

Green cities of the future

The carbon model
transforming urban living



Electric vehicles
What their rise
means for energy

Interview
CEO of Baker Hughes,
a GE Company

Breaking records
Investment in renewables
overtakes fossil fuels

Big projects are back
More upstream getting
the go-ahead

New nuclear in India and China

China is pressing ahead with three new nuclear reactors, which have all passed initial operational tests and inspections. Meanwhile, India has advanced plans for ten new reactors which will be built by 2031, including two new sites. India and China accounted for half of the 1%

of growth in energy demand last year, BP said in its annual statistical review. While these countries plan to meet this demand with other forms of energy, such as renewables and liquefied natural gas, nuclear power also features in the future energy mix for both nations. ■



On the wane: coal trains

Fossil fuels are dead, says US railroad boss

CSX, a railroad company, will not buy new locomotives to haul coal, its boss Hunter Harrison said. "Fossil fuels are dead, that's a long-term view," he said

in the US. The announcement follows US President Donald Trump's promises to revive the US coal industry, despite its decline in recent decades. ■



The Liza project in Guyana was divided into phases

Big projects back on track

During the comparative boom years between 2007 and 2013, oil and gas firms made about 40 final investment decisions (FIDs) on big projects every year. By 2015, the number of FIDs was just 10, but now things seem to be picking up. Wood Mackenzie, a consultancy, expects companies to approve 20-25 projects this year—evidence that they're starting to think about growth again. "There are some positive signs in what is a challenging outlook for new project investment," says analyst Norman Valentine. There are several reasons identified by the

consultants for the uptick.

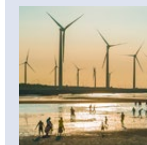
There are several reasons "Costs have been coming down, there has been supply-chain deflation, meaning companies pay lower rates for drilling, equipment and installation," says analyst Malcolm Dickson. Projects have been divided into phases, such as ExxonMobil's operation in the Liza oil field in Guyana, and small-scale projects are becoming more popular.

The company says gas demand will increase by 41% over the next 20 years. Most major international oil companies are now investing in renewables. ■

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For the first time, investment in clean energy overtook fossil fuels. Final investment decisions in upstream are on the rise

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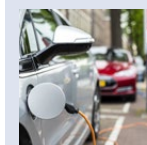
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Meet those working to build the low-carbon, sustainable cities of the future with big plans for cutting global emissions

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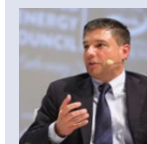
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Record-breaking clean energy investment overtakes fossil fuel spending

As capital spending across the fossil fuel industry continues to fall, investment in low carbon energy is thriving, helping to push electricity sector capex to record levels, according to the International Energy Agency (IEA)

Last year spending in the electricity sector overtook investment in the fossil fuel industry for the first time ever, according to the IEA's recently-released [World Energy Investment 2017 report](#) — a barometer for spending across the entire energy industry.

Capital investment in global oil and gas supply fell by 38% between 2014 and 2016, the IEA said, but still comprises around 40% of the total. This drop has allowed spending on low-carbon energy supply, including electricity networks, to reach a record 43% of the global, total spend last year. This is a rise of 12% from 2014 levels.

Global electricity investment was down just 1% at \$718bn, with growing network spending mostly offset by fewer coal-fired power plant additions.

Investment in renewable-based power capacity was the largest area of electricity spending. According to the report, progress in technology and

project management is driving down solar and wind costs, which has led to investment in renewables falling 3% to \$297bn. The IEA notes, however, that renewables will generate 35% more power as they become cheaper and technology in solar PV and wind develops.

“The biggest area of power generation investment is renewable, low-carbon generation,” said IEA chief economist Laszlo Varro. “Wind and solar power have been doing very, very well and 2016 was a record year. We can expect 200 TWh of electricity from the wind and solar investment [made] in 2016.”

Notably, China, the world's largest energy investor, saw a 25% decline in coal-fired power investment last year, as it is increasingly driven by clean electricity generation and networks, as well as energy efficiency investment.

In 2016, total global investment



Growing: technology advances are boosting solar and wind investment

across the entire energy sector fell by 12%, from a year earlier, to \$1.7 trillion— or 2.2% of global GDP.

It was the second, consecutive year of declining overall investment. This was because higher spending on energy efficiency and electricity networks failed to offset a 44% drop in upstream oil and gas spending between 2014 and 2016, the IEA said.

