

The 27th JCCP International Symposium Keynote and Special Speech Summaries

“The 27th JCCP International Symposium” was held on January 28 and 29, 2009 under the theme, “Future Vision of the Oil Industry.” For your reference, we have provided below the summaries of the keynote speech and three special speeches that were delivered at the symposium.

Mr. Nasser D. Al Mahasher from Saudi Arabia described Saudi Arabia’s three major areas of responsibilities as the following: (1) the provision of a reliable and stable supply of petroleum to global markets; (2) contribution to the economic development and diversification of the Saudi economy; and (3) operation based on commercial considerations and profitability. Mr. Vikram M. Sampat from India stated that we need the following four factors in order to increase competitiveness: (1) business excellence regarding feedstock and products; (2) supply chain flexibility; (3) technology innovation; and (4) environmental preservation. Dr. Fereidun Fesharaki from the United States cautioned that the refining industry needs to be very careful in making future decisions, because the upswing on the refining side may be “slow in coming.” Mr. Abubakr Amer Al-Saiari from Qatar explained that Qatar will continue to work with its partners in the educational field and other fields to further promote Qatarization and develop human resources in the energy sector.

Keynote Speech

“Hydrocarbon Development in Saudi Arabia: Maximizing Value, Maximizing Benefits”

**Mr. Nasser D. Al Mahasher
General Manager, Saudi Petroleum, Ltd.**

At Saudi Aramco, the notion of a “tripod” encapsulates the company’s three major areas of responsibilities. These are: first, the provision of a reliable and stable supply of petroleum to global markets; second, contributions to the economic development and diversification of the Saudi economy; and third, operation based on commercial considerations and profitability.

The understanding that we must strive to simultaneously fulfill each of these objectives means not only striking a balance between meeting domestic energy needs and supplying

global markets, for example, but also seeking out opportunities which contribute to all three goals.

In the upstream sector, we will achieve a massive 1.2 million barrel per day production capacity addition later this year. This includes some 1.5 million barrels a day of spare capacity.

Further downstream, the company is engaged in a series of refinery expansions and the development of grassroots refining facilities, in conjunction with partners both at home in the Kingdom and abroad. In addition to the PetroRabigh joint venture with Sumitomo Chemical, we are also

applying the integrated refining-petrochemical model in China's Fujian Province, in conjunction with SINOPEC and ExxonMobil. At Ras Tanura Refinery, we are working with Dow Chemical on the Ras Tanura Integrated Project for construction of a large petrochemical complex. While these integrated facilities help us increase profitability and diversify the product portfolio in the Kingdom, the projects also provide additional benefits to the local economy. These include new job opportunities for local investors and a hub for the growth of domestic industrial clusters.

While the current global economic downturn has impacted the short-term commercial outlook for some of these projects, these initiatives were designed with a long-term vision. We are well aware that these facilities will have to be profitable over the next several decades, not just over the next year or two, and we believe the fundamentals of these various downstream projects remain strong.

Of course, the ability to see these projects through hinges upon the abilities, skills and dedication of individuals and teams hard at work in all parts of the business. That in turn requires proactive human resources development efforts and a slate of educational programs. Our human resource efforts also include developing a corporate culture that encourages self-development by employees, a commitment to lifelong learning, and an innovative approach to business and operational challenges. The emphasis on people and their development will continue, and the company will continue to invest significantly in the men and women who call themselves "Aramcons."

To tackle all of the challenges and opportunities we face, we are working with a wide range of businesses and institutions related to energy, such as other oil companies; specialized oilfield service firms; leading petrochemical corporations; engineering, procurement and construction contractors; advanced research laboratories; and universities and educational institutions. I take an enormous degree of satisfaction from the fact that so many of those business partners and related institutions are based here in Japan.

Petroleum is a plentiful but an ultimately depleting



*Mr. Nasser D. Al Mahasher
General Manager, Saudi Petroleum, Ltd.*

resource, and at Saudi Aramco we are working hard to maximize the value of the Kingdom's precious hydrocarbons to fulfill our obligations in each area of our strategic tripod.

Today, we are witnessing what many analysts are terming the most serious worldwide economic downturn in generations. Major developed economies are in the midst of a recession, growth has flagged in the developing nations, and some of the world's best-known financial, industrial and commercial enterprises have been laid low. The current crisis is certainly remarkable not only for its severity but also for its widespread scope. Those of us working in the petroleum industry have seen the effects of the slowdown firsthand, with sagging demand and crude oil prices which are roughly a third of the levels we saw last summer. Moreover, funding for major projects has become scarcer due to lower revenues and tighter credit markets.

