

SUSTAINABLE ENERGY  
DEVELOPMENT

energizing



Baker Hughes 

energizing  
CHANGE

January 28-30 | Annual Meeting 2024 | Florence, Italy

Event proceedings



**Energizing Change** is about shifting paradigms, adopting new technologies, and fostering a culture of innovation and inclusivity to achieve the trilemma objectives of energy security, sustainability, and affordability.

**Energizing Change** focuses on people. According to the Edelman 2024 Trust Barometer, people are what grow businesses and businesses are what people trust the most; more than NGOs, governments, and media. Businesses are also most trusted to introduce new innovations. As we accelerate progress toward a net-zero future, we will do it by putting people first and energizing change.

The world is at a critical inflection point. Since AM2023, the trilemma has been tested and pushed:

- First global stock take of the Paris Agreement finalized at COP28, with 2023 being the hottest year on record.
- COP28 reminded us that climate change remains very real and will continue to affect our global economies as well as energy affordability.
- More geopolitical instability in 2023 than in decades, with energy security remaining critical.
- Generative AI became the trend of the year, yet the technology is underutilized and widely misunderstood.
- The demand for hydrocarbons continues to rise, while at the same time electrification and decarbonization of industries continue to mature.

It is time to enter a new phase of progress. If we are going to make this the “decade of action”, we must accelerate change to achieve more powerful results.

### Sustainable energy development

Mr. Simonelli, Chairman and CEO of Baker Hughes, in his opening keynote, reminded the audience that sustainable energy development must come back into focus. It not only addresses the three factors of the energy trilemma – security, sustainability, and affordability – but it also introduces efficiency by repurposing and reusing built elements to create a circular economy. It’s a mindset that balances the needs of today with the needs of the future.

### A focus on energy efficiency and digital transformation

Refining processes and prioritizing efficiency are the cornerstone of the transition and key to revolutionizing not only the energy sector but industries across the board. In a recent study by the IEA, if we double our energy efficiency gains annually until 2030, 50% of the global CO<sub>2</sub> reductions needed to meet Paris Agreement goals will be achieved. Digital solutions are critical to driving efficiency for intelligent operations, for oil and gas well production with Leucipa™, for industrial asset management with Cordant™, and AI is rapidly becoming a critical part of the solution.

### Mature assets solutions

Mr. Simonelli spoke about the importance of improving the performance of mature assets to deliver shorter cycle, lower cost, lower carbon footprint production compared with greenfield.

At the Annual Meeting this year, we displayed a comprehensive set of innovative methodologies to accelerate production and total recovery while lowering CO<sub>2</sub> per barrel and cost of asset retirement. This combined decades of insight and industry-leading technologies to maximize the health and value of mature fields.

### Growth in New Energies

Mr. Simonelli emphasized the continued importance of new energies including hydrogen in driving sustainable energy development. He updated attendees on the progress of Baker Hughes’ partnership with Air Products, which includes successful testing and start-up of 100% hydrogen-fueled NovalT™16 turbines for Air Product’s Net-Zero Hydrogen Energy Complex in Edmonton, Canada, and delivery of the first two trains of advanced compressor solutions for the NEOM project in Saudi Arabia.

**Energizing Change** is about collaborating with customers and technology partners to build an ecosystem across industries; aligning company initiatives with global initiatives like the UN’s SDGs and COP28; navigating the complex terrains of ESG requirements to deliver people-powered, technology-driven energy solutions to meet the needs of each region as they transition.

Explore the following pages  
for key takeaways from the conