A factory in Jeddah: A day and night tariff regimen could bring down electricity prices for industries operating after sundown

Heating up

SAUDI ARABIA IN 2010 HAS ALLOCATED MORE THAN $146 BILLION FOR EDUCATION AND HUMAN DEVELOPMENT. THIS SHOULD BODE WELL FOR THE HVACR INDUSTRY IN THE REGION, WRITES **JOSE FRANCO**.

IT may not surprise many people in the Middle East and elsewhere that Saudi Arabia is the place to be for HVAC operators this year and many years hereafter. To begin with, the kingdom has allocated over a quarter of the 2010 expenditures, totaling more than $146 billion, for education and human development. This includes the construction and development of four new universities in Dammam, Alkharj, Majma and Shaqra; the completion of various infrastructure projects around a number of existing universities and the establishment of new polytechnic colleges and vocational institutes.

"Saudi will be the biggest market in the Middle East for the HVAC industry," says Abdullah Ahmad Zeneeh, Managing Director of Dubai-based Rio Electro Mechanical, adding that the kingdom plans to build 13 new universities over the next five years. These huge learning institutions would surely require district or central cooling systems. As has been well documented, the system offers tremendous benefits to developers planning also to build office complexes, mixed-use properties and commercial districts.

Illustrating the opportunity that the Saudi market offers, Zeneeh says HVAC eats up 10% of expenditure for MEP, which is 25% of the total cost of construction. There is also great opportunity for the refrigeration sector, as shopping malls and retail and food outlets make up two per cent of the Saudi economy. Spending on refrigeration systems account for five per cent of the value of construction of industrial facilities like manufacturing centres.

SPENDING ON REFRIGERATION SYSTEMS ACCOUNT FOR FIVE PER CENT OF THE VALUE OF CONSTRUCTION OF INDUSTRIAL FACILITIES LIKE MANU-FACTURING CENTRES.

"Saudi Arabia has the most business potential in the region over the next three to five years across all sectors," remarks Imad Kaba, Sales Director for the Middle East Distributors at Trane Middle East, Africa and India. "As the government supports large infrastructure and social projects, we will continue to see the demand for HVAC equipment increasing and opportunities for manufacturers and suppliers growing." There will also be great demand for large and central plant rooms and large tonnage chillers, he says, with the increase in the number of large infrastructure projects and new economic cities over the next 15-20 years. »

BIGGER THAN DUBAI

There has been, in fact, an increase in the average size of plant room in recent years, with building of bigger hospitals and universities. "The Saudi district cooling market could be growing much bigger than the Dubai market," Kaba remarks, "and last for a longer period." Most people do not want to share utility bills – no wonder the region always had smaller plant rooms for air-cooled chillers serving each building. But he says the Saudis can learn from Dubai, and will soon switch to district cooling, as they discover the savings that a large water-cooled plant offers. "They have access to the expertise in Dubai, which has already started branching out into Saudi," he stresses.

And there is great hope for the way the Saudi market regards the industry, says Mohamed R Zackariah, noting "a very visible shift towards large-tonnage water-cooled chillers" from the traditional mentality to use air-cooled chillers. "There is definitely a robust market for large-tonnage chillers in Saudi in the coming years," says Zackariah, the Chief Consultant at Protecooling, a division of Suhaimi Design, which offers consultancy services to high-end HVAC projects. He cites the growing number of large industrial projects, educational institutions and healthcare facilities across Saudi Arabia. Large residential projects are likewise mushrooming in areas like Mecca and Medina.

The outlook for the HVAC industry in the oil-rich Saudi Arabia is made more favourable by the fact that the concept of district cooling is a late-comer to this Gulf Arab country of 28.7 million people as compared to its neighbours. "District cooling for industries, in our opinion, is one of the largest opportunities for this industry [HVAC]," says Zackariah. He cites the district cooling projects for industrial clients in places like Jubail, adding that the Jubail Industrial City is developing infrastructure for the next phase of industries.

He also cites the conversion of existing HVAC systems to district cooling systems in large industrial complexes, such as that in Hadeed, and the large cooling requirement of learning institutions like Riyadh-based Prince Noora University, which has a capacity of 66,000 tonnes of refrigeration (TR). He also mentions other projects in the pipeline, such as new universities and residential complexes, as part of the large potential for district cooling business in Saudi Arabia.

