



adding that load centres in Baghdad, Basra and Mosul were built almost 50 years ago. As such, he says, the distribution network was not designed to meet the requirements of the current number of residents and the load of modern necessities such as air conditioning, all of which must be taken into consideration to reduce the financial loss from such inefficiencies.

Placing the current capacity in the country at 16,000 MW – 18,000 MW, Istepanian points out that demand for power is only set to increase 8-10 % annually, in view of the GDP and population growth. He emphasises that the requirement for reliable power must be addressed, since Iraq, similar to its

ROAD TO RE

A new, enthusiastic and dynamic Iraq is emerging from years of conflict and uncertainty, yet challenges lie ahead, as the quality and number of existing infrastructure is unable to meet the current needs of its citizens and the requirements of a government working towards economic self-sufficiency. **Hannah Jo Uy** of *Climate Control Middle East* takes a closer look at the nation's road to rehabilitation...

Mesopotamia was once home to a myriad different cultures and civilisations, with a rich history dating back thousands of years. Now known as Iraq, the fabled land between the two great rivers, the Tigris and the Euphrates, is more concerned with its future rather than its past. For more than a decade, the country was the battleground of wars that have left the once prosperous nation devastated. Today, Iraq and its people are eager to write a better story for the next generation.

The years of fighting scarred the land, as revealed by the destruction of infrastructure, the deterioration of whatever remained, and the insufficient number of facilities, all unable to meet the basic requirements of the population. Harry Istepanian, Senior Fellow, Iraq Energy Institute and an independent power consultant based in Washington D.C., USA, puts the number of Internally Displaced People (IDPs) in Iraq at between two million

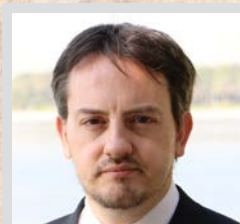
and 2.5 million – a conservative estimate, he says, as the figure may be higher. Istepanian says that this is creating an urgent and massive requirement for housing units, approximately four million in Iraq. "Once reconstruction starts," he adds, "the demand for electricity will go high."

This is a major problem for a country with an underdeveloped power sector suffering from significant technical and non-technical losses. Istepanian explains: "If you are generating 16,000 MW and losing 50 % - 60 % of it on the distribution side, the consumer is only getting 8,000 or 9,000 MW. Those problems need to be sorted out before thinking about adding more generation." The losses, he says, is owing to ageing power lines and distribution transformers,

neighbours in the Middle East, is subject to the region's high-ambient conditions, which drive demand for cooling and, subsequently, power consumption during the summer months. Robin Mills, CEO, Qamar Energy, and Senior Fellow, Iraq Energy Institute, explains that access to 24-hour electricity still remains elusive, with power cuts common throughout the land. The government is feeling the pressure, Istepanian adds, pointing to massive riots in Basra, as citizens protest against power shortages. He says that the government fears the riots will only escalate, unless new measures are taken, and that officials are implementing steady changes and promising 15 % improvement in supply of electricity.



Harry Istepanian



Robin Mills



The energy crisis is only the tip of the iceberg, with Mills emphasising that the government also has a pressing need to develop infrastructure related to the water sector. Moustafa Hassan, General Manager (Iraq and Jordan), Metito, echoes this, pointing out that there has been an increase in demonstrations in Basra, as thousands were hospitalised from bad quality water. Currently, Hassan says, the Total Dissolved Solids (TDS) in the water in Basra range from 25,000 to 30,000 PPM. According to the World Health Organisation (WHO), the acceptable range of TDS is only 1,000 PPM. This, Hassan stresses, is a relaxed version,

been a steady increase in the sale of inverter splits in Iraq – with market share increasing year on year from one per cent in 2014 to almost 10 % in 2018. “While the retail market currently accounts for 90 % of our business,” he says, “we are anticipating that will shift and our light commercial segment will gain popularity as the new commercial projects in the country get realised.” Al Ghussein says there is big opportunity for VRF technology in villa and hotel developments, adding that the company is looking to contribute energy-efficient cooling solutions to the country’s retail, hospitality, leisure and residential sectors.

we will get there again in a couple of years, as long as governments and companies keep improving the relationships,” he says.

As Timothy McLaren, Senior Commercial Contracts Engineer, Ramboll, puts it: “Iraq is open for business for anyone that has a preference for them.” Dr Tarik Al-Omran, Professor, Material Sciences, Baghdad University, echoes this saying that as the country makes a move to enhance its non-oil sector, manufacturers from all over the world have an opportunity to take part in the country’s rehabilitation, which is encouraged by the government through a number of incentives.

HABILITATION



as more conservative implementation of WHO standards even require TDS below 500 PPM. Hassan says the company, which has a long history in Iraq, is proposing long-term solutions to address TDS and make tap water acceptable for drinking and irrigation, to government entities. Previous projects, Hassan says, were put on hold, as funds were diverted for military spending, but that Metito resumed work in three out of the seven ongoing projects and expects work to resume for the remaining four in Baghdad soon.

