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# Qatar Petroleum expects Brussels to find anti-trust compliance in deals

**An investigation lasting years into Russia's Gazprom ended without fines**

**LNG Journal editor**

**Ras Laffan complex in the Gulf supplies cargoes worldwide**

Anti-trust investigations by the European Commission into LNG agreements between Qatar and European energy companies has led Qatar Petroleum to say it gave the "highest importance" to compliance around the world and would cooperate with Brussels.

The investigation by the Commission, the executive arm of the 28-nation European Union, would look into potential anti-competitive implications of LNG supply agreements within the European Economic Area.

## Clauses

"Qatar Petroleum wishes to stress that it gives the highest importance to compliance with regulatory authorities in all geographical areas in which it operates," said the QP statement.

"Qatar Petroleum looks forward to working with the European Commission to address any queries or concerns they may have in this regard," it added.

The investigation by the Competition Commission was announced on June 21 and would focus on whether LNG agreements signed by Qatar Petroleum and its subsidiary Qatargas on the sale of LNG to European companies restricted the free flow of gas.

Commission officials said they were looking into contract clauses which either prevented or limited the diversion of gas to other destinations.

"Such clauses may harm competition and prevent consumers from enjoying the benefits of an integrated European energy market," said Competition Commissioner Margrethe Vestager.

Qatar Petroleum is the owner of the Ras Laffan LNG production complex in the Middle East from where 77 million tonnes per annum of LNG is exported worldwide.

Brussels recently ended an investigation lasting several years into Russian natural gas company Gazprom, the main supplier of pipeline gas to the EU, particularly Germany, which is not an LNG importer unlike most other major EU members.

The Commission decided against using one of its main sanctions against Gazprom, a huge financial penalty or fine, though asked the Russian company to reform its pricing structure.

Some oil majors including ExxonMobil, Royal Dutch Shell and France's Total are joint venture partners of Qatar Petroleum in the LNG production Trains. These include the largest liquefaction Trains built with output of around 7.6 MTPA each.

"The European Commission has opened a formal investigation to assess whether supply agreements between Qatar Petroleum companies exporting LNG and European importers have hindered the free flow of gas in breach of EU antitrust rules," stated the Commission.

Commissioner Vestager, in charge of competition policy, said that energy should flow freely within Europe, regardless of where it comes from.

"We have opened an investigation to look at whether there are problematic territorial restriction clauses in gas supply contracts with Qatar Petroleum," she said.

"Such clauses may harm competition and prevent consumers from enjoying the benefits of an integrated European energy market," she added.

The Commission said it would further investigate whether Qatar Petroleum's long-term agreements, typically 20 or 25 years, for the supply of LNG into the EEA contain direct and/or indirect territorial restrictions.

"In particular, certain clauses contained in these agreements appear to, directly or indirectly, restrict the EEA importers' freedom to sell the LNG in alternative destinations within the EEA," claimed the Commission.

■

## UNLIMITED AGENDA

# Energy World Corp. backs Philippines terminal economic report for Senate about LNG advantage

LNG Journal editor

Energy World Corp., the owner of the first LNG import terminal in the Philippines at Pagbilao, has backed testimony to a Senate hearing in Manila that imported liquefied natural gas was the most economic source of fuel for the nation's electricity.

EWC, whose shares are listed in Australia and whose headquarters are in Hong Kong, is constructing a second storage tank at the Pagbilao facility that will operate as a tolling Hub with access for third-party clients.

Pagbilao facility that will operate as a regional tolling Hub

## Strategic

The company said its terminal was a strategically important asset for the Philippines gas industry with 130,000 cubic metres of storage already available.

EWC said Pagbilao LNG is capable of handling 3 million tonnes per annum with the first tank, which can support 3,000 megawatts of combined-cycle, gas-fired power generation.

It will specifically support a 650MW gas-fired power plant built next to the terminal.

During the Manila hearing, the Philippines Department of Energy discussed a report entitled "The Economic Benefits of Switching to the Use of Natural Gas" which supported the future role of imported LNG as a fuel source for power generation.

EWC agreed with the report that power generation costs for LNG in the Philippines was around 4.53 pesos per kilowatt hour, lower than for other fuels.

"The study shows that electricity generated from imported LNG will be more economic than electricity sourced from coal, the indigenous Malampaya gas field, diesel and renewables," said EWC.

