

North Field expansion: Recent LNG deals awarded to have positive medium-term impact



Recent LNG deals awarded for Qatar's North Field gas expansion project will have a positive medium-term impact, facilitating an increase in LNG capacity by almost 65% to 126mn tonnes per year (mtpy) by 2027 from 77 mtpy now. Oxford Economics said in its latest country report. In the two weeks, Qatar secured multiyear supply agreements with China and Germany for LNG output set to be added in the first phase of the project due to be completed in 2026. Qatar's non-hydrocarbon sector recovery will slow in 2023 after a strong rebound this year, Oxford Economics said. "We see non-oil GDP growth of 7.6% this year, the fastest rate since 2015. The pace will then slow to 3.3% in 2023 as momentum eases once the World Cup concludes. This will still be stronger than the 2.7% expansion in 2021, which followed a decline of 4.7% in 2020," noted Maya Senussi, senior Middle East economist at Oxford Economics. The non-oil economy surged by 9.7% in Q2, up significantly from 5% in Q1. The latest survey data show momentum has eased from record high levels, but the influx of World Cup fans means non-oil

activity should remain resilient at year-end. The latest figures show Qatar's tourist numbers neared 1.2mn in January-September, almost quadrupling relative to the same period in 2021, thanks to a surge in arrivals from other GCC countries as well as India, the US. and the UK. The World Cup event is estimated to attract more than 1mn visitors. This should lift the total number of visitors this year above pre-pandemic levels (2.1mn). The month-long event, which started on November 20, has brought an influx of visitors. supporting activity, despite global headwinds. However, inbound travel to Qatar will decline in 2023. before a rise in regional arrivals spurs a recovery thereafter, the report said. Qatar is the world's second-largest LNG exporter (after the US). There is also heavy investment in gas-to-liquids, petrochemicals, a gas export pipeline, infrastructure, and tourism. Some \$200bn has been spent on infrastructure, partly related to the 2022 football World Cup, and partly to an expanding population and the country's long-term strategy, the Qatar National Vision 2030. In addition, Qatar is developing into a significant regional financial and educational centre, Oxford Economics noted.

QatarEnergy, ConocoPhillips sign deal to supply LNG to Germany

ConocoPhillips



حفل توقيع اتفاقيات بيع الغاز الطبيعي المسال من مشروع
حقل الشمال الشرقي وحقل الشمال الغربي إلى ألمانيا

The Signing Ceremony of Sale and Purchase Agreements for LNG Supply
from North Field East and North Field South Projects to Germany

Doha, Qatar
29 November 2022

الدوحة، قطر
٢٩ نوفمبر ٢٠٢٢



Deal signed to supply Qatar LNG to Germany QatarEnergy, ConocoPhillips sign deal to supply LNG to Germany Qatar's first long-term LNG supply deal with Germany was announced Tuesday with QatarEnergy signing two LNG sale and purchase agreements (SPAs) with ConocoPhillips affiliates for the delivery of up to 2mn tonnes per year for at least 15 years.

Pursuant to the two SPAs, a ConocoPhillips wholly-owned subsidiary will purchase the agreed quantities to be delivered ex-ship to the LNG receiving terminal, which is currently under development in Brunsbüttel in northern Germany, with deliveries expected to start in 2026.

The LNG volumes will be sourced from the two joint ventures between QatarEnergy and ConocoPhillips that hold interests in Qatar's North Field East (NFE) and North Field South (NFS) projects.

The SPAs were signed by HE the Minister of State for Energy Affairs, Saad Sherida al-Kaabi, also the President and CEO of QatarEnergy, and Ryan Lance, Chairman and CEO of ConocoPhillips at the QatarEnergy headquarters in Doha

Tuesday.

Speaking at the signing ceremony, al-Kaabi said, “We are pleased to sign these agreements with our partner ConocoPhillips to supply up to 2mn tonnes per year of LNG to Germany from the two QatarEnergy-ConocoPhillips joint ventures in the NFE and NFS LNG expansion projects respectively, starting in 2026.

“These agreements are momentous for several reasons. They mark the first ever long-term LNG supply to Germany with a supply period that extends for at least 15 years, thus contributing to Germany’s long-term energy security. They also represent the culmination of efforts between two trusted partners, QatarEnergy and ConocoPhillips, over many years, to provide reliable and credible LNG supply solutions to customers across the globe, and today, to German end-consumers. This is a concrete demonstration of QatarEnergy’s resolve to provide reliable energy supplies to all major markets around the world, and of our commitment to the German people.”