OPEN FOR BUSINESS

Metito is just one of the many companies looking to address the growing needs of the market. Taqueef is another, with Tariq Al Ghussein, CEO, sharing that the company started doing business in Iraq in 2003 and currently has showrooms in Baghdad and Basra. He confirms that Taqueef plans to invest to further advance its presence in the country. Already, Al Ghussein says, there has

The construction sector has attracted new names, as well. Arda Haçaduryan, Deputy Manager – Director After Sales Service, Metrology Group, says that the company’s interest in Iraq grew following its cooperation with Reftrade, a company that represents the interest of international manufacturers in the country. In view of the Iraqi government’s support of the industrial sector, Haçaduryan says the company is optimistic and confident about the opportunities in the pipeline. However, the company is still trying to get a clear grasp of the market and identify potential buyers, adding that it is important to make inroads among stakeholders – an exercise several months in the making. “Iraq used to be a good market for Turkey, and I believe

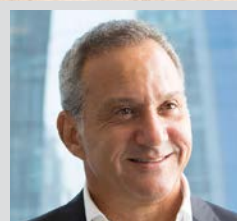
A SOURCE FOR FUNDING

While interest in entering the Iraq market is palpable, much of the momentum is

restrained by questions surrounding the reliability of the funding for projects in the pipeline. Hassan believes that donor countries, such as Germany and England, will help finance urgent jobs, adding that recently, the government supported pending projects that were more than 50 % completed. Of late, much of the optimism stems from support promised by the international community, including pledges from countries in the European Union. However, Mills says that often in such commitments, the money serves to kickstart projects than fully funding them, adding that much



Moustafa Hassan



Tariq Al Ghussein



AN UNTAPPED RESOURCE

With a population approaching 40 million, Iraq has a unique advantage over its counterparts in the GCC region, says Robin Mills, CEO, Qamar Energy, and Senior Fellow, Iraq Energy Institute, emphasising that this means the country will not be reliant on expatriates for its workforce. That said, Mills admits that Iraq faces its own set of challenges, having gone through several wars that disrupted the socio-economic dynamics of a nation, rendering many people unemployed. Harry Istepanian, Senior Fellow, Iraq Energy Institute, and an independent power consultant based in Washington D.C., USA, puts the unemployment number between 20 and 30%.

Istepanian stresses that the massive gap in unemployment can be addressed through greater support for the construction sector, which is highly labour-intensive and creates a requirement for builders, electricians, plumbers and engineers. Dr Tarik Al-Omran, Professor, Material Sciences, Baghdad University, points out that while Iraq has the required human capital of engineers, technical people and workers, there is a dire need of retraining them to update knowledge when it comes to technical innovations and standards.

Another issue that Mills identifies is the lack of skills owing to the generational gap. While the older generation in their 60s and 70s have a lot of international knowledge and expertise, he says, there is a gap in the mid-career people, who underwent a difficult period in Iraq owing to the war. Timothy McLaren, Senior Commercial Contracts Engineer, Ramboll, adds that many of the other skilled and educated people also opted to leave the country and, having set up roots in other countries, are not willing to go back. Mills says this aggravates the situation, as it is harder to pass on the relevant knowledge and training to develop skills of the youth.

Dr Al-Oman says the government is looking to address the issue by integrating youth skills in the national agenda. However, he says, this is largely confined to colleges, universities and institutions. He believes, however, there is scope for private companies and manufacturers in the field of HVACR or construction to also contribute by spearheading training and programmes under engineering colleges, to develop more specialised skill sets among the younger generation.

McLaren adds there is a wealth of opportunity to benefit mutual parties in this regard, pointing out that much of the youth are simply not being given the option to learn skills for "an honest day's work", be it installing pipes or doing drywall. "That country is untapped human capital that never left," he stresses, "and they have a strong urge to have a job and support the family." McLaren

says that with the growing movement towards digitisation, there is a lot of stigma surrounding manual labour, as more of the youth get into the field of business or technology.

This, he says, makes technically skilled and specially trained people in the field of construction a precious commodity. "Somebody still has to build something," he says, "you still need people to float the concrete and put the cable in, etc. That workforce could be the next best construction people in the world." – HJU

of the rebuilding, thus far, is being initiated by the people themselves from the oil sector. "The government has some money to spend again," he says. "That's all helping the situation."

Speaking on growing interest among Arab investors, Istepanian reports that the GCC region is also earnest in its efforts to participate in Iraq's reconstruction programme, as revealed by visits from the leadership of these countries. However, this will take time. "It's not something you will see by end of the year," he says. "It may take 5-10 years."

While Iraq looks to foreign investment to stimulate the construction sector,

Istepanian points out that currently, owing to the low oil prices, the country has a deficit of USD 22 billion dollars [based on oil price at USD 56/barrel] in this year's fiscal budget, and that the government is expecting the private sector will participate in addressing the deficit. However, Mills believes that the current market is not as "private-sector friendly" as one would hope for, saying "it's getting easier to operate there, but it is not an easy place".