A prolonged period of depressed oil prices and advances in technology, which have helped to reduce costs for both producing electricity from renewable energy and oil and gas drilling, have also helped to slash overall investment levels.

However, so far in 2017 there has been a modest rebound. A 53% rise in US shale oil and gas investment, combined with resilient spending in large oil and gas producing regions such as the Middle East and Russia has driven nominal upstream investment 6% higher in 2017 (a 3% increase in real terms). Notably, it says the oil and gas sector is getting better at cutting costs.

“The oil and gas industry is undertaking a major transformation in the way it operates, with an increased focus on activities delivering paybacks in a shorter period of time and the sanctioning of simplified and streamlined projects,” the report says. ■

News in brief

SOLAR TENDERS TO AWARD 9.6 GW IN Q3

A total of 9.6 GW of solar tenders will be issued globally in the third quarter according to GTM Research's Global Solar Demand Monitor. The company said it is tracking 17.4 GW of confirmed tenders around the world, of which 8.1 GW are in Europe and 5 GW in South Asia. According to GTM, tendering or auction schemes are currently in place in 48 national markets, while 27 nations are discussing or planning projects. GTM says global solar installations this year will top 80 GW for the first time.

TANZANIA RECEIVES GEOTHERMAL FUNDING

The Climate Investment Funds (CIF) has approved \$21.7m for the United Republic of Tanzania to finance its Geothermal Energy Development Project. The funding will help develop the Ngozi geothermal steam field in southwestern Tanzania. The project is funded by the CIF's Scaling-up Renewable Energy Program (SREP) and will receive \$5m as a loan and \$16.73m in grant resources, paid through the African Development Bank.

SOUTH KOREA BOOSTS RENEWABLES

South Korea aims to generate 20% of its electricity from clean, renewable energy sources by 2030, while reducing its reliance on fossil fuels and nuclear power plants. In a policy report to President Moon Jae-in, who took office in May, the State Affairs Planning Advisory Committee said it will encourage big companies and small merchants to use renewable energy by offering financial incentives and other promotional packages. Earlier this year, President Moon outlined plans for the closure of 10 old coal-fired plants.



The 'Aspern Lakeside' urban development aims to create 10,500 new apartments for 20,000 residents by 2028

Photo: Walter Schaub-Waizer

Energy in Future Cities

Populations are increasingly concentrated in urban settings, but metropolises don't have to be planet polluters

While the definition of a smart, low-carbon, sustainable city may vary depending on who you speak to, there is one thing most urban planners agree on: cities have an extremely important role to play in the decarbonisation efforts needed to achieve the Paris climate goals.

Cities already account for more than 70% of global energy-related greenhouse gas (GHG) emissions. If forecasts that nearly 66% of the global population will live in cities by 2050 prove correct, then it's no wonder they are being put at the heart of efforts to mitigate climate change.

City leaders and local organisations around the world have been ramping up efforts and the low carbon, sustainable city movement is beginning to bear fruit.

Arup Group, which provides engineering, design, planning, project management and consulting services for all aspects of the built environment, is involved in low carbon city projects around the world. The company has been working with the C40—a network of 91 of the world's megacities committed to addressing climate change—for several years.

Arup's associate director in energy, cities and climate Stephen Cook says: "Achieving targets that call for 60-80% carbon reductions requires radical changes in areas such as how energy is used, how people move around the city, building design, etc. It's a case of leaving no stone unturned."

Target areas

City governments have greater power to act in cutting emissions in some areas than national governments.

Transport is one domain where big improvements in carbon intensity can be made. "There is so much scope to improve public transport as well as active transport, e.g. getting people walking and cycling, which has other benefits in terms of making places more liveable and enjoyable," says Cook.

He notes the buildings sector is one of the biggest challenges. "City governments tend to struggle to influence buildings because most are privately owned," says Cook. The problem is exacerbated in the developed world where there is a legacy of inefficiently heated buildings in colder climates.

Generating heat is generally a huge challenge and there is a lot of work to be done in this area. Cities have many potential sources of heat, which Cook says can be captured and fed back into buildings through heat pump systems. "These are significantly more efficient than gas and allow you to tap into electricity networks, which are more successfully decarbonising," says Cook.