Graham Elliott, Executive Director of EWC, said the Department of Energy's own study validates the strategy EWC had implemented to "bring cost-effective clean energy" to the Philippines.

"There are also significant health benefits of using LNG relative to dirtier sources of energy such as coal and diesel," stated Elliott.

The higher prices compared with 4.53 pesos kW/h for LNG included coal at 5.49 pesos per kW/h, Malampaya pipeline gas at 4.67 pesos per kW/h, diesel at 14.40 pesos per kW/h and an average for renewables of 4.92 pesos per kW/h.

"We believe that once LNG is available in the Philippines demand will grow, not only from gas-fired power plants, but also from the industrial, transport and city-gas sectors given the economic benefits," he added.

"We are grateful for the support of the Philippines Senate and look forward to bringing our world-class LNG hub terminal and 650MW power station into commercial operations at the earliest opportunity," stated the EWC executive.

The Hong Kong company is additionally developing the small-scale Sengkang LNG liquefaction plant in Indonesia.

It has a design capacity of 2 MTPA, consisting of four modular Trains each with 500,000 tonnes per annum of capacity.

Construction is about 85 percent complete and feed-gas will be purchased from the Sengkang gas field, where an allocation agreement has already been concluded, ensuring supply of gas until 2022.

Indonesian gas is also expected to be sold to the Indonesian state-owned electricity company Perusahaan Listrik Negara under an offtake agreement for domestic use.

EWC has a licence to export LNG from Indonesia and this could be used to supply the Philippines terminal. ■

# Shell sells 15 percent stake in two Malaysian LNG Trains at Bintulu production plant for net $650M

Royal Dutch Shell said it completed the sale of its 15 percent stake in liquefaction plant three at the Malaysian LNG Bintulu Complex in Sarawak for a net $650 million.

Shell subsidiary, Shell Gas Holdings (Malaysia) Limited, sold the shareholding in the processing joint venture, Malaysia LNG Tiga (Three), comprising two liquefaction Trains, to the Sarawak State Financial Secretary (SFS) for $750M before the deduction of around $100M for dividends and other expenses in the transaction.

SFS is an existing MLNG Tiga shareholder and with completion of this transaction, increased its stake in MLNG Tiga to 25 percent.

The other shareholders include state energy company Petronas (60 percent) and Japanese stakeholders Mitsubishi Corp. and Nippon Oil

"This sale is consistent with Shell's strategy to simplify its portfolio and reshape Shell into a simpler, more resilient and focused company," said a statement from the Anglo-Dutch company.

"Following the expiry of the MLNG Satu and Dua joint venture agreements, MLNG Tiga was Shell's only remaining interest in the Petronas LNG complex," it added.

"Completion of this sale demonstrates the clear momentum behind Shell's delivery of its global divestment programme," stated Shell.

Petronas supplies other Asian nations with LNG volumes from its recently expanded Bintulu plant where a ninth processing Train started operations more than a year ago.

The new Train helped take Malaysia's LNG production last year to 26.8 million tonnes from the Bintulu complex. The Malaysian company has also been producing LNG since the end of 2017 from the world's first floating LNG hull deployed offshore Sarawak over the Kanowit gas field.

It additionally has a stake in the Australia Gladstone coal-seam-gas-to-LNG plant in the eastern state of Queensland.

Petronas will retain its LNG links with Shell by participating in the company's LNG Canada project in British Columbia. ■

# Trafigura signs storage and loading deal in Singapore

Trafigura, the international commodities trading company, has signed an agreement with Singapore LNG Corp. for storage and reload services at the city-state's import terminal on Jurong Island.

This is the second such agreement that Trafigura has signed with SLNG to utilise the excess LNG storage at the facility.

Under the agreement, Trafigura will have access to 160,000 cubic metres of firm LNG storage capacity for two years.

"We are very glad to be renewing our partnership with SLNG," said Chin Hwee Tan, Asia Pacific Chief Executive of Trafigura.

"LNG storage in Singapore allows us to offer our customers additional security of supply and flexibility," added Chin.

John Ng, Chief Executive Officer of SLNG, said the company was pleased to sign its latest terminal agreement after one previously signed with Trafigura and another in 2017 with local company Pavilion Gas.

"SLNG is very pleased to once again offer our storage and reload services to Trafigura and we look forward to continuing our fruitful working relationships with the company," said Ng.

"Through this and our other ancillary service offerings, SLNG aims to facilitate more LNG trades and market plays out of Singapore, contributing to the development of Singapore as an LNG hub," added Ng.

# Japanese LNG imports rebound in May amid Cove Point cargo

**LNG Journal editor**

Carrier 'LNG Sakura' carried Cove Point cargo to Japan

Japanese liquefied natural gas imports rebounded in May to rise by 2.7 percent as US shipments to Tokyo Bay started from Cove Point in Maryland, though thermal coal purchases were still preferred to LNG for power generation.

The LNG imports amounted to 6.40 million tonnes in May compared with 6.23MT in May 2017, according to the preliminary trade figures from the Japanese Finance Ministry.

## Competition

Shipments the previous month had dropped 14.7 percent year-on-year to 5.60MT.

LNG shipments edged higher as imports of thermal coal for power generation surged 15.3 percent in May to 8.82MT.

The cost of the LNG shipments rose 13 percent year on year. The May imports cost 350.20 billion yen ($3.13Bln) compared with 309.54Bln yen ($2.79Bln) in May 2017.

Japan's nuclear power plants, numbering more than 50, were largely still offline in May with only four currently operating.

The Ministry data for May showed that Asian shipments from nations such as Malaysia and Indonesia, Papua New Guinea and Brunei dropped 10.6 percent from May 2017 to 1.41MT.

Imports from the Middle East region rose 7 percent with shipments from countries like Qatar, the United Arab Emirates and Oman totalling 1.43MT in May.

Russian monthly shipments from the Sakhalin Island plant in the Far East were down 40.8 percent compared with a year ago at 476,000 tonnes.

Imports from the US were markedly higher in May at 210,000 tonnes, up 47.5 percent from a year ago, from the Cheniere Energy-owned Sabine Pass plant in Louisiana and the Cove Point plant in Maryland.

Tokyo Gas received the cargo in May at the Negishi import terminal near Yokohama.

The cargo was delivered on board the vessel "LNG Sakura", operated by NYK Line. The ship passed through the Panama Canal on April 28 after sailing down the US Atlantic Coast from the Cove Point facility on Chesapeake Bay.

The balance of imports from other nations in the preliminary figures for May amounted to 2.87MT versus 2.02MT in April 2018, with most volumes coming from Australia, as well as some shipments from Africa and the spot market.

# Indian imports rise ahead of more diversification of cargo sources

Indian LNG imports jumped last month by over 17 percent, led by shipments from Qatar and Nigeria as volumes are also set to increase from the US to meet rising demand from regasification infrastructure being developed for the first time on the East Coast.

LNG deliveries to India's three main import terminals at Dahej, Hazira and Dhabol near the West Coast port of Mumbai during May amounted to 1.67 million tonnes compared with the 1.42MT received in the same month of 2017.

Cargoes for the first two months of the financial year amounted to 3.36MT versus 3.05MT in the year-ago period, an increase of 10.2 percent, according to figures from the Indian Ministry of Petroleum and Natural Gas.

Gross production of domestic natural gas for May was 2.72 billion cubic metres, a fall of 1.5 percent from the 2.76 Bcm posted in May last year.

The cumulative gross production of natural gas was 5.39 Bcm for the first two months of the financial year, an increase of 1.7 percent versus the 5.30 Bcm recorded in the same period of 2017. Cargo deliveries had amounted to 1.68MT in April 2018, a rise of 4.48 percent compared with the 1.61MT received in April 2017.

For the 2017-2018 fiscal year through March 2018 Indian LNG imports had amounted to 19.48MT versus 18.26MT in fiscal 2016-2017, a rise of 6.7 percent.

Indian LNG imports volumes are impacted by a lack of import terminals and pipelines to improve city-gas distribution and to boost capacities for industrial customers.

# NEWS NUDGES

### Cove Point pricing

The Intercontinental Exchange (ICE), the leading operator of commodities, futures and share trading platforms, has launched a physical trading product to reflect the change at the Dominion Energy Cove Point LNG facility in Maryland from an import terminal to an export plant. The new Dominion Energy Cove Point product reflects the physical market for natural gas deliveries into the plant for liquefaction and export. The previous Cove Point market, which had been set up for receiving natural gas from LNG imports, was delisted simultaneously by the ICE.