POLTICAL WILL

The market is made even more promising by Riyadh's strong political will – as clearly indicated by the current fiscal year's budget – to fuel strong economic growth in the kingdom, whose full potential is not yet fully realised. "When the public and private partnerships will be streamlined further, Saudi can become the largest market [for the HVAC industry] in this part of the world," says Zackariah. And being the Gulf region's biggest economy (with a 2009 nominal GDP of $375 billion, according to Saudi's foreign ministry), he adds, the Saudi market for HVAC and refrigeration (HVACR) equipment is "always high".

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Abdullah Ahmad Zeneeh

Last year's nominal gross domestic product, Saudi's foreign ministry said, was down 21% from $475 billion in 2008. The 2009 trade balance had a massive fall of 51% to $104 billion while the balance of payments shrank 84.5% to $20.5 billion, owing to a drop in oil income. But the public debt dropped to $60 billion from $63.2 billion. As a proportion of GDP, however, public debt rose to 16% from 13% as at end-2008.

Representing a 14% increase over the 2009 fiscal year (FY) expenditures, this year's budget was crafted using conservative demand and pricing estimates for oil, according to the Web site of the US-Saudi Arabian Business Council. This means a government revenue projection of $125.3 billion, with a deficit of $18.7 billion. Actual revenues for 2009 topped the projected income of $109 billion, following the increase in oil prices, which recovered to more than $70 a barrel from around $40. Sitting on the world's largest proven crude reserves, Saudi Arabia is currently pumping more than eight million barrels per day.

Besides the establishment of new universities, the $36.5-billion budget for education includes the building of 1,200 new primary schools to add to the 3,112 currently under construction and the more 770 completed last year while 2,000 schools are scheduled for renovation. About 5,000 Saudi students will likewise receive study grants for abroad,

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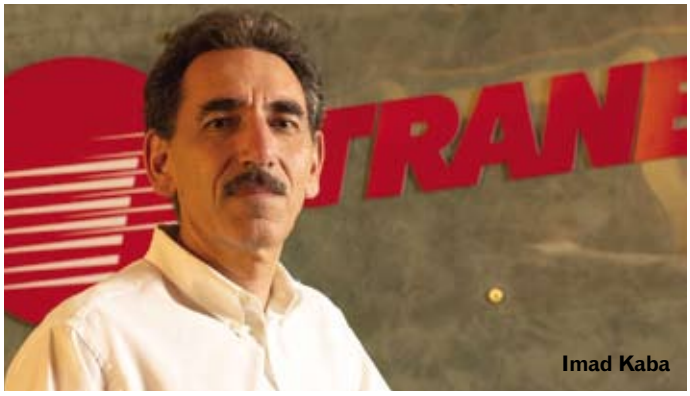
under the King Abdullah Scholarship Programme, as Riyadh is implementing its national plan for science and technology development.

The health and social affairs in Saudi Arabia is all about modernising and expanding its healthcare system as well as promoting healthy lifestyle. Of the total FY 2010 expenditure, $16.3 billion has been allocated for the kingdom's healthcare system, including the construction of 92 new hospitals, with a capacity of 17,150 beds, and a number of primary healthcare facilities. A number of sports clubs and sports centres will be set up, as well, along with social centres and labour offices to support Riyadh's poverty-reduction programmes.

UTILITIES DEMAND

With massive expenditures on various infrastructure projects come the growing demand for water and electricity, whose supplies are a serious concern in many parts of the world, more so in Saudi Arabia. The kingdom's Jubail, for instance, in spite of being one of the largest industrial cities, has acute shortage of all kinds of water – be it potable, treated sewage effluents (TSE) or sea water, Zackariah says. "Power is also in short supply," he adds. "Saudi needs to focus really on these areas to sustain the growth as well as to realise its full potential."

This is a good challenge to a number of HVACR equipment designers and manufacturers like Trane Middle East, a business of the $13-billion diversified global industrial company, Ingersoll Rand. "As a supplier, we keep improving the efficiency of our chillers to consume less power," Kaba says. "We also design these chillers to operate with lower condenser flow." If installed close to the sea – in the eastern and western provinces of Saudi Arabia, for instance – Trane chillers



Imad Kaba

can also be made to operate using sea water. He remarks, "Today there are solutions to make up for water loss using reverse osmosis plants, collecting condensate water, eliminating evaporation or, even better, using TSE."

It is hoped, however, that power shortages in Saudi Arabia would soon become a thing of the past, what with the $10-billion investment being planned by the Saudi Electricity Company (SEC) for the next 10 years. This development follows the awarding of a $288.1-million contract by SEC to the Arabian Bemco Contracting Company, to expand the Qassim Power Plant. Quoting SEC President and CEO, Ali Saleh Al Barrak, Arab News reported this month that the 10-year plan will add 25,000 megawatts (MW) to the kingdom's power-generation capacity, which is currently at 40,000 MW.