Low-cost LNG supplier Qatar to remain in ‘relatively strong competitive position’ : S&P



*** Qatar's revenue stream will be significantly enhanced by North Field expansion, whereby Qatari liquefied natural gas production capacity is expected to increase by 64%**

As a low-cost LNG supplier, Qatar will remain in a “relatively strong competitive position” even after 2030, although demand is likely to peak in the mid-2030s, with increasing use of renewables in the energy market having a gradual impact on demand for hydrocarbons, S&P Global noted in its ratings upgrade.

S&P recently raised its long-term sovereign credit rating on Qatar to ‘AA’ from ‘AA-’, assigned a stable outlook, and affirmed the country’s ‘A-1+’ short-term rating.

In its overview, S&P noted Qatar’s debt interest costs as a share of government revenue have fallen, and therefore it expects them to remain low because the government is repaying maturing debt.

Additionally, the government’s revenue stream will be significantly enhanced by the North Field expansion, whereby Qatari liquefied natural gas production capacity is expected to increase by 64% (by 2027).

“The upgrade reflects structural improvements in the Qatari government’s fiscal position. The government’s strategy of

paying off maturing debt, will sustainably reduce debt-servicing costs to below 5% of general government revenue over 2022-2025," S&P said.

Higher gas production related to the North Field expansion, expected to come onstream from end-2025, should further increase Qatari government revenue.

Qatar remains one of the largest exporters of LNG globally. Between 2025 and 2027, the government plans to increase its LNG production capacity by about 64%, from 77mn tonnes per year to 126mn tpy.

The strategic pivot away from Russian gas, particularly by European economies, suggests there will be a ready market for the additional Qatari gas.

In its forecast, S&P said, "We assume that LNG production levels will be largely flat until 2025, but increase by about 30% over 2026-2027, on the assumption that the full increase in capacity will take some time to be fully utilised."

S&P said it expects "strong" non-hydrocarbon sector growth as Qatar hosts the FIFA World Cup from November 20 to December 18, which will support an economic expansion of about 5% in 2022.

After the tournament, S&P has forecast real GDP growth will average about 2.5% over 2023-2025 as gas production levels remain broadly stable and non-hydrocarbon sector growth normalises around 4%.

The country's strong general government net asset position remains a credit strength and it expects it to increase over the period to 2025, supported by investment returns on Qatar's sovereign wealth fund, Qatar Investment Authority (QIA), assets, and the government's repayment of maturing external debt.

Averaging about 150% of GDP in 2022-2025, Qatar Government's large liquid assets provide it with a strong buffer to mitigate the economic effects of external or financial shocks.

QatarEnergy announces hydrocarbon discovery in Brazil's Sepia field



QNA/Doha

QatarEnergy Monday announced an oil discovery in the 4-BRSA-1386D-RJS well in Brazil's world class Sepia oil field, which is located in the prolific Santos Basin in water depths of about 2,000 meters off the coast of Rio de Janeiro.

QatarEnergy acquired a working interest in the Sépia Co-Participated Area in December 2021 during the 2nd Transfer-of-Rights Surplus Bidding Round, which was organized and managed by Brazil's National Agency for Petroleum, Natural Gas and Biofuels (ANP). The Area is operated by Petrobras (with a participating interest of about 52 percent) in partnership with TotalEnergies (19.2 percent), QatarEnergy (14.4 percent) and Petronas Petrleo Brasil Ltda (14.4 percent), with Pre Sal

Petroleo S.A. (PPSA) as manager. The Sepia shared reservoir is currently producing about 170,000 barrels of oil per day.

Commenting on this occasion, HE the Minister of State for Energy Affairs, the President and CEO of QatarEnergy, Saad bin Sherida Al Kaabi, said: “We are encouraged by this discovery, which comes as a result of strategic cooperation with reputable partners in our effort to unlock more global energy resources as part of our comprehensive growth strategy. On this occasion, I would like to congratulate our partners, and I look forward to more future achievements.”