### Croatia gas purchase

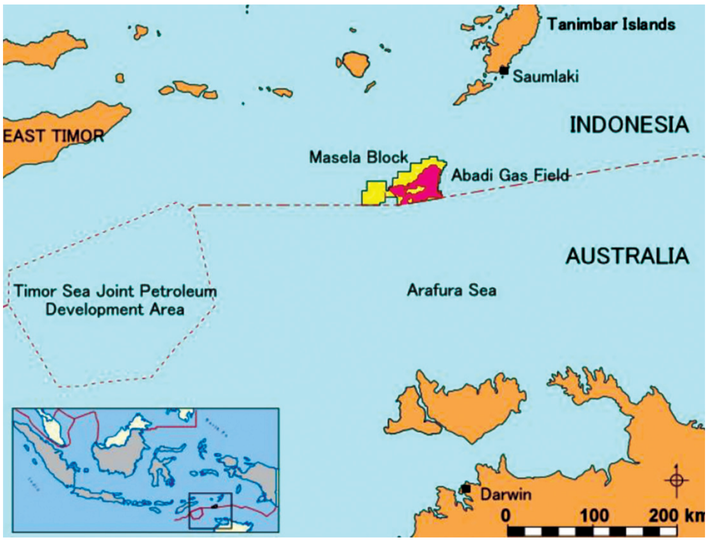
Future LNG importer Croatia has purchased control of nine Northern Adriatic and Marica area gas fields offshore the Balkan state from Italian energy company Eni. The Croatia state-backed company INI has agreed to buy Eni Croatia BV and become the 100 percent owner and sole operator of the fields. The transaction covers production of almost 380,000 cubic metres per day of gas and marks Eni's exit from Croatian exploration and production. Eni and INA had previously worked in a 50-50 joint venture since 1996 under a production-sharing agreement with the Croatian government.

### Morocco and Egypt gas

SDX Energy Inc., the UK-based exploration company, has made another natural gas discovery in Egypt at its South Disouq concession. The well was drilled to a total depth of 7,806 feet and encountered 89 feet of net conventional natural gas pay. SDX also completed a test programme at its LMS-1 well in the Lalla Mimouna Nord permit in Morocco. ■

# Chiyoda wins initial contract for Abadi feed-gas destined for onshore Indonesian LNG plant

**LNG Journal editor**




**Abadi gas field development plan is for an onshore venture**

Chiyoda Corp., the leading Japanese project engineer, was awarded a pre-front-end engineering and design subsea contract along with a partner for the Indonesian Abadi natural gas field in the Arafura Sea that will underpin an onshore LNG export project.

Chiyoda said its partner for the contract would be Indonesian consultancy firm Synergy Engineering, based in Jakarta.

## Inpex

Japanese energy company Inpex Corp. awarded the pre-FEED contract covering the provision of subsea umbilicals, risers, flowlines and a natural gas pipeline to the shore.

The proposed onshore Indonesian LNG plant project is formerly the Abadi floating LNG venture that had originally intended to use a hull based on the existing Prelude FLNG production vessel currently deployed offshore northwest Australia by Royal Dutch Shell.

Inpex owns 65 percent of the Indonesian Masela Block licence containing the Abadi field and Shell owns 35 percent.

"The Abadi field development in the Masela Block is an onshore concept under the supervision of The Indonesia Government Special Task Force for Upstream Oil and Gas Business Activities (SKK Migas)," said Chiyoda.

The nearest Indonesian territory for an onshore liquefaction plant for the Abadi gas field is the Tanimbar Islands.

"Under the terms of the contract, Chiyoda and Synergy will jointly utilize their technically and commercially competitive resources to provide Inpex with various engineering, safety and cost studies, as well as development of the future FEED scope of work," explained Chiyoda.

The Japanese engineering company added that the International energy consultancy, the Xodus Group, and Norwegian-listed and UK based engineering, construction and services company, Subsea 7 SA, would also carry out specific studies as nominated sub-contractors.

The Xodus energy consultancy is jointly owned by Chiyoda and Subsea 7.

"Subsea 7 will contribute specific studies and advice specially focused on competitive installation solutions as a leading experienced subsea engineering, procurement, construction and installation contractor," said Chiyoda.

