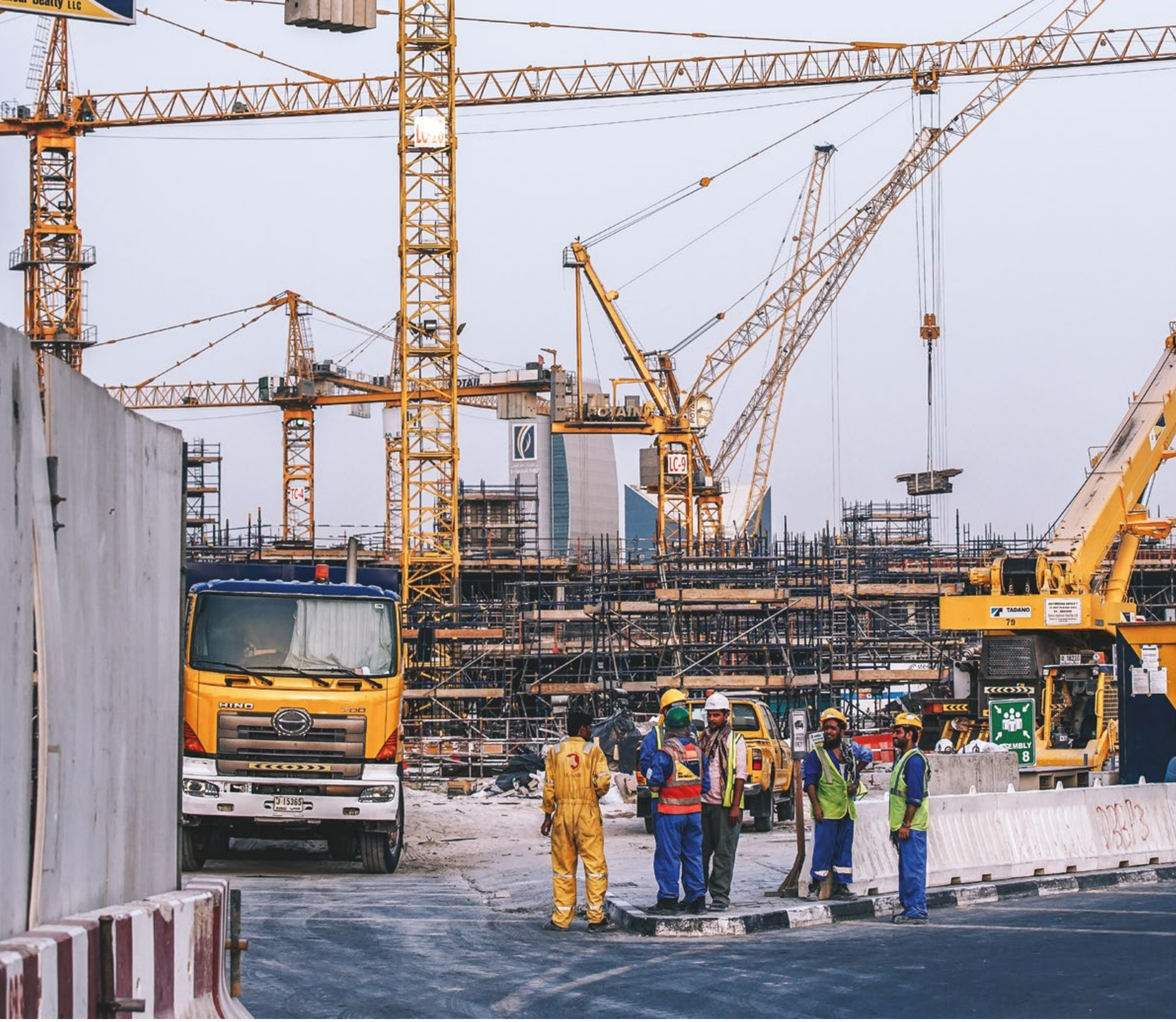

WHEN NATIONS NEED TO GO BEYOND OIL

GULF STATES PUT NEW EMPHASIS ON GROWING LOCAL INDUSTRIES

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There's a certain symbolism in the role South Korea has taken on in helping the United Arab Emirates launch its nuclear power industry. South Korea – a relative newcomer to nuclear power compared to bigger rivals like the United States, Japan, or France – grew its own industry from the ground up in order to cut energy costs, create new jobs at home, and boost domestic growth.