The discovery is significant in that the well penetrated a net oil column, which is one of the thickest ever encountered in Brazil. Partners will continue operations to characterize the conditions of the discovered reservoirs and verify the extent of the discovery by conducting well tests. (QNA)

**QatarEnergy Trading to
offtake, market 70% of LNG
produced by Golden Pass
project in US**



Doha

Affiliates of QatarEnergy and ExxonMobil have agreed to independently offtake and market their respective proportionate equity shares of LNG produced by the Golden Pass LNG Export Project located in Sabine Pass, Texas, the US.

Pursuant to the agreement, QatarEnergy Trading, a wholly owned subsidiary of QatarEnergy, will offtake, transport, and trade 70% of the LNG produced by Golden Pass LNG.

The construction of Golden Pass, which has a total production capacity in excess of 18mn tonnes of LNG per year, is well underway with first LNG production expected by the end of 2024.

Commenting on this development, HE the Minister of State for Energy Affairs, Saad bin Sherida al-Kaabi, also the President and CEO of QatarEnergy said, "The energy market is highly dynamic and undergoing a period of transformation, and LNG will continue to play a key role in meeting global energy demand and ensuring security of supply. This agreement is an important addition to our efforts to meet demand for cleaner energy and to support the economic and environmental requirements for a practical, equitable and realistic energy transition."

Al-Kaabi added: "QatarEnergy is the global leader in LNG, the cleanest of all fossil fuels, and it is only natural for us to increase focus on LNG trading and portfolio optimisation to

deliver innovative LNG solutions that meet the needs of our customers across the globe. I am proud of what QatarEnergy Trading has achieved in the very short time since its inception and with this new addition to its portfolio, I am confident that QatarEnergy Trading will accelerate its efforts to deliver on our aspiration of becoming a world leader in LNG trading in the near future.”

As a result of this arrangement, Ocean LNG Limited, a joint venture established in 2016 between affiliates of QatarEnergy and ExxonMobil for offtaking and marketing the entire production of Golden Pass LNG, has ceased operations, and will be wound down.

رغبة قطرية في الدخول إلى التحالف للتنقيب عن النفط في البلوكين 4 و 9



عقد رئيس الحكومة نجيب ميقاتي اجتماعا مع وزير الطاقة والمياه وليد فياض واعضاء هيئة ادارة قطاع البترول التي تضم وسام شباط، وسام الذهبي، غابي دعبول ووليد نصر .

وأعلن الوزير فياض بعد الاجتماع: عقدنا لقاء اليوم مع دولة الرئيس ميقاتي بمعية أعضاء هيئة إدارة البترول، بعد زيارة قمت بها لفخامة رئيس الجمهورية لتهنئته بالإنجاز التاريخي بشأن ترسيم الحدود وترسيخ حق لبنان بالمباشرة منذ الآن، بأعمال الاستكشاف في حقل قانا وسائر البلوكات في مياه البحر عندنا.

وكشف الوزير فياض عن رغبة قطرية في الدخول إلى التحالف للتنقيب عن النفط في البلوكين 4 و9. وقال: "لقد وردت الرغبة القطرية عبر رسالة من معالي وزير النفط القطري سعد الكعبي أعلن فيها نوايا دولة قطر الشقيقة بمشاركة لبنان بالدخول إلى التحالف الذي سينقب في البلوكين 4 و9 لتصبح قطر الشريك الثالث لشركتي "توتال" و"أيني" في هذين الحقلين، وهذا أمر مهم جدا، لأننا نعرف قدرة قطر الاستثمارية ورغبتها التي أعلنت عنها عبر زيارات مختلفة لسفيرها للوزارة للاستثمار في النهوض الاقتصادي للبنان في قطاع النفط والغاز، في التنقيب ونتاج الطاقة.

وقال: لقد أرسلوا إلى الوزارة المدراء العاميين للشركة المملوكة من الدولة القطرية، وهي مهمة بالاستثمار في قطاع الطاقة ونتاج الطاقة في شكل عام. ونحن نشكر دولة قطر على رغبتها في مشاركة لبنان باستثمار موارده والاستثمار في بناء الاقتصاد اللبناني. لقد عهدنا دائما ووقوف قطر إلى جانب الشعب اللبناني.