Third parties can invest in retrofits of buildings, or energy performance contracting, which is funding insulation

"City governors should engage more with developers to devise city plans that consider how development, movement and energy are all interrelated"

or other energy saving measures, and recovering the cost through a share of the savings.

Paris, for example, has launched a programme which looks at the procurement of innovative, low carbon retrofit solutions for a wide range of buildings. "Such a big procurement programme will allow a lot of innovation to be brought in quite quickly," explains Cook.

City initiatives

The European Bank of Reconstruction and Development (EBRD) ensures that money for projects is invested wisely through its [Green Cities Programme](#).

Key to the programme is the Green City Action Plan (GCAP). The GCAP outlines each city's sustainable development vision, strategic objectives and those actions and investments which will address them.

Last year Arup completed what it claims could be the first attempt to set out a plan for cities to achieve their carbon budget in accordance with the Paris Agreement. Called 'Deadline 2020: How cities will get the job done' the report provides an analysis of the contribution that the 91 cities in the



Arup's Stephen Cook

which signed up to the compact are equivalent to reductions of nearly 1bn tonnes of greenhouse gas emissions annually by 2030 or 11.6bn tonnes cumulatively between 2010 and 2030. This represents 26% of what is possible globally through direct city action by these 600 cities alone.

The commitments of these two organisations, adding up to more than 6,000, under the EU's Covenant of Mayors, are projected to reach an overall estimated reduction of 240m tonnes of CO₂, or approximately 31% of the overall EU28 GHG emission reduction target by 2020 compared to 2005.

Asian initiatives

China and the rest of Asia have been making notable progress. The APEC Low Carbon Model Town (LCMT) project, for example, has been promoting low-carbon technologies in city planning in order to manage rapidly-growing energy consumption and GHG emissions in urban areas of the APEC (Asia-Pacific Economic Cooperation) region. It was initiated in 2011 and has carried out feasibility studies in six case towns so far and researchers are now carrying out a feasibility study of Krasnoyarsk city in Russia.

Tomio Harada, director for natural resources and energy research, for Japan's Ministry of Economy, Trade and Industry and leader of the LCMT taskforce, highlights that the urbanisation rate has been progressing fast in the APEC region and is predicted to reach 80.9% in 2050. The trend is predominant especially in China, Indonesia, the Philippines,

Thailand and Vietnam. At the same time, the amount of primary energy consumption in the APEC region has increased at an annual average rate of 3.5% since 1990.

"The energy consumption in the urban areas generally exceeds 70% of the total consumption of a nation, and this applies to the APEC member economies. The reduction of greenhouse gas emissions in the urban areas is, thus, a crucial challenge for the APEC economies," says Harada.

China has set a target of reducing carbon intensity—the ratio of emissions to GDP—by 40-45% by 2020, compared with 2005 levels. In line with this, the first project

being implemented under the APEC LCMT is the Yujiapu Financial District Development Project. The project aims to reduce carbon intensity by 50% by 2020 in the district, requiring a 30% real reduction in emissions from both transportation and industry.

Yujiapu CBD aims to be a milestone in low carbon town development; containing many innovative solutions in an integrated manner, adopting wide-ranging advanced technology.

Looking forward

Integrated urban planning is one of the key ways cities can reduce their carbon emissions and improve sustainability and resilience to climate change-

related weather extremes.

"City governors should engage more with developers to devise city plans that consider how development, movement and energy are all interrelated," says Cook.

He adds: "When talking about carbon, there are some basic features I would advocate. In addition to thinking about operational carbon from direct emissions or energy consumption, you need to think about the capital carbon that is embodied in the physical assets that you're building. Thinking about the emissions associated with the energy needed to make materials such as aluminium and cement is the next step." ■

global C40 Cities Climate Leadership Group (C40) need to make to convert the Agreement from aspiration into reality.

At the start of the year the Compact of Mayors merged with the EU Covenant of Mayors to form the largest and first-of-its-kind coalition of cities committed to fighting climate change. Known as the Global Covenant of Mayors for Climate & Energy, the coalition comprises more than 7,100 cities across six continents and 119 countries, representing nearly 684m people or just over 9% of the global population.

Under the Compact of Mayors, 596 commitments made by those cities

A GLIMPSE OF THE FUTURE

A 240-hectare site formerly used as a military airport on the northeastern outskirts of Vienna is the home of what is claimed to be Europe's biggest urban development project. According to official sources from the City of Vienna, the 'Aspern Lakeside' urban development aims to create 10,500 new apartments for 20,000 residents by 2028. The first building phase, which is already completed, provides 2,845 homes for 6,000 residents.