Today, a Korean consortium led by state-owned electric utility Korea Electric Power Company (KEPCO), is working with the UAE and its Emirates Nuclear Energy Corporation (ENEC) to do the same thing. The joint Korean and ENEC team is building four facilities in western Abu Dhabi with the help of local labor and companies, part of the Emirates' own efforts to increase its industrial base and employment and generate more electricity to power the nation's economic growth moving forward. The first reactor in Barakah is scheduled to be completed in 2017; the other three are slated for 2020.

THE PRESSING NECESSITY TO LOCALIZE

The need has never been greater for Gulf region nations like the UAE to decrease their dependence on oil and gas production and broaden the industrial base of their economies. With the decline in crude oil prices over the past two years, some of the richest Gulf nations are experiencing budget deficits and unemployment for the first time in decades. In fact, almost all major oil producing nations – from Venezuela, to Indonesia – are under pressure from their constituents to expand their manufacturing sectors, create more good-paying jobs, and increase local content across their oil and gas value chain.

But, it's not easy. In the past, well-intentioned efforts to increase local production often have been fraught with problems and disappointments, as economies overreach to score big results over a short period or fail to take into consideration the skill level and readiness of their workforce and local supply chain. In the Middle East, governments have built massive state-of-the-art manufacturing facilities, only to find they had to import workers to staff them – undermining both their security and the goal of providing jobs to their own citizens.

Even localization projects considered success stories, such as the one undertaken by the Norwegians after the discovery of offshore oil deposits in 1969, can and do take decades to achieve their goals. Norway's effort, which took more than 15 years, is not even typical, as that nation's economy was already relatively prosperous before it started developing its oil and gas resources. Most oil-producing economies are more dependent on oil and gas revenue than Norway ever has been. (See Exhibit 1.)

THE PROCUREMENT LEVER

Still, Norway serves as a model for helping nations ensure that the development of oil and gas leads to an expansion of local industry and employment. In Norway's case, the focus was on working with international oil companies (IOCs) to develop the oil and gas value chain and guarantee the transfer of knowledge and technology through agreements. The Norwegians achieved import substitution by requiring IOCs to use 50 percent local content to supply their operations, and the nation mandated that research and development should be conducted in Norwegian facilities.

Norway's approach also was based on developing local companies in fields that supported the oil and gas industry. For instance, the Norwegians focused on their upstream oil and gas sector by developing enterprises that made offshore oilfield drilling equipment and other related equipment.

Eventually, the nation became a major export center for these upstream capabilities.

Saudi Aramco, Saudi Arabia's national oil company, is following the Norwegian example to a certain degree by using its massive clout as a purchaser of oil and gas equipment and support services. Aramco is incentivizing its suppliers to increase the amount of local content by making it one of the procurement criteria by which it assesses bids. The company provides a 10 percent premium for local content.

MEETING LOCAL-CONTENT GOALS

Aramco has set clear objectives and targets for major projects. It even provided its planned spend per category for the next five years to help suppliers justify the investment necessary to localize production and services. The Norwegian initiative eventually was able to increase local content in the oil and gas industry to 80 percent – a goal the Saudis hope to replicate.

Over the next several years, the goal of the Saudi Aramco program is to double the percentage of local content to 70 percent. It also hopes to create 500,000 jobs and raise the export contribution from the initiative to 30 percent.