أضاف: أما الموضوع الثاني فهو ضرورة دعم هيئة إدارة البترول بالكادر البشري لمواكبة هذه المرحلة وإدارتها وخصوصا العلاقة مع الشركاء، أي العلاقة التحالفية وإدارة العقد الذي يسمح بإدارة أعمال الاستخراج والاستكشاف التي ستبدأ قريبا إن شاء الله، ووضع الجدول الزمني المحدد للإنجازات المتوقعة بالنسبة إلى الأمور اللوجستية وأمور الحفر والمنصة التي ستنشأ لإنتاج الغاز والنفط. ومن الضروري أن يكون لدى الهيئة الموارد اللازمة والكادر البشري المناسب لإدارة هذه المرحلة، وكان دولة الرئيس متجاوبا في هذا الشأن.

إجتماع تربوي

ورأس الرئيس ميقاتي اجتماعا شارك فيه وزير التربية والتعليم العالي القاضي عباس الحلبي، الوزير المفوض في سفارة العراق في لبنان أمين النصراوي، المستشارة الثقافية بان الموسوي، القنصل الأول مهند يحيى، مدير عام وزارة التربية في لبنان الدكتور عماد الاشقر، ومدير عام التعليم العالي الدكتور مازن الخطيب، ورئيسة دائرة المعادلات والامتحانات الرسمية أمل شعبان. وتم خلال الاجتماع بحث شؤون الطلبة العراقيين في لبنان.

الوزير الحلبي

بعد الاجتماع قال وزير التربية: عرضنا الموضوع المتعلق بالمعادلات الذي تقدم به الطلاب العراقيون الذين يتابعون دراستهم في بعض الجامعات في لبنان، والمشاكل التي انعكست سلبا على سير المعاملات، وتم الاتفاق على وضع آليات محددة تسهل على هؤلاء الطلاب من جهة مراعاة القوانين العراقية المطبقة، وكذلك القوانين اللبنانية المطبقة على موضوع المصادقات والمعادلات، واتفقنا على متابعة البحث في اجتماعات متتالية كل أسبوعين مرة بيننا وبين فريق السفارة لوضع حد لاي إشكالات قد تصيب أوضاع هؤلاء الطلاب في لبنان. نحن نعمل على تسهيل الموضوع مع مراعاة القوانين المطبقة، وعلى الجامعات المعنية التي سببت هذه المشكلة ان تساعدنا على ضبط الأعداد التي توافدت إليها من الطلاب العراقيين، لان هناك أخطاء ارتكبتها بعض هذه الجامعات كما ان هناك أخطاء ارتكبتها بعض الطلاب، ولا نريد ان يتم دفع الثمن من قبل وزارة التربية التي تقوم بما عليها في تسهيل مهمة هؤلاء الطلاب. هذا الاتفاق سيسري في الأيام القليلة المقبلة ونأمل ان نتوصل الى حل هذه الإشكالات.

النصراوي

بدوره قال الوزير المفوض في سفارة العراق في لبنان أمين النصراوي بعد الاجتماع: "التقينا دولة رئيس الوزراء ميقاتي بحضور وزير التربية اللبناني والوفد الفني المرافق له، تحدثنا في كثير من الأمور التي تخص الطلبة العراقيين في لبنان، ونقلنا له تحيات دولة رئيس الوزراء مصطفى الكاظمي، وتوجيهاته بشأن ضرورة تسهيل أمور الطلبة الدارسين في لبنان. تطرقنا الى بعض المواضيع الفنية التي تواجه الأخوان الطلبة في بيروت، وتم الإتفاق على وضع آلية جديدة، وعلى تحديد اجتماعات دورية بين السفارة والملحقية الثقافية في بيروت ووزارة التربية لتذليل أي عقبة او مشكلة تواجه الطلبة العراقيين في لبنان.

أضاف: تداولنا مع الرئيس ميقاتي في بعض القضايا المتعلقة بالساحة اللبنانية واستمعنا الى رأيه في الكثير من المواضيع التي تدور حاليا، وكانت فرصة للإضاءة على العلاقة المميزة بين العراق ولبنان.

وإجتمع رئيس الحكومة مع وزير الدفاع الوطني موريس سليم، ثم مع وزير السياحة وليد نصار .

Multi-billion dollar North Field development enters key phase



Pratap JohnThe multi-billion dollar North Field development, the largest ever LNG project in the world, has reached a crucial phase with QatarEnergy beginning to announce partners for NFS project that will further increase Qatar's liquefied natural gas production capacity from 110mn tonnes per year to 126 mtpy by 2026 or 2027.