The project is the brainchild of the City of Vienna, its utility companies (Wien Energie and Wiener Netze), and Siemens. The partners founded a research company called Aspern Smart City Research (ASCR) in 2013 as a joint venture to handle the near-

€40m (\$49m) project.

The aim behind the project is to create a future-proof urban energy system. A coordinated research plan calls for the city to be a 'test bed' or 'living lab' for the integration of technologies that support energy efficiency and sustainable urban development.

Michael Strebl, Managing Director of Wien Energie GmbH, said: "The ASCR project gives us the chance to test new services for our customers."

As well as reducing the CO₂ footprint of buildings by making them more energy efficient, researchers want to see how they can be used to generate energy for the grid.

The programme takes into consideration forecasts for both independent generation and energy demand (weather-dependent);

and energy prices, which vary over time.

According to the partners, ASCR "covers everything smart", including smart buildings, smart grids, smart users, smart ICT (information and communication), smart energy production and smart storage.

Most recently, a Smart User App was introduced for the 111 households in the town who have agreed to participate in the energy research project. The app allows users to control energy consumption, heating and ventilation via a personalised dashboard via their smartphone or tablet.

Using the data received, the research team has been able to understand how users have applied the control capabilities to reduce their energy consumption.



Plugging in: electric vehicles
are on the rise

The future is supercharged

Electric vehicles are increasingly central to government policy and car manufacturers' plans alike. What does their uptake mean for the energy sector?

Oil and its products have given the world more than a century of easy mobility. Gasoline and diesel keep ambulances running and planes need jet fuel. They enable global trade, on land and at sea, and create wealth.

But its dominant role in global transport—like its function in power generation in previous decades—is coming under threat, starting with cars.

The UK added its weight to the growing movement towards electric vehicles, declaring in July this year that sales of petrol and diesel vehicles will be banned after 2040.

That decision followed France's announcement weeks earlier to also end sales of petrol and diesel vehicles by the same year.

Car manufacturer Volvo has pledged to make only fully electric or hybrid cars from 2019 onwards, betting on an increase in demand in the next two years. For now, penetration of EVs is low. The global stock doubled from 1m units in 2015 to 2m last year, says the International Energy Agency (IEA)—but that's still less than 1% of the world's fleet.

In Europe, California and Manhattan, the rise of the silent, economical EV

and its hybrid cousin is conspicuous. No longer is a Prius or Tesla the expensive badge of an eco-warrior. Auto-makers believe EVs are the future and a tsunami of new models—more than 100—is about to hit the market. The question is no longer if the battery

No longer is a Prius or Tesla the expensive badge of an eco-warrior

will hurt oil demand, but how much.

The forecasts are diverse. The IEA's central case is that EVs will pinch about 1.3m barrels a day from demand by 2040. If so, the oil industry can rest easy—in the same time, consumption will still grow by another 10m b/d or so. Yet, at the other end of the spectrum, Bloomberg New Energy Finance says battery cars will cut 13m b/d from demand by 2040. Oil would go into permanent decline.

What can be said is that EVs and alternative forms of mobility—electric rail, natural gas bunker fuel, car-sharing, hydrogen fuel cells, self-driving vehicles—are on their way. EVs

are leading the race and promise the biggest impact. Government subsidies have given them a push—helping, for example, EVs to account for about 40% of the new-car sales in oil-rich Norway. Climate policy and fuel-economy rules have also played their part.

Unstoppable progress

But the market is taking over. Battery costs continue to fall steeply each year. New charging-point networks and wired car parks are sprouting across advanced economies. Sceptics in the oil industry might not believe in a grid-powered transport future—but China does. It wants to become the dominant manufacturer of EVs, both for its own fleet and the world's. The largest major automobile manufacturers will from next year unveil the first wave of new EVs and their hybrid-powered cousins in China. India, whose economic rise the oil industry assumed would mean soaring petroleum needs, wants all transport to be electrified by 2030.

In a report on the rise of EVs, the World Energy Council identified several recommendations for policymakers and energy leaders. The report, *E-Mobility: Closing the Emissions Gap* identified the EV gap, which is the gap between the number of EV sales required to meet fuel economy targets for passenger cars. In the European Union, this figure is 1.4m, in the US, 0.9m, and in China, it is 5.3m.