BUMPS IN THE ROAD AHEAD

McLaren believes security and safety concerns have a part to play in this regard.

Mills adds that many visitors deal with heavy requirements related to insurance policies, adding that while security has greatly improved, overall perception remains negative. McLaren says

this is only aggravated by a disorganised visa system, making the travel process even more tedious for potential visitors. To break the existing stigma associated with Iraq's security situation, Dr Al-Omran believes more efforts must be taken

to ease engagement with international markets, which will help remove misconceptions in the global community. He adds that support towards conferences, exhibitions and seminars inside and outside of Iraq, and media engagement would also go a long way when it comes to breaking stereotypes.

Government intervention is also needed to further cultivate a more attractive business environment for the private sector.

For his part, Al Ghussein says fluctuations in customs policies and rates make sales strategies and pricing very difficult. That said, the government's role is not only confined to attracting products and services but also includes ensuring that businesses that enter the country deliver the right kind of solutions and the market adopts them accordingly.

Currently, however, Al Ghussein says cost is a key factor driving purchasing decisions in the Iraq market. "Disposable income remains limited, so the market share of the cheaper cooling products obviously reflects this," he says. However, reliability is also of particular importance; instabilities in electrical supply mean inverter products, which require less start-up current, are often the most reliable choice." The energy-efficiency features of such products, he explains, are then seen only as a secondary benefit to their ability to operate within an often compromised power supply.

Istepanian says the intermittent nature of power should push the government to pursue demand-side management schemes through regulations. "There is no push from the government's side for more efficient ways of construction, and no legislation on the kind of appliances that are used or imported," he says. "I think the government should educate people about this, through media campaigns, and put legislation banning conventional bulbs or the import of air conditioning units

and appliances that do not meet energy-efficiency criteria." This, he says, will greatly reduce the heavy burden of consumption on an already fragile power network.

Al Ghussein believes that as Iraq's increasing stability paves the way for new developments, there is an opportunity for the government to develop a robust regulatory backdrop that will promote consumer protection, lead to improvement in terms of quality of products and create huge opportunities for new, turnkey, energy-efficiency projects. Most importantly, Al Ghussein says, it will put a clamp down on counterfeit goods, which he says the public sector must pay heed to, as currently, Taqueef, to cite an instance, is aware of 23 fake Fujitsu General brands circulating in the Iraq market.

THE COLOUR OF MONEY

Undoubtedly, a stricter legal framework would allow Iraq to be less vulnerable

to counterfeits, misrepresentations and other instances of bad practice, which may have negative implications down the line for the built-environment and its inhabitants. However, McLaren, a stark advocate of transparency, also encourages scrutiny with regard to regulations related to energy efficiency or specifications, as often "the colour of the money dictates the rule that will be set". "Everyone wants to know what's going to be the standard," he says. "Is it European, American or maybe Chinese? How will you integrate it if Iraqi government wants all three and nothing is compatible? What if the industry keeps its mouth shut and the government suffers from the cost associated with variations? I have seen it happen, where people don't say anything to get more follow-up work, because nothing connects. Responsible companies don't do that – they get involved in the programme and in the planning process. If you don't, you only create a problem for you to address." McLaren

adds that policies would be effective so long as they balance cost and promote technically acceptable standards that do not compromise on safety and quality, while allowing companies to remain competitive.

Pointing to another issue plaguing the market, Hassan says local stakeholders do not have the necessary expertise to properly evaluate technical specifications of tenders. Decision makers, Hassan says, often opt for the cheaper option, despite it not being the best solution, for fear of being questioned on why a project was awarded to a higher bidder, as they are unable to explain the long-term technical, financial and operational benefits of one solution over another. As distributors of European brands, Haçaduryan says this serves as a challenge for the company "as convincing for the best quality is never as easy as it seems to be". Dr Al-Omran echoes the importance of directing investment towards high-quality products, saying that the market has long suffered from installation of bad quality equipment in the previous years.

For many stakeholders education is the best antidote to safeguard the industry from skewed, cost-centric thinking. Istepanian supports the value of training, saying that many local stakeholders are not proficient in contract management, owing to lack of experience, leading to mismanagement of projects and existing resources. Hassan believes this can be addressed through the exchange of knowledge, and that it is important to have international consultants enter the country to share knowledge and to conduct trainings. He adds that there is a need for assessment of technical qualifications before proposals are submitted, so the consultant is liable and responsible for decisions. This creates an ecosystem that will make it easy for the Iraqi government to procure good-quality and long-lasting products and equipment at competitive prices.

Al Ghussein says, "While the challenges of the Iraq market are huge, so are the opportunities." Indeed, as Iraq and its people usher in a new era for the country, the international community, particularly those in the GCC region, could play a vital role in helping the country move forward and, most importantly, do so in the right fashion. [ccme](#)



Timothy McLaren



Arda Haçaduryan



Dr Tarik Al-Omran



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