The North Field South (NFS) has many unique features, the foremost of which is its advanced environmental characteristics. This includes significant carbon capture and sequestration technologies and capacity.

NFS comprises two mega LNG trains with a combined capacity of 16mn tonnes per year.

QatarEnergy's first partner in the NFS project is TotalEnergies, which will have an effective net participating interest of 9.375% out of a total 25% interest available for international partners.

QatarEnergy will hold a 75% stake in the NFS project, HE the

Minister of State for Energy Affairs Saad bin Sherida al-Kaabi said at a media event in Doha recently.

“The other partners in this project will be announced in due course,” HE al-Kaabi said.

The minister noted: “We are committing big investments to lower the carbon intensity of our energy products, which constitute a key pillar of QatarEnergy’s sustainability and energy transition strategy.”

QatarEnergy targets more than 11 mtpy of carbon capture and storage (CCS) and the production of 5GW of solar power by 2035, HE al-Kaabi said, highlighting Qatar’s commitment to CCS and renewable energy production.

“QatarEnergy is moving forward to help meet the growing global demand for cleaner energy, of which LNG is the backbone for a serious and realistic energy transition,” he said.

Recently, QatarEnergy announced the Ammonia-7 Project, the industry’s first world-scale and largest blue ammonia project with a capacity of 1.2 mtpy.”

Blue ammonia is produced when the carbon dioxide generated during conventional ammonia production is captured and stored. It can be transported using conventional ships and then be used in power stations to produce low-carbon electricity.

The new plant, which is estimated to cost \$1.156bn, will be located in the Mesaieed Industrial City (MIC) and will be operated by Qafco as part of its integrated facilities.

In August, QatarEnergy’s affiliates, QatarEnergy Renewable Solutions (QRS) and Qatar Fertiliser Company (Qafco) signed the agreements for the construction of the Ammonia-7 project, the industry’s first world-scale as well as the largest blue ammonia train, which is expected to come into operation by the first quarter of 2026.

The North Field Expansion Project, comprising NFS and the North Field East (NFE) expansion projects, is the industry’s largest ever LNG project.

It will start production in 2026 and will add more than 48 mtpy to the world’s LNG supplies. Five partnership agreements have been signed in June and July this year covering the NFE project, which comprises four mega LNG trains with a combined capacity of 32 mtpy.

“Most project contracts have been awarded, while the onshore EPC contract is expected to be awarded in early 2023,” HE al-

Kaabi noted.

North Field expansion to see world's 'most responsibly produced LNG,' says Shell CEO



The North Field expansion that will include carbon capture and storage is expected to see the “most responsibly produced LNG” in the world, noted Shell CEO Ben van Beurden.

Speaking in Doha Tuesday, van Beurden said, “This expansion is good news for Qatar... for the world... and for Shell.

“Because this responsibly produced gas is consistent with Qatar’s energy sustainability strategy, and also for Shell’s strategy to become a net zero emission energy business by 2050.”

He said “natural gas plays an important role in world wide transition to net zero emissions energy system.”

“If we switch from coal to gas for production of iron or steel, that can result in a reduction of CO2 equivalent,

saving 38%. And that is very significant.”

van Beurden said, “I thank His Highness for taking the decision to end the moratorium of the development of NF in 2017. It was a crucial step forward towards realising Qatar’s National Vision for 2030.”

“I am honoured that Shell has been selected by QatarEnergy as a partner in the NFE project. Through its pioneering integration with carbon capture and storage, this landmark project will help provide LNG the world urgently needs at a lower carbon footprint. This agreement deepens our strategic partnership with QatarEnergy which includes multiple international partnerships such as the world-class Pearl GTL asset.”

“We are committed to maximise the value of the LNG expansion for the State of Qatar and continue to be a trusted, reliable and long-term partner in Qatar’s continued progress,” van Beurden noted.

QatarEnergy Tuesday announced the selection of Shell as partner in the North Field East (NFE) expansion project, the single largest project in the history of the LNG industry.

The partnership agreement was signed at a ceremony in QatarEnergy’s headquarters by HE the Minister of State for Energy Affairs Saad Sherida al-Kaabi, also the President and CEO of QatarEnergy, and Ben van Beurden, in the presence of senior executives from both companies.