Saudi Arabia is working to tighten connections between training and job creation and develop key performance indicators to measure success through a program called the In-Kingdom Total Value Add program (IKTVA). The IKTVA program is designed to measure and monitor the "added-value" to the Kingdom from a supplier, reviewing such items as the value of local goods and services used, salaries paid to local citizens, and the amount spent on training and development.

PRODUCING SUSTAINABLE GAINS

As in the case of Norway, the use of procurement as a lever is producing immediate and sustainable results for Saudi Arabia. Siemens recently completed the first "Made in the KSA" gas turbine at the company's Dammam Energy Hub, the first gas turbine plant in the Kingdom and the largest in the Gulf Cooperation Council (GCC). Additionally, Siemens committed to help develop a vocational education and training program, working with the Saudi Colleges of Excellence. The program may prove particularly useful, given the results of a recent survey of oil-and-gas country and project managers that identified the lack of competent labor as a key barrier to effective localization programs.

Currently, the agreement with Siemens focuses on the development of technicians and business administration graduates. These types of positions are likely to be attractive to locals and were identified by the industry survey as critical needs.

Eventually, the government may want to consider extending this agreement or establishing another with a different supplier to develop the kind of blue-collar skills, such as welding, needed in manufacturing and construction. This would further align talent development initiatives with creating sufficient, sustainable jobs, as these skilled blue-collar jobs tend to be more plentiful in most projects than managerial positions.

INVESTING IN MODERNIZATION

Saudi Arabia and Siemens also negotiated research and development agreements to collaborate on the expansion of renewable energy and the digitization of the oil and gas industry. The investment here helps

EXHIBIT 1: TRYING FOR A BIGGER ECONOMIC PAYBACK FROM ENERGY

Nations globally are pushing producers for more local content and jobs

NORWAY

50%
of **research and development in oil and gas** has to be done in Norway

80%
achieved **local content through procurement** policies

Considered among the best localization efforts, Norway developed into a major export center for oil and gas equipment.

POLAND

30%
local content target for new nuclear construction

Poland is trying to move away from coal and build a nuclear reactor, but the first project has been delayed.

SAUDI ARABIA

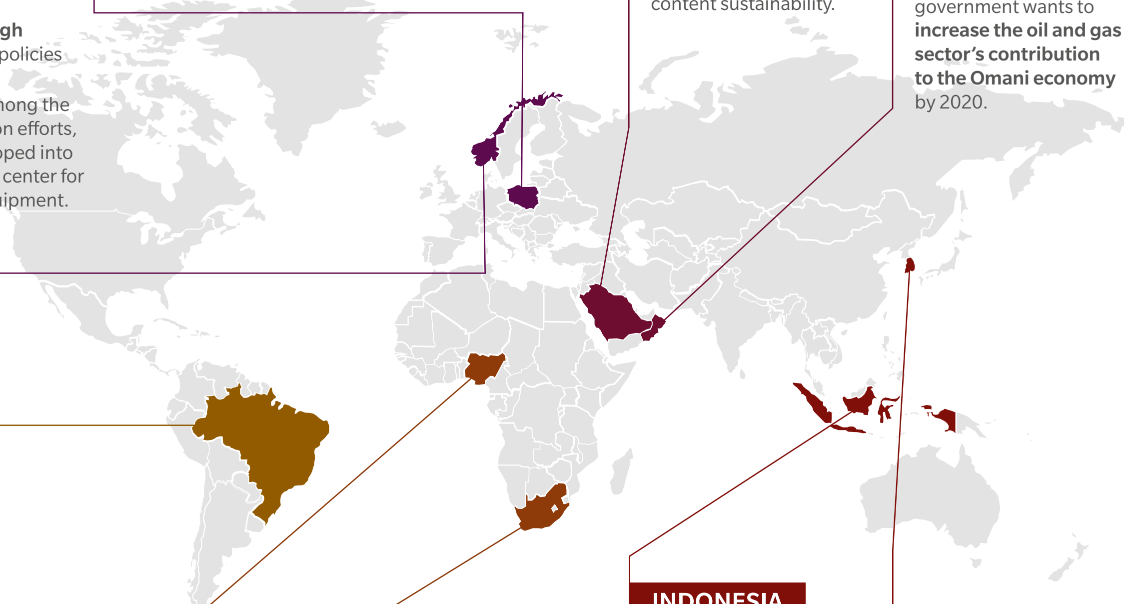
75%
local content by 2030 in oil and gas industry

As part of a broader Saudi initiative, Saudi Aramco is using procurement policies to encourage suppliers to increase local content sustainability.