However, at Saudi Aramco we believe it is imperative to look beyond the short-term volatility in both the global economy and the oil markets, and we understand that the long range prospects for energy in general remain robust. The world's population will continue to grow, and as standards of living in the developing world continue to rise, so will demand for energy in general, and in particular for petroleum.

While short-term cost containment and reexamination of activities and projects is certainly

in order given the current economic crisis, we must not lose sight of the long-term needs and opportunities for petroleum. That is why intelligent, targeted, and selective investments all along the petroleum value chain are so essential, and why the decisions that will be made across our industry in the next year or two will be so critical.

On the upside, crises always bring opportunities. Forward looking companies will be able to position themselves for even greater success once the global economy recovers, if they continue to look at the big picture and the next decade or two, rather than focusing on just the next quarter or two. On the downside, there is a risk that underinvestment in vital infrastructure today will result in supply shortfalls and tight petroleum and refining markets

tomorrow, once demand recovers, as it inevitably will.

When I look to the long-term trends for energy and petroleum, I remain bullish on the prospects for the global oil industry, and feel privileged to continue playing the liaison role between Saudi Aramco and the hydrocarbon industries in Japan as well as in this part of the world.

My message to you this year is *A-un no Kokyu*. *A-un no Kokyu* means that people are on the same wavelength when they are doing something together, a relationship people can communicate without gestures or words, anticipating each other's movement. Ladies and gentlemen, let us endure together and overcome the current difficulties for our bright future through the spirit of *A-un no Kokyu*!

Special Lecture 1 (India) "Challenges in Oil Refining"

Mr. Vikram M. Sampat
Vice President, Reliance Industries Limited

The global market is experiencing tough times. Because of the recession, demand is decreasing, crude prices are falling, and operating rates are going down. However, this is, in our view, a short-term trend. When the tide turns again, crude prices will rise. Today, our challenge lies in making our refineries sustainable and more competitive during the next three or four years.

An issue in the refining industry is that while crude oil is becoming heavier and more difficult to process, the market demands good-quality fuel, such as ultra-low-sulfur diesel and ultra-low-sulfur gasoline. On one hand, we have tougher crude, and on the other hand, we desire better products and want to reduce greenhouse gas emissions. In Europe, diesel has become a more preferred fuel to gasoline. In the Middle East and India, there are trends to produce more petrochemicals from refining products. These trends show that we must refine our oil more competitively if we are to survive in this system.

There are a number of challenges regarding competitiveness. The first challenge is in addressing fuel oil and naphtha. Both have low margins, so anybody making fuel oil and naphtha is in fact destroying value in the refinery.

The second challenge lies in the fact that the market has become extremely volatile. Previously, we



Mr. Vikram M. Sampat
Vice President, Reliance Industries Limited

hardly used to see any changes in oil prices, but today, prices are changing 3 to 4 dollars in one day. Prices have become extremely volatile and, in turn, are also making demand volatile. Therefore, our challenge is in whether we can work together to increase our competitiveness in this volatile scenario.

The last challenge is the environment, and whether we can conserve our environment. This is not about future generations. I am talking about our own generation. If we do not protect the environment today, we will not be able to lead a good life in five or seven years' time.

These are the major challenges facing the refining industry. What we need to do in response to these challenges is to firstly make a shift from the production of gasoline to diesel fuel. Then, we must increase heavy crude processing capacity. If fuel oil and naphtha margins are low, we should eliminate fuel oil and naphtha from our products slate. If the market is becoming increasingly volatile, we need to make our supply chain more robust so that we can manage this increased volatility. In regard to environmental concerns, we need to produce clean fuels, or use less fuel to produce clean fuels.

To increase competitiveness, we must consider four factors. First of all, we need business excellence regarding feedstock and products. Secondly, we need supply chain flexibility; thirdly, technology innovation; and lastly, environmental preservation.

Heavy crudes are in abundance, and light crudes are declining. Therefore, we must consider whether our refineries can process heavier crudes, and whether our refineries have the flexibility to process difficult crudes to make good products. The answer lies in improving bottom processing technology, so that our refineries can process all grades of crude and minimize bottom oil. Fuel oil and naphtha are priced lower than crude oil, but we must do something about this. We must use crude oil more efficiently, or in other words, increase the number of good-quality products that are produced from crude oil.

Similarly, we need to maximize the high-value products of the refinery. The world will not accept poor-quality products. We must consider what we need to do to respond to demands for good-quality

products. We could increase middle distillates and petrochemical products. We could produce more diesel fuel in place of gasoline. We could minimize the production of fuel oil and naphtha. Lastly, we could consider using bottom oil by introducing gasification or cryogenic recovery.