The report identified that regulators could help by developing incentives for consumers and manufacturers in line with emissions standards. Vehicle manufacturers could also partner with utility electricity providers to deliver a

Sceptics in the oil industry might not believe in a grid-powered transport future—but China does

superior value proposition to consumers.

Consumers themselves can play a role, by evaluating the economic and environmental benefits of EVs alongside other alternative transport methods that are coming online, and provide feedback to regulators and manufacturers.

A challenge for the oil industry is that this shift is underway while oil prices are relatively low. The new enthusiasm for EVs is not a response to high-cost fuel and these days it's not only concern about the environment either. Small EVs are convenient and cheap to run, especially in cities. In some places, it's cheaper—with the subsidies—to go fully electric. The consumers' verdict will only become truly clear in a few years' time, but auto-makers, are pushing ahead with plans for new, better, longer-driving and cheaper EVs.

Even if EVs do make the breakthrough, natural gas could be a major source of their electricity. But the oil sector is starting to accept the change. Joel Couse, Total's chief energy economist, said recently that EVs would make up 15-30% of new vehicles by 2030. ■

40%

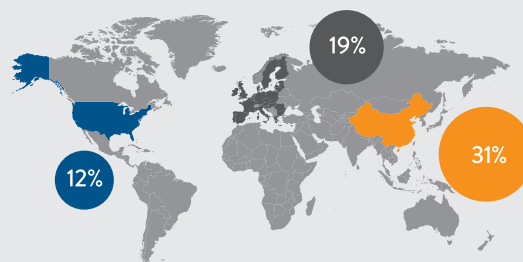
EV share of new car sales in Norway in 2016



ELECTRIC VEHICLES: CLOSING THE EMISSIONS GAP BY MEETING FUEL EFFICIENCY TARGETS

NEW PASSENGER VEHICLES MARKET SHARE

The EU, US and China are the world's largest car markets with collective annual demand of over 40 million passenger vehicles.



FUEL ECONOMY IMPROVEMENT TARGETS

Regulators in the EU, US and China have all demanded major improvements in fuel economy by 2020, requiring efficiency improvements two to three times higher than current levels.



30%
EFFICIENCY INCREASE BY 2020
(5.7 – 6.1% PER ANNUM)

KEY

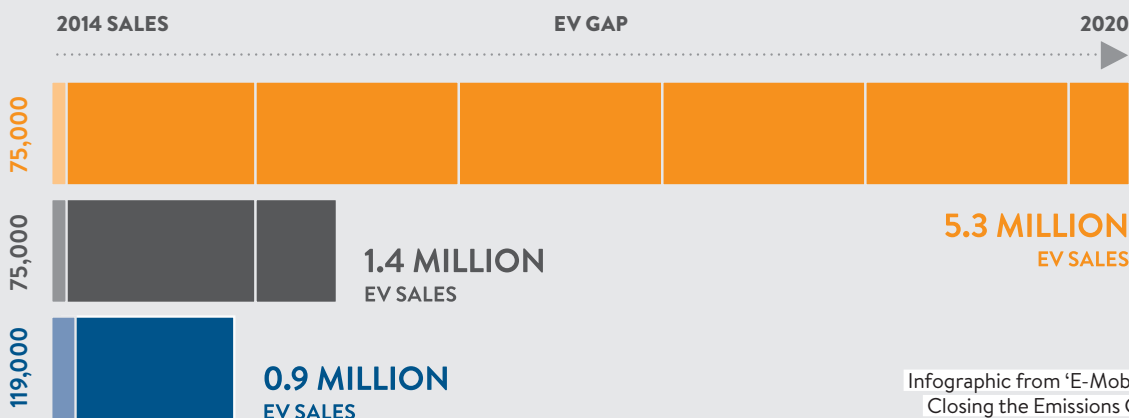
CHINA

US

EU

ELECTRIC VEHICLE SALES GAP

Even capturing less than 1% of combined sales across the three markets, electric vehicles can be key to lowering overall fuel economy to meet new requirements. The EV Gap is the number of electric vehicle sales that will be needed in each market to meet the regulatory requirements.



Infographic from 'E-Mobility: Closing the Emissions Gap', World Energy Council

Lower for longer?