OMAN

90%
of workforce should be Omani in oil and gas industry

32%
the amount the government wants to **increase the oil and gas sector's contribution to the Omani economy** by 2020.



BRAZIL

70%
local content in oil exploration phase required

75%
in production phase

90%
production aimed for in 2020

Foreign investors must invest 1 percent of each oil field's revenue into energy research and development.

NIGERIA

95%-100%
local talent, as required by Nigerian Oil and Gas Industry Content Development Act

In 2010, Nigeria passed a law giving preference to local businesses and workers and allowing the government to consider local content when evaluating bids.

SOUTH AFRICA

61%
local content for national energy utility

52%
for new builds

South Africa through Eskom promotes local content creation, using it as one of the key procurement criteria for new projects and regular spend.

INDONESIA

45%
for offshore oil and gas operations; 70% for oil and gas production on land

30%
on nuclear construction

Indonesia's local content law says preference must be given to citizens for jobs, and oil and gas companies are required to prioritize local goods, which are given price preferences.

SOUTH KOREA

80% - 95%
local content for new construction in the country's nuclear industry

70%
the amount Korea plans to **increase its nuclear capacity** by 2029

Nuclear power is a strategic priority for Korea because it imports so much of its energy needs.

Source: Oliver Wyman analysis, Saudi Vision 2030, ANP, PROMINP, Eskom, IPIECA, Global Local Content Council, World Nuclear Association, and published reports

Saudi Arabia diversify beyond fossil fuels and will allow its dominant industry to compete more effectively, by bringing in cloud technology and advanced analytics.

The Saudi Aramco effort is backed by a larger KSA localization campaign detailed in the Kingdom's ambitious Vision 2030 economic initiative. Among its broader goals: to create a $2 trillion investment fund to finance economic diversification; transform Aramco into a global industrial conglomerate; and establish the Kingdom as a trade hub connecting Asia, Europe, and Africa.

Another pledge is to expand the country's military industrial complex, so that half of its future defense industry purchases will be fulfilled with Saudi domestic production. Similar to the more targeted Aramco project, Saudi Arabia's goal in Vision 2030 is to increase the localization of oil and gas sectors from 40 percent, to 75 percent by 2030.

ATTRIBUTES OF A SUCCESSFUL INITIATIVE

So what are the characteristics of a successful localization campaign? While every country has its own spin on localization initiatives, there are a few attributes that distinguish the ones most likely to produce results. First, it's important that localization plans are centralized and coordinated on both the country level and the operator level. They also must be staged over time to ensure successful technology transfer and adequate preparedness of the workforce and local supply chain.

500,000

The number of jobs that Saudi Aramco hopes to create

Localization efforts must be sustainable and reflective of the current state of the national industry and the economy. Initiatives are not free, usually requiring a large investment by the government or foreign investors in such items as the purchase of technology rights.

Embedding localization mandates into procurement and human resources provides mechanisms for implementation. To be successful, they also require strong government commitment, and they must be standardized and able to be replicated.

Finally, everything must be measurable. To ensure sustainability, governments and companies must be able to demonstrate progress to its citizens and customers.

At the end of the day, economic development is never easy, particularly when it involves reducing an addiction to a resource once considered to be a limitless source of wealth and growth. But gradually, various countries are developing the best practices that will eventually allow the Gulf region nations and others to realize localization goals.

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This article is adapted from one that first appeared in Middle East Economic Survey.