The same applies to fuel gas. If fuel gas is being burned without recovering the good products it contains, we should think about recovering those products by cryogenic recovery. Now is the time to make this investment. We cannot shut down facilities for renovation when plants are running at full capacity. Therefore, I strongly believe now is the right time. We need to extract maximum value from the crude barrel.

Let us now look into the supply chain. On the supply chain side, we are facing extreme volatility. The first thing we need to do is decrease inventories to the minimum to reduce our exposure to volatility. The second is to properly manage whatever inventory cannot be reduced and lower our risk as much as possible. The third is to be flexible. By lending flexibility to the supply chain, we can adapt and survive any environment. If we can do that, I believe we could increase our competitiveness.

We are at a time where we need technology leaders to take up new challenges. In particular, as an industry we need to develop technologies relating to catalysts, equipment materials, and refining processes. Even when we seek the same results, we should try to achieve them with less energy. Moreover, if we improve equipment materials, we should be able to produce lighter vessels that take up less space. We face many challenges in technology, but the bottom line is that technology innovation is crucial to maintaining the competitiveness of the refining business.

Environmental preservation is also very important to us. Global warming is occurring throughout the world, and environmental preservation is no longer an issue for the next generation. As a large emitter of carbon dioxide and as an industry with a large carbon footprint, I think the refining industry has a responsibility to develop technologies for reducing carbon emissions. We need to fully utilize energy-saving technologies and carbon capture and

sequestration technologies. These efforts are called green refining. I think all of us here have an onus to not only go competitive but also to go green in our refining initiatives.

In conclusion, I want to say that we must utilize the recessionary pause to strike a correct balance between energy and ecology in refining. We must upgrade our refining assets at this time to maximize production. Furthermore, we must shut down

refineries which are not meeting the minimum efficiency and ecology standards of the industry, because they cannot survive if they do not meet these standards.

Refineries are coming to play an increasingly important role. Various alternatives will emerge, but the role of refineries will not disappear. In fact, I think this conference has provided an ideal starting point for the transformation of the refining business.

Special Lecture 2 (USA)

"Refining in the East of Suez Market: Impact on Product Flows"

Dr. Fereidun Fesharaki
Chairman, FACTS Global Energy

I have had the chance to come to Japan often since 1985 when the Japanese oil industry looked very different. Based on this experience, I will try to offer you a helicopter view from 10,000 meters upwards to give you a view of how I think the refining industry in this part of the world is changing. I will also share with you my view of the developments in Asia Pacific and in the Middle East.

Firstly, we need to understand the interrelationship between global GDP and oil demand. In 2007, oil demand grew, albeit not by much. In 2008, oil

demand was still positive. In 2009, it was slightly negative, but altogether, from 2007 through to 2009, demand was about the same, and it is not as though we have had a crash in demand by any means. What we have had is an input of supplies from OPEC and non-OPEC countries assuming that there is growth where there was none. In other words, the dropping of oil prices so hard and so fast was not the result of a demand crash. Demand has been the same, though of course, it had fallen in some places and had been compensated for in other places.

Next, I wish to talk about the likely demand pattern between 2007 and 2015. The world has become three major poles: China and the countries of the Middle East are displaying growing demand as new consumption countries; India is following behind, though at a distant third. Fundamentally, these three poles will account for an extremely large growth in demand for oil in the future.

East of Suez, China and India are increasing their refining capacity. Large capacity additions have also been seen in Iran, and smaller additions in Iraq and Kuwait. Oman, Qatar, and UAE are planning to make capacity additions. Saudi Arabia has four projects on board. Not all of the projects will go through, however, because some of these export



Dr. Fereidun Fesharaki
Chairman, FACTS Global Energy

refineries may not be essential to the country. They are intended for the United States and European markets, and designed to produce extremely high-quality material using full conversion facilities. Some of the projects may go through, but others may be delayed. I am convinced that the United States and the European markets will soon be saturated to the point where they would lose money and would need to shut down large numbers of refineries, and there would be no point in sending something new to them.

If everybody makes an investment in the scope of current wisdom, something will go wrong. Everybody will follow one line and create too much, or acquire too much conversion capacity. The market will achieve a certain balance after a while, but in the short term, there would be a situation where everybody rushes to produce one thing because they think that is where the profits are, only to find those profits disappear when they get there, because too many people have gone the same way.

In 1998, there was a good balance between Asia-Pacific net imports and Middle East net exports.