Lorenzo Simonelli, head of Baker Hughes, a GE Company, says the newly-merged firm is already adapting to the oil and gas industry's leaner environment and focusing on innovation

Speaking at the World Petroleum Congress (WPC) in Istanbul, Lorenzo Simonelli outlined an approach mirrored by other energy leaders who are diversifying their services and turning to technology to become more efficient and competitive.

Expect to see more consolidation between oil and gas companies offering services at different stages of the process, says Simonelli.

He now presides over the merged Baker Hughes, a GE Company—or BHGE, as it is listed on the New York Stock Exchange.

At a meeting on the sidelines of the World Petroleum Congress recently, he pointed to the underlying logic of the merger. BHGE is now the world's largest manufacturer of oilfield equipment with its second-biggest oilfield-services provider. At a time when efficiency and cost-cutting are paramount in the oil industry, it's the kind of scale he thinks will yield growth.

"We are starting to see some consolidation in drilling, and with the big players in Norway," Simonelli said. He cited Halliburton's failed attempt to merge with Baker Hughes before GE succeeded, last October, as another example of the trend.

Shortly afterwards, Opec agreed to start cutting production to support

3-4%

Annual growth BHGE expects to see in LNG

prices, leading many in the industry to hope the market would go on a sustained rally. But Simonelli believes "lower for longer is the new normal," and oil and gas companies need to make themselves permanently leaner as a result.

"We've heard people in the industry say that when it's good, we spend like drunken sailors, and when it's bad, we cut everything, and we go through this vicious cycle again and again. But some things have changed," he said. "Unconventionals weren't there before, and new technology has meant productivity is achievable if you are consistent and sustainable in your efforts. The industry wants to be more efficient, and not go back to those old ways."

The subsea contract for the Eni floating liquefied natural gas project in Mozambique, awarded to BHGE in June, was an outcome of the company's broad offering, Simonelli said. BHGE was able to match information from the subsea part of the project with the

"The industry wants to be more efficient, and not go back to those old ways."



floating LNG, knowing what is required for both—a process he described as "full stream".

He thinks deep-water and offshore drilling will make a comeback, despite a market that seems fixated by onshore oil and gas. As for LNG, Simonelli expects global market growth of 3-4% a year.

New technology will play a role for many companies looking to adjust to

new realities. Data analytics is another focal point for BHGE—the company offers an array of software tools to assess maintenance and performance in real time. Data generated by offshore oil wells, rigs and pipelines, will be collated and analysed to provide more successful drilling, more efficient use of subsea equipment and better use of pipeline capacity. Other prospects may also

emerge. "We are not averse to looking at new opportunities, filling in the gaps," Simonelli says. Another potential area is 3D printing for drilling equipment—a nascent and complex technology when it comes to drilling through rock, but one which points to savings thanks to lighter, more durable equipment.

BHGE has 70,000 employees, spread across 120 countries. ■



SENER
SECRETARÍA DE ENERGÍA



**WORLD
ENERGY
COUNCIL**

World Energy Leaders' Summit

Energy in Transition: Leading through Change

12-13 September 2017
Mexico City, Mexico

Hosted by the World Energy Council and the Secretaría de Energía de México (SENER)

The World Energy Council will host the **World Energy Leaders' Summit** in Mexico on 12-13 September, which will form a highlight of a week of energy events co-hosted by Mexico's Secretariat of Energy. Under the theme Dialogues for the Future of Mexico 2017, the Summit will focus on Renewable Energy and Innovative Business Models to Drive and Enable Change; Decentralised approaches to Balancing the Energy Trilemma; as well as Energy System Resilience and Energy Sector Reform. The Summit will bring together approximately 100 Ministers and CEOs from across the world to drive change and deepen understanding of the grand energy transition during a critical time for the sector.

Participation is by invitation only, contact:

<https://www.worldenergy.org/events/2716726e-2cb6-e611-80c3-00155d0511bf/>

2017 Executive Assembly

16 – 19 October 2017

Lisbon, Portugal

The Executive Assembly is the World Energy Council's annual general gathering of the global energy leaders' network. It convenes over 1000 energy leaders, from industry, governments, academia and others for ongoing dialogue on the challenges and opportunities facing the energy sector. Hosted by Portugal, the week-long event will allow for high level, exclusive CEO and Ministerial discussions, peer-to-peer interaction and sharing of best practice.