Chiyoda, based in Yokohama, point out that it had been in the offshore and upstream consultancy business since its acquisition of Xodus in 2013. Inpex had originally envisaged the Abadi field in 2014 as being an FLNG venture with 2.5 million tonnes per annum of production.

However, after revising its volume of reserves, Inpex decided the FLNG project could support more capacity.

## Revised

It submitted a revised plan to the Indonesian authorities in September 2015 for a development based on an FLNG plant with LNG processing capacity of 7.5 MTPA.

Then in April 2016, Inpex received notification from the Indonesian authorities instructing it to re-propose a plan of development based on an onshore LNG plant.

It is now moving forward with an onshore plant development after "constructive discussions with the Indonesian government regarding the development" of the project. ■

> "Subsea 7 will contribute specific studies and advice specially focused on competitive installation solutions as a leading experienced subsea engineering, procurement, construction and installation contractor"
>
> *- Chiyoda*

# Spanish global utility Gas Natural Fenosa renews long-term LNG and pipeline contracts with Algeria

**LNG Journal editor**

Gas Natural Fenosa, the Spain-based utility and major liquefied natural gas market participant, has signed a contract with Algerian energy company Sonatrach to renew pipeline and LNG supply contracts with the North African nation until 2030.

The Spanish company's gas procurement contracts with Algeria currently represent more than 40 percent of its overall gas procurement.


GNF CEO Reynes and Sonatrach counterpart Ould Kaddour

## Security

The new GNF-Sonatrach accord was signed in Madrid by Francisco Reynes, Chairman and Chief Executive of GNF, and Adelmoumen Ould Kaddour, Chairman and CEO of Sonatrach.

"In addition to contributing to the security of supply to the Spanish market, the agreement reinforces an optimal distribution of the supply mix for the country between natural gas supplied via pipelines, which represents 30 percent of domestic consumption, and liquefied natural gas," said GNF.

Sonatrach produces LNG from two plants on its Mediterranean coast at Skikda, east of the capital Algiers, and at Arzew to the west.

Algeria exported 12.34 million tonnes of LNG last year, higher than the previous year's 11.44MT as feed-gas supplies improved.

The main LNG cargo recipients were Turkey, France and Spain while spot shipments were also delivered to the Middle East and Asia.

However, the Spanish company's biggest portion of supplies will be by pipeline from Algeria.

GNF owns 14.9 percent of Medgaz, the company that owns and operates the Algeria-Europe subsea gas pipeline.

The pipeline connects Beni Saf in northwest Algeria with the Almeria coast in southern Spain with gas capacity of 8 billion cubic metres per annum

"This agreement is a major step forward to strengthen our historical strategic alliance with Sonatrach," said GNF's Reynes.

"Moreover, it undoubtedly constitutes a significant milestone in the relationship with Algeria as this renewal guarantees the stability of gas supply to Spain," he added.

GNF is one of Sonatrach's main customers and the Algerian company has become the fourth largest shareholder in the Spanish firm with a 4 percent shareholding.

On the LNG business front, GNF is one of the few European companies that currently receives LNG from both the US and Russia.

It has signed 20-year agreements for cargoes from the Cheniere Energy Sabine Pass plant in Louisiana, as well as its Corpus Christi project in Texas,

In addition to being one of the buyers of US LNG, GNF is also a main contract holder for cargoes from the Yamal LNG plant in Arctic Russia started by natural gas company Novatek at the end of 2017. ■

## Baker Hughes and GE win contract for Corpus Christi

US energy services and equipment company Baker Hughes-GE won a contract to supply more turbomachinery to power the third Train at the Cheniere Energy LNG export plant at the Texan port of Corpus Christi.

BH-GE was chosen as the supplier of the equipment by Bechtel, the engineering, procurement and construction partner of Cheniere at Corpus Christi, as well as at Cheniere's operating first plant at Sabine Pass in Louisiana.

Bechtel contracted BH-GE to provide turbomachinery for the third Train consisting of six PGT25+G4 DLE gas turbines driving various compressors.

BH-GE had provided the same equipment for the other two Trains under construction at Corpus Christi, and similar technology for five Trains at Cheniere's Sabine Pass plant. The value of the latest BH-GE contract was not disclosed.

Cheniere is making progress on the first two processing Trains at Corpus Christi and gas was being introduced to the first Train.