Pursuant to the agreement, QatarEnergy and Shell will become partners in a new joint venture company (JV), in which QatarEnergy will hold a 75% interest while Shell will hold the remaining 25% interest.

In turn, the JV will own 25% of the entire NFE project, which includes 4 mega LNG trains with a combined nameplate LNG capacity of 32mn tonnes per year.

Other buyers could join North Field expansion 'if they add value': Al-Kaabi

HE the Minister of State for Energy Affairs Saad bin Sherida al-Kaabi said other buyers could join the \$29bn North Field expansion "if they add value".

Speaking to reporters in Doha Tuesday al-Kaabi, also the President and CEO of QatarEnergy said, "We had been in discussions with several buyers – or value added partners as well call it, around the world who have shown interest... and very eager interest I would say.

"It depends on the value they add...if they add value they would come in. We are proceeding with the project, regardless. There could be some, if we find good opportunities and a win-win situation. We really are not in a rush to do that...there is no big need to do that."

On the "value added partners", the minister noted, "Basically, they need to be a buyer of LNG... so they need to demonstrate that they can give us a price that is above the market price. This is because they will be coming into the best project that exists in the LNG business from a cost perspective and from a return perspective (in the world) and the largest ever built."

Al-Kaabi said QatarEnergy has very capable marketing organisations that are working on marketing these volumes – and the likes of Shell only add to additional marketing capability.

The minister said QatarEnergy had finalised the selection of IOCs in the North Field East (NFE) Expansion project following its selection of Shell as a partner.

QatarEnergy and Shell will become partners in a new joint venture company (JV), in which QatarEnergy will hold a 75% interest while Shell will hold the remaining 25% interest.

This agreement is the fifth and last in a series of

partnership announcements in the multi-billion dollar NFE project, which will raise Qatar's LNG export capacity from the current 77mn tonnes per year (mtpy) to 110 mtpy. The North Field East (NFE) expansion project is the single largest project in the history of the global LNG industry.

QatarEnergy joins 'Aiming for Zero' industry initiative aiming to eliminate methane footprint by 2030



QatarEnergy, the country's hydrocarbon bellwether, has joined the 'Aiming for Zero Methane Emissions' Initiative', an industry-led move that aims to reach near zero methane emissions from operated oil and gas assets by 2030.

QatarEnergy is the first company to join the initiative

outside its 12 existing signatories: Aramco, BP, Chevron, CNPC, Eni, Equinor, ExxonMobil, Occidental, Petrobras, Repsol, Shell and TotalEnergies.

The initiative adopts an all-in approach that treats methane emissions as seriously as the industry treats safety. It supports the implementation of sound regulations to tackle methane emissions and encourages governments to include methane emissions reduction targets as part of their climate strategies.

“By being the first company to join the Aiming for Zero Methane Emissions Initiative outside its 12 existing signatories, we are reaffirming Qatar’s priorities and commitments with regards to the climate change agenda, and its unwavering support to the global effort to reducing emissions, including methane,” HE the Minister of State for Energy Affairs as well as the President and Chief Executive of QatarEnergy, Saad bin Sherida al-Kaabi said.

This also falls in line with QatarEnergy’s recently announced sustainability strategy and follows landmark steps that include signing the guiding principles on reducing methane emissions across the natural gas value chain and endorsing the Global Methane Pledge, he added.

On this occasion, Bob Dudley, chair of the OGCI (Oil and Gas Climate Initiative), said “We are proud to welcome QatarEnergy, one of the world’s largest integrated energy providers, to the Aiming for Zero Methane Emissions Initiative.”

Recognising that eliminating methane emissions from the oil and gas industry represents one of the best short-term ways of addressing climate change, he encouraged others to join this ambitious effort to eliminate the oil and gas industry’s methane footprint by 2030.

The ‘Aiming for Zero Methane Emissions Initiative’ was launched in March 2022 by the OGCI member chief executives. All energy companies involved in the exploration, extraction and/or production of oil or natural gas can join as signatories at no financial cost.

Other organisations striving to have a positive influence on reducing methane emissions from the oil and gas industry can join as supporters.

Companies joining the Initiative agree to do what it takes to reach near zero methane emissions in their operations, reporting transparently, adopting better monitoring and measurement technologies and supporting the implementation of sound regulations.