The events' website can now be consulted for more information and members' registration

<http://worldenergyassembly2017.org/en>

ABOUT THE WORLD ENERGY COUNCIL

The World Energy Council has been at the forefront of the energy debate for nearly a century, guiding thinking and driving action around the world to achieve sustainable and affordable energy for all. It is the UN-accredited energy body and principal impartial network, representing more than 3,000 organisations – public and private – in almost 100 countries. Independent and inclusive, the Council's work covers all nations and the complete energy spectrum – from fossil fuels to renewable energy sources.

JOIN OUR NETWORK

Join the debate and help influence the energy agenda to promote affordable, stable and environmentally sensitive energy for all. As the world's most influential energy network, the World Energy Council offers you and your organisation the opportunity to participate in the global energy leaders' dialogue. Find out how you can: join a Member Committee; become a Project Partner, Patron or Global Partner; take part in annual industry surveys, study groups and knowledge networks; by visiting our website and contacting our team on:

www.worldenergy.org/wec-network

CONTACT US

World Energy Council,
62–64 Cornhill,
London EC3V 3NH
United Kingdom
Tel: +44 20 7734 5996
Fax: +44 20 7734 5926
www.worldenergy.org
@WECouncil

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Publisher

Elliot Thomas
elliot.thomas@petroleum-economist.com

Editors

Helen Robertson
helen.robertson@petroleum-economist.com
Beth McLoughlin
beth.mcloughlin@petroleum-economist.com

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MEMBER COMMITTEE EVENTS

Gas & Energy Congress

23 – 24 August 2017

Santa Cruz, Bolivia

The Bolivian Chamber of Hydrocarbons and Energy (CBHE) will be organising the tenth edition of its Gas and Energy Congress. Bringing key actors from the energy industry, especially from the oil & gas sector, together with local, regional and international energy leaders and policymakers, since 2008, the Bolivian Gas and Energy Congress positions the country at the heart of the energy debate in the Latin American region and beyond. The two-day conference will reunite 20 international speakers and over 500 participants, including top level business executives from energy and service companies, political authorities as well as national and international media. The Gas and Energy Expo, carried out in parallel to the Congress, specialises in welcoming the latest innovation in energy products and services with up to 100 stands and more than 2500 visitors.

For more information, visit the website:

<http://www.boliviagasenergia.com/>

Baltic Energy Cooperation – the way forward

7 – 8 September 2017

Stockholm, Sweden

The event organised by the Swedish member Committee of the World Energy Council brings on its first day an exclusive discussion between the Council's committees of the Baltic Sea to exchange knowledge and best practice around energy policies. The second day will be an open seminar focusing on the EU initiative "Winter Package – Clean Energy for All Europeans". Three main topics will be covered including: Electricity market design, Gas market development; Transport sector development for CO2 emissions reductions. Key high level speakers include Pierre Schellekens, Deputy Head of Cabinet of Commissioner Arias Cañete of the EU Commission.

For more information, visit the website:

<https://www.worldenergy.org/events/aabc67c8-7456-e711-80c6-00155d050ff0/>

North American Annual Regional Forum & Empowering Energy

13 September 2017

Mexico City, Mexico

The North American Annual Regional Forum will also take place in the margins of the World Energy Leaders Summit, bringing together the leadership of the World Energy Council's Canadian, Mexican and US member committees to discuss relations between the three countries' energy systems. During the same week, the Council will also host an open session on "Empowering Energy – Scaling up rural energy access through innovation". Co-hosted by the Council, Oxfam Mexico, Fomento Mexicano and Barefoot College on 13 September, it will explore how to bring energy to rural areas and how new players and business models create synergies across communities.

For more information, visit the website:

http://demex.mx/en/wp-content/uploads/2017/07/EXT_Programme-Empowering-Energy-20170718.pdf

International Summit for Electric Mobility

19 – 21 September 2017

Bogota, Colombia

This event is aimed at creating a space for discussion and debate between government, private sector and academia for the development of electric mobility in the Latin American region. Electric mobility has been identified by the World Energy Council as a key element to achieve sustainable energy systems at national level and the potential of electric mobility in Latin American countries is extremely high. Feeding from one of the currently cleanest energy mixes in the world, and from the fast development for renewables integration, growth in demand for electric vehicles could potentially be fulfilled in a sustainable manner in the region.

For more information, visit the website:

<http://movilidadelectrica.energycolombia.org/>