However, the start-up of the Texas plant located on the La Quinta Channel on the northeast side of Corpus Christi Bay is still at least six months away.

Cheniere had announced a positive final investment decision for the third Train in May and issued a notice to proceed with full construction, though preliminary work had already begun.

"This is the fifth order for similar equipment for Cheniere Energy through Bechtel, and an important one as it is the first FID on new liquification in the US since 2015," said Rod Christie, President and Chief Executive of Turbomachinery and Process Solutions at BH-GE.

# Rio Grande LNG plant developer names Ex-BG executive for China

**LNG Journal editor**

NextDecade, the company proposing to build the Rio Grande liquefied natural gas export plant in Texas, named Ping Lee as its main LNG marketing executive for China and Southeast Asia.

Ping is former President of BG Group in China and was a former colleague of NextDecade Chief Executive and President Matt Schatzman.

**Rio Grande plant to be near Texan port of Brownsville**

### Contacts

"Ping was instrumental in building BG's business in China and prior to the Shell acquisition, BG had become China's largest LNG supplier," said NextDecade.

NextDecade is one of the most active development companies on the US Gulf Coast with its plans to develop a portfolio of LNG projects, including the Rio Grande plant near the Texan port of Brownsville with capacity to produce 27 million tonnes per annum.

The Nasdaq-listed company also aims to build the Rio Bravo Pipeline that would have 4.5 billion cubic feet of capacity to supply the liquefaction plant with feed-gas from the Agua Dulce area hub.

NextDecade said that new Executive Vice President Ping was now running the Houston, Texas-based company Beijing office.

Before BG, Ping had spent 21 years with oil and gas services company Schlumberger, ultimately serving as Asia area President.

Ping's Asia marketing efforts will be supported by James MacTaggart, a 20-year Shell veteran whose appointment was announced earlier in 2018 and who is running the Singapore office.

"The appointment of Ping marks another strong addition to our marketing capabilities to serve the world's largest and fastest growing LNG markets," said Matt Schatzman, NextDecade President & Chief Executive Officer.

"His longstanding experience in key markets, especially China, will prove invaluable as we progress to a successful Final Investment Decision on our Rio Grande LNG project," stated Schatzman.

Ping began his career with Schlumberger as a Research Scientist in 1990 in Austin, Texas.

"I am honored to join the NextDecade team," said Ping.

# ExxonMobil regas project is under consideration for market defence

ExxonMobil Corp, southeast Australia's biggest domestic natural gas supplier and with stakes in liquefied natural gas production in the Asia-Pacific region and the Middle East, is considering importing LNG.

The US major is considering using existing infrastructure at Longford in the Australian state of Victoria, to set up a regasification facility as two other separate LNG projects advance near the cities of Melbourne and Sydney.

The two projects challenging ExxonMobil's domestic Australian gas sales have been proposed by AGL Energy of Australian and an Australian-led consortium, including the Mineroo Group and two Japanese companies. The Australia authorities have warned that Victoria, the country's biggest gas-consuming state, could face shortages from mid-2021 due to a rapid decline in offshore supply from the Gippsland Basin joint venture, owned by ExxonMobil and Australian commodities company BHP Billiton.

Output from the Gippsland Basin, the state's mainstay supplier over the past 50 years, is expected to fall to just half of 2018 levels by 2022.

The Gippsland Basin covers an area of Victoria that is approximately 4,600 square kilometres. More than 70 percent of the basin lies offshore.

ExxonMobil has three gas plants and an oil-handling facility at Longford, which is the main onshore receiving point for oil and gas output from Bass Strait between the mainland and Tasmania.

"Combined with the existing Gippsland resource and infrastructure, an LNG import facility could ensure ExxonMobil can continue to meet our customers' needs," said the company, while adding that the regasification facility could open by 2022.

The ExxonMobil LNG option emerged after AGL, Australia's second-largest energy retailer said it planned to start importing LNG by 2021.

# Wheatstone starts Train two operations to bring Australia closer to surpassing Qatar on exports

**LNG Journal editor**

Chevron Corp. said production was on stream at the second processing Train at the onshore Wheatstone LNG plant in the Pilbara region of Western Australia, bringing the Australians closer to surpassing the world's largest exporter Qatar in LNG output.

Wheatstone Train 2 is the last of five LNG production units built by Chevron and its joint venture partners in the state of Western Australia over the past 10 years at a combined cost of more than US$85 million.

