SAUDI ARABIA’S VISION 2030 is the blueprint of a visionary economic and social transformation which started in 2016. With the goal to diversify the economy, the development of gas resources and the transition to cleaner fuels are among the key objectives of this vision. Several large gas development projects are underway to meet the growing domestic demand in an efficient, sustainable, and environmentally conscious way.

It is certainly providing opportunities for Siemens Energy, which was awarded a contract in late July to provide several compressor trains for Saudi Aramco’s Hawiyah Unayzah Gas Reservoir Storage (HUGRS) project, the first underground natural gas storage project in the Kingdom.

The project includes a plant with a 1,500 MMSCFD gas injection facility which will inject surplus pipeline gas into depleted gas fields in the winter months, and a 2,000 MMSCFD withdrawal facility enabling gas to be withdrawn when needed to meet high demand in the summer, thus fulfilling cyclical energy demand.

The project builds on the supply of compressor trains for other Saudi Aramco projects, including the new Fadhili gas plant and the Hawiyah gas expansion project.

“We have a history of providing highly reliable compression solutions to oil and gas and petrochemicals customers, especially in the Middle East and Saudi Arabia, bringing together the finest global players. We have a huge installed fleet in various projects throughout the Kingdom,” explains Talakar. “As for our recent success, I think it goes back to what we stand for; focusing on what matters to our customers and understanding the key requirements of the project, working closely with them to come up with a custom-made solution.”

He adds that Siemens Energy is proud to be building the units for HUGRS at its SDEH, one of the most advanced gas turbine and compression production facilities in the Middle East region, with a dedicated local workforce, in line with the company’s commitment to Saudi Aramco’s In-Kingdom Total Value Add (IKTVA) programme and the ambitious localisation initiatives formulated by the leadership of the Kingdom, under Saudi Arabia’s Vision 2030.

“Here, we’ve been putting a lot of focus on developing talent, adding digital capabilities for remote monitoring, and ensuring the reliable operation of our solutions,” says Talakar.

**Commitment to IKTVA**

Siemens Energy’s commitment to localisation goes back a long way and reflects the company’s mission to serve the societies in which it operates.

“Saudi Arabia has a large young population, with two-thirds of the citizens being below 34. Vision 2030, therefore, aims to build up local capabilities and technical knowledge and create highly skilled jobs, especially for young people,” says Talakar. “We started this journey very early on with Saudi Aramco, and in 2011 we built the SDEH. Since then, 11 advanced and highly efficient gas turbines have left the factory. In addition, we have been consolidating our capabilities at the SDEH and building a series of gas compression solutions. Together with our partners from Saudi Aramco we have been putting together clear development and investment plans, as outlined in our five-year IKTVA implementation roadmap, with the objective to further increase the local value add. “That is very important for us, because we are highly committed to the countries we are active in, and take pride in working together with Saudi Aramco and the ministries, to understand what the real requirements of the country are and strategically work together.”

This approach has resulted in large projects where the company is working together with Saudi Aramco, he adds.

He notes that Siemens Energy’s leadership team has been engaged with the IKTVA programme since its launch in 2015, and that the launch provided avenues to significantly accelerate the company’s localisation drive.

**Vision 2030 aims to build up local capabilities and technical knowledge and create highly skilled jobs.**
“It’s not only about hiring, it’s about the amount of value created within the country, in terms of jobs, in terms of training, in terms of the supply chain. It is a very comprehensive concept and sets clear metrics, defined jointly between Saudi Aramco and its partners.

“We have been working on quite a few areas with Saudi Aramco, defining an ambitious, clear localisation plan. A lot is being done in the field of talent development, where we have been training some 500 Saudi Arabian youth in various fields.”

Saudi Arabia’s first ever “Made in the KSA” gas turbine was built by local talent at the SDEH. “That was the culmination of an initiative that started several years ago with Saudi Aramco and the Saudi Petroleum Services Polytechnic (SPSP), where we trained young talent at our sister sites in Germany and USA to become gas turbine experts,” adds Talakar.

“We went on to work with other institutions, such as Effat University in Jeddah, the first university in Saudi Arabia, offering engineering and science courses for female students,” says Talakar. “We’ve been introducing the most advanced digital technologies to the young population for their sustainable education. Through the Misk Foundation, a unique and highly regarded institute in the development of science and technology among youth, we started a dedicated programme with a handful of students initially, who participated in internal internships in Germany, which has now expanded to take a large number of students to six different locations – China, South Africa, Germany, UK, USA and Singapore. It is seen as a benchmark programme for technology exchange.”

“It’s our mission to serve society and that is the driver of these initiatives in line with Vision 2030.”

**Focusing on emissions reduction**

Turning to compressor technology trends, Talakar comments. “Globally, the most important trend setting the tone for any activity in this field is emissions reduction. We have people working on solutions and improving our products to take the waste out of processes, such as reducing leakage in the processing of methane gas or compressing CO₂ for sequestration. Another example is the capturing of flare gas, with flaring still happening in upstream oil and gas operations in many countries, as well as in many chemical processes. We are applying technologies to capture this flare gas to increase operational efficiency and reduce operational costs, thereby making a great contribution to reducing CO₂ emissions and supporting sustainable environmental development. With the progression towards more carbon-neutral economies, we have been at the forefront in making sure our gas turbines are burning hydrogen or gas below particular weights, thereby reducing emissions.”

Siemens Energy is a leader in deploying hydrogen, which is now coming to the forefront as an environment-friendly industrial fuel. “We have gas turbines that can burn 100% hydrogen, most of our advanced gas turbines burn a double-digit percentage of hydrogen, and we are working to ensure the entire portfolio is capable of doing so,” he says, adding that the process of burning hydrogen is different to burning methane. “While burning methane is a continuous combustion process, burning hydrogen is a series of explosions, so we need to make sure we have the material in place which can sustainably withstand these pressures.”

“And let us not forget the topic of digitalisation. We have seen with COVID-19 that in the area of remote inspection testing and acceptance, there are real opportunities, and with robust industrial digital platforms, a lot can be achieved to drive up efficiency and ensure availability.”

So in these times of uncertainty, how does Talakar view future prospects for Siemens Energy in Saudi Arabia, and how is the pandemic affecting operations?

Talakar takes the view that Saudi Aramco has proven to be very resilient in weathering market volatility and short-term cycles, such as when the oil price dropped to a low of US$26/bbl in January 2016, and is unlikely to be diverted from its long-term plans and the Kingdom’s Vision 2030 objectives.

“The COVID-19 crisis has, of course, had a tremendous impact on the markets globally. Nevertheless, Saudi Arabia’s Vision 2030 is something which is being sustained when it comes to clean energies and switching to gas. It has recently been announced that two new gas fields have been found, expansion projects are well underway, and we will see more projects in this direction coming our way. These are long-term plans that are in place, and Saudi Arabia and Saudi Aramco have shown they have the leadership in place to weather these short-term cycles and events.”

As for the operational impact, the company’s teams have been collaborating internationally from an early stage to put procedures in place to ensure all its manufacturing facilities are working well, Talakar adds.

“I have to say that all of our facilities have lived up to expectations, ensuring the highest standards of health and safety are in place while maintaining production without any major delays,” he says.

“We are committed to doing whatever it takes to live up to the demanding requirements of this industry, and we are proud to have demonstrated our ability to deliver to our customers despite the pandemic,” he concludes.