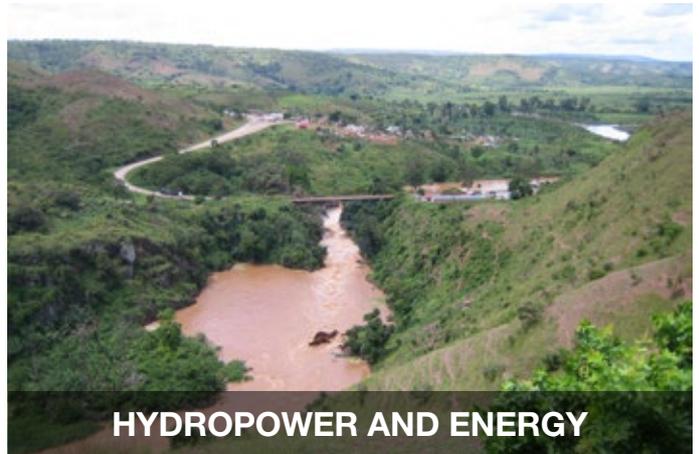
Upon completion, the 7,000 newly-electrified villages will see immediate improvements to their day-to-day lives, and will continue to see improved economic and social outcomes.



TRANSPORT

N1 Roadway Upgrade Project South Africa

The existing single carriage freeway between Ventersburg and Kroonstad is being upgraded to a dual carriageway, to improve safety and ease of travel for commuters. SMEC provided consultancy services on the upgrade which included: detailed assessment; preliminary and detailed design; tender documentation for the works; site inspection and tender evaluation. SMEC is currently providing project monitoring services with all contractors progressing well.



HYDROPOWER AND ENERGY

Muyanza Hydropower Project Rwanda

SMEC provided consultancy services for Muyanza Hydropower Project on behalf of the Government of Rwanda Ministry of Agriculture and Animal Resources. The Project involves construction of a 26 m high clay core earthfill dam with a reservoir capacity of 2.3 million cubic meters to service approximately 1,100 ha. SMEC's scope of works included: design review; contract administration; supervision of works; and quality control throughout construction.



WATER AND ENVIRONMENT

Drought Mitigation Master Study Kenya

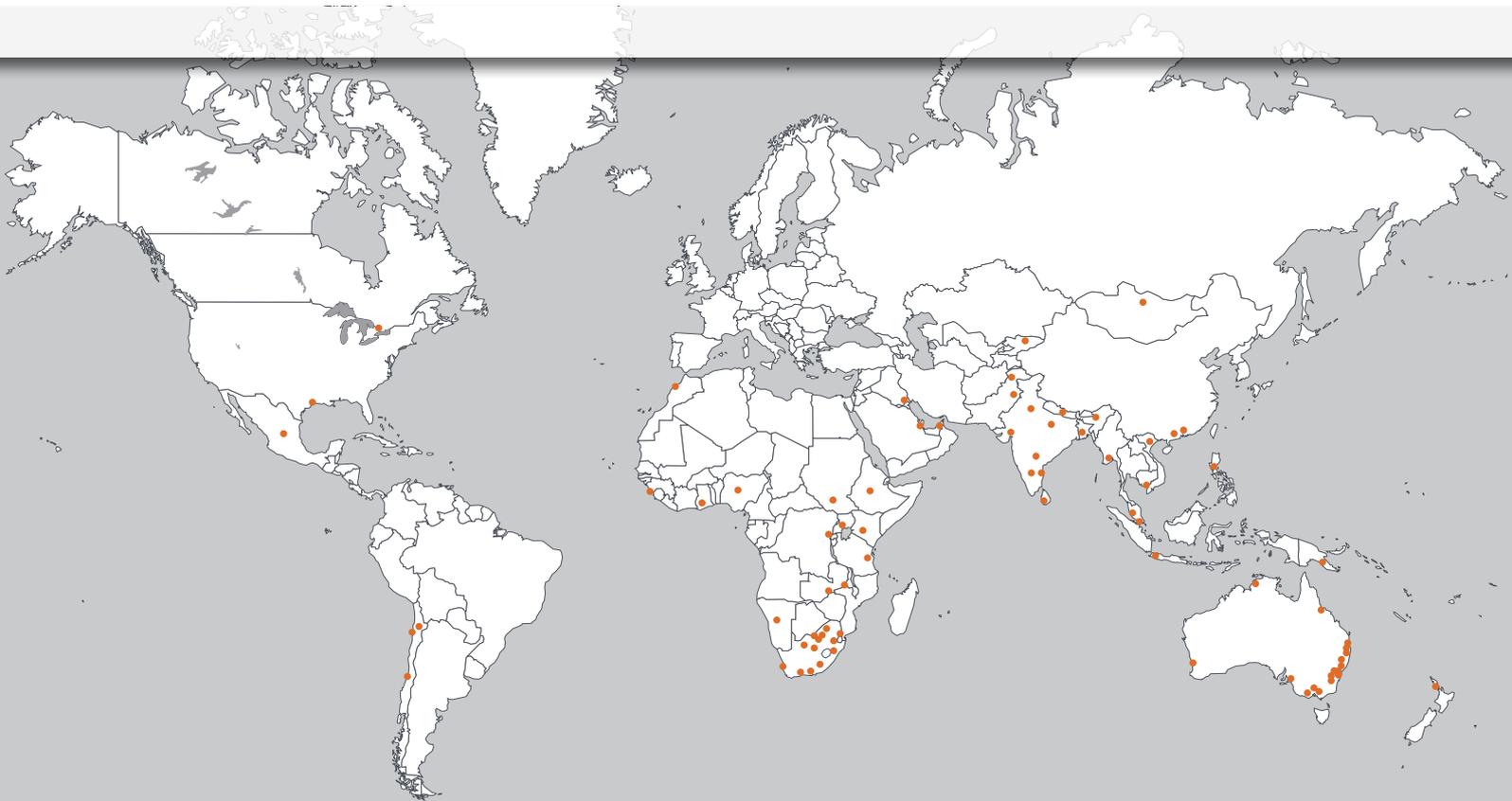
Due to the need to improve water supply and sanitation services in arid and semi-arid areas of Kenya, the International Development Agency is financing the Drought Mitigation Master Study in north western Kenya through the Northern Water Services Board (NWSB). SMEC will undertake the Master Study in order to determine the best ways to increase and improve access to reliable, affordable and sustainable water supply and sanitation services in drought-prone areas.



URBAN AND SOCIAL DEVELOPMENT

Conakry City Centre Master Plan Guinea

SMEC in partnership with Surbana Jurong (SJ) has been engaged to provide urban redevelopment and design services in Guinea by the Singapore Cooperation Enterprise (SCE). SMEC and SJ will assist the SCE to prepare a Master Plan for the Government of Guinea to redevelop Kaloum, the city centre of Conakry, Guinea's capital city. The scope of work includes: positioning; visioning and programming; urban redevelopment planning; urban design; implementation planning; and Master Plan launch.



ABOUT SMEC

SMEC is recognised around the world for providing high-quality consulting services on major physical and social infrastructure projects.

SMEC's origins date back to the iconic Snowy Mountains Hydroelectric Scheme in 1949. Today SMEC is consistently recognised for technical excellence and design innovation by the world's leading engineering bodies. Striving to deliver service excellence across a range of industry sectors, SMEC has developed and refined a core service offering covering the life cycle of a project.

With over 5,800 committed people working within an established network of over 80 offices throughout Australia, Asia Pacific, the Middle East, South Asia, Africa, North and South America, SMEC provides professional services that contribute to national development in some of the world's fastest growing economies.

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