**Wheatstone Train 2 is the last of five built by Chevron**

## Significant

"With the Chevron-operated Wheatstone and Gorgon LNG facilities now operational, we are delivering a significant new source of energy for customers in the region, as well as contributing to significant levels of investment into the Australian economy," said Chevron Australia Managing Director Nigel Hearne.

The US major said that in conjunction with the Gorgon plant on Barrow Island in Western Australia, the Wheatstone facility reinforced its position as a leading natural gas supplier and LNG operator in the Asia-Pacific region.

Wheatstone, with a total capacity of 8.9 million tonnes per annum, is the eighth LNG project to be completed in Australia. It puts the nation on track to overtake Qatar and its total of 77 MTPA of output.

That will happen when two remaining projects fully come on stream in 2018 and 2019, Inpex Corp's Ichthys LNG in the Northern Territory and Royal Dutch Shell's Prelude floating production venture offshore northwest Australia.

Hearne said the first shipment of LNG sourced from Train two at Wheatstone was expected to leave in the next week.

The commercial start-up comes about eight months after Wheatstone's first Train began production.

"First LNG production from Wheatstone Train 2 is another remarkable achievement and is testament to the collaboration of our partners, customers, contractors, governments, community, and the many thousands of people who worked to deliver this legacy asset," stated Hearne.

"Working closely with our customers, we are committed to be a safe and reliable natural gas supplier for decades to come," he stated.

Hearne added that the company would also be following the same process as with the first Train and temporarily halt Train two in the September quarter to remove strainers used in the start-up phase.

"We'll take a short outage, remove those strainers then we'll put Train two back up," he said.

Chevron's partners in Wheatstone are Kuwait Foreign Petroleum Exploration Company, Australia's Woodside Petroleum, Kyushu Electric Power Co, and a joint venture part-owned by the world's biggest LNG buyer, Japan's Jera Co. Inc. ■

# Engineering contracts lined up for Australian Barossa gas field to extend Darwin LNG lifespan

Asia-Pacific LNG stakeholder Santos said it made further progress on the front-end engineering and design phase of the Barossa offshore project with the award of three major engineering contracts to continue supplying feed-gas to the Darwin LNG plant, operated by partner ConocoPhillips since 2006.

The Barossa development concept includes a floating production storage and offloading facility (FPSO), six subsea production wells to be drilled in the initial phase, support in-field subsea infrastructure and a gas pipeline to Darwin.

The Barossa gas field development would extend the operating life of the Darwin LNG plant for more than 20 years.

The Darwin plant exports around 3.5 million tonnes per annum of LNG from a single liquefaction Train to Japanese utilities Tokyo Electric Power Co. and Tokyo Gas.

Santos said separate engineering contracts for the FPSO have been awarded to Japan's offshore and subsea company Modec Inc. and a consortium involving Franco-US energy and LNG engineering company TechnipFMC and Samsung Heavy Industries of South Korea.

"A design competition will be conducted between the two groups," said Santos, owner of a 25 percent interest in the Barossa-Caldita field offshore northwest Australia.

ConocoPhillips holds 37.5 percent licence stake in the Barossa-Caldita field and SK E&S of South Korea owns a similar portion.

Santos, which operates the Gladstone LNG plant in Queensland and has a stake in Papua New Guinea LNG, is also a joint venture partner in the 12-year-old Darwin LNG plant with an 11.5 interest.

The Australian company said a third contract, for the subsea infrastructure including umbilicals, flowlines, risers and gas export pipeline, has been awarded to Intecsea, a subsea subsidiary of WorleyParsons of Australia.

"These contracts reaffirm Barossa's position as the leading candidate for Darwin LNG backfill, with no alternative projects in the FEED phase," said Santos Chief Executive Kevin Gallagher.

"Barossa would more than double Santos's production in northern Australia and significantly increase our portfolio LNG production from early 2024 when strong, unfulfilled LNG demand is expected," added Gallagher.

"The award of the FEED contracts is another big step towards ensuring Barossa replaces Bayu-Undan production when it ceases in the early 2020s," explained the Santos CEO.

Gallagher stated that an FPSO design competition between leading engineering contractors with experience in the Australian market "will ensure a robust, cost competitive package is delivered ahead" of a final investment decision. ■