SEC has authorised for this year about $586.81 million worth of projects in the Qassim, a predominantly agricultural region in the central part of the kingdom, about 300 kilometres north of Riyadh, which has experienced disruptions. Al Barrak described the expansion project as "super rush" which will be completed in seven months, instead of two years. He stressed that 75% of the plant's expansion has been completed. "With the additional production, we hope the demand during the coming summer will be met," he said. "Tenders for four other plants in various other areas are also under way."

IF THE TECHNOLOGIES ARE PROPERLY REPRESENTED AND RIGHTLY PRESENTED TO THE KINGDOM'S MARKET, THE TRANSFER OF TECHNOLOGIES IS POSSIBLE.

The more serious problem is water, opines Zeneeh, as desalination plants have to be upgraded. "District cooling will also trigger spending on water and power projects," he says. Something which will not be a problem to a country whose actual spending in 2009 stood at $146.7 billion while actual revenues were at $134.7 billion, or 16% higher than initial projections, owing to higher oil export receipts. Finance Minister, Ibrahim Al Assaf earlier said the projected budget deficit for FY 2010 will shrink if oil prices increase.

MORE CHALLENGES

Finding the right talent to fill the gap in the HVACR industry has also been a challenge in Saudi Arabia for many reason, Kaba says. "Which is why training and personal development should be part of the strategy of any company doing business in the area," he adds.

For his part, Zeneeh has also noted the difficulty by some companies in obtaining visas for migrant labourers, and the slow pace of customs clearance in the kingdom. "There has been some movement, yes, but very, very slow," he says. He emphasises that for one huge university project alone, a contractor would need 30,000 labourers and staff members. "And I expect more foreign labour to come in, for Saudi Arabia to cope with progress," Zeneeh says. "Changes [on visa rules] should be made in a few months, rather than years, if Saudi Arabia wants to keep up with progress. That's the key element."

Despite the challenges, however, Zeneeh vows to do business in Saudi Arabia, as he expects the kingdom to institute drastic changes over the next five years. "Definitely, we're going to Saudi," he says of Rio Electro Mechanical, a specialised-service provider for the HVAC industry. "We're on preparation stage, but haven't

decided yet if we will get a partner." He is optimistic that Riyadh would ease its rules governing the industry and other related sectors, to keep up with development like the growing demand for district cooling and utilities.

The kingdom, he thinks, may eventually grant industries a day-and-night tariff, the application of which would bring down by 30% the prices of power used in the evening. This would encourage a number of manufacturing facilities to run their machines automatically at night, putting a balance in power consumption. (Most companies run their manufacturing facilities during the day. The residential sector consumes only 22.25% of the power supply as against the industrial sector's 70%.)

Zackariah is equally optimistic, saying that considering the kingdom's "huge potential, solid and concerted effort from the HVACR industry can have a positive change in the government's attitude towards this industry". He enumerates some of the district cooling projects expected in the kingdom, including that of Saudi Aramco, in Dhahran; two in Royal Commission Jubail; the Jubail export refinery; the Prince Noora University, in Riyadh; other Riyadh-based higher learning institutions and other various industrial initiatives in Jubail and Yanbu.

INCREASED OPTIMISM

The same rosy outlook must have contributed to increased confidence among the business community in Saudi Arabia. The latest survey released by HSBC says the kingdom's index on the level of confidence among businessmen remains at high level, rising marginally to 91.6 in the last quarter from 91.5 during the third quarter of 2009. Kuwait's index also rose while the UAE, Bahrain and Oman posted decreased indexes.

Zeneeh hopes that such a high-level of confidence will be evident in the HVAC industry, and encourage stronger partnerships between the public and the private sectors, in the form of, say, build-operate-transfer (BOT) scheme. He dismisses an idea that Riyadh, given its tremendous assets, would not need any outside help for project investments. "BOT is about commitment, quality of work and good will," he says, stressing the scheme is also important for technology transfer.

"We believe there are opportunities for new technologies," Zackariah says. "If the technologies are properly represented and rightly presented to the kingdom's market, the transfer of technologies is possible."

Saudi Arabia is, indeed, moving in the right direction, with BOT projects and the entry of more private entities in various industries like aviation. Zeneeh cites Emaar, The Economic City and its development, King Abdullah Economic City (KAEC) as having a BOT project on HVAC, and carriers like Sama and Nasair, private entities that recently launched operations in the kingdom. "We are hoping that the same scheme will be adopted in all other mega projects," he says. "You have to be very ambitious about the future. Be optimistic." ■