What Asia needed, the Middle East supplied. Thus, it was a reasonably good balance. However, in 2010, the balance will become difficult, with everyone becoming an exporter. Asia is an exporter. The Middle East is trying to expand exports. To survive, Asia, including India, has to export to the United States and Europe, and the Middle East has to expand exports or stop building more refineries. Not building more refineries is certainly a scenario worth considering. We need to take the time to think what it is that we really need to do. Things may be better at a later time, but the timing issues are very important.

I have observed the Middle Eastern and Asian markets for 30 years, and have seen various cycles. It has been a repeat of a good five, six years followed by a bad five, six years, but is this pattern going to continue repeating itself? It might not, in the future. Gasoline demand may change, because whether in the United States, Europe, or Japan, hybrids and electric cars are rapidly emerging. Altogether, we need to be very careful, because the upswing on the refining side may be slow, or may not come at all.

Special Lecture 3 (Qatar)

“Reengineering of Human Resource Development”

Mr. Abubakr Amer Al-Saiari
Liaison Coordinator, Human Resources, Qatar Petroleum

In Qatar today, we are seeing a lot of development in various industrial sectors including oil and natural gas. One of the most difficult things to develop, however, is human resources, which we have found is our responsibility, along with our partners in the energy industry. Therefore, I am going to share with you today the steps and the mechanisms we have applied since launching a nationalization plan in Qatar, or Qatarization plan, in May 2000.

Qatarization is the identification of development of competent Qataris in universities and secondary schools and placing them in permanent posts, so

that eventually 50% of the workforce in Qatar’s core energy industry will be Qatari men and women.

In order to achieve this goal, it is not sufficient to simply hire people fresh out of secondary schools or universities and provide them vocational training. Quality improvement is more important. Quality is a must, because our international partners focus on investment performance.

Each company must align its business plan with the Qatarization plan. This is because the energy industry is expanding, and the industry is becoming ever more multi-national. We feel it is important to

share knowledge and technology among the diverse nationalities and our people, and to prepare Qataris to manage business through training and knowledge transfer.

Developing the Qatari workforce is an investment for the future. We have formed competency Qatarization committees and support educational institutions. However, it is not just for the sake of promoting the recruitment of Qataris. We are planning the best recruitment, the best training and the best development mechanism to develop our country, and all Qataris are asked to cooperate and to share in that responsibility.

The Qatarization plan began with the participation of 18 domestic energy companies in 2002. There are now 38 companies. These companies not only do business in Qatar, but they believe in making a contribution to society. That is, they invest in developing the Qatari workforce.

For example, building a refinery could take maybe three years from conducting a feasibility study to commissioning the refinery, but it would take three times that same amount of time to develop the necessary manpower. Though it may take time, each company understands the significance of developing outstanding Qataris, and cooperates in providing Qataris opportunities to participate in projects and accumulate practical experience.

The objective of the Qatarization plan is to develop outstanding Qataris and to retain them in key positions in the energy industry, not training posts. We are working on three levels to achieve this objective. At the corporate level, each company has its own strategy of recruiting Qataris. At the department level, each department has its own strategy of training Qataris. Then at the individual level, we have various individual programs and OJT programs for career enhancement. In other words, we have a mechanism for providing the best recruitment, the best training, and the best career progression to retain stable manpower.

Each company is required to report their achievement of the Qatarization plan twice a year to the Minister of Energy and Industry. We use an advanced information system called QIS (Qatar Information System) to manage the reporting



*Mr. Abubakr Amer Al-Saiari
Liaison Coordinator, Human Resources, Qatar Petroleum*

procedure and all the information obtained from the 38 participating companies via IT. The companies also present an annual review of their Qatarization plan to the minister. Through this review session headed by the minister, the companies assess potential obstacles to management and discuss how to overcome those issues.

Under the Qatarization plan, we have 850 students studying at overseas and local universities at present. Last year, 700 students participated in a summer internship in the energy industry in response to a massive recruitment campaign. To accommodate the increasing number of Qataris in the industry, we have reinforced our training facilities in Ras Laffan, among other locations. Since launching the Qatarization plan, we have recruited more than 8,000 Qataris, and have also increased the number of women in the workforce. More than 800 women are now working in various fields in the energy sector.

As a result of launching the Qatarization plan, we have increased awareness of Qatarization, made a transition in the training and development of Qataris, have begun to retain Qataris in the workforce in the energy sector, and have enhanced education programs. We will continue to work with our partners in the educational field and other fields, and to align various programs with our needs, to further promote Qatarization and develop human resources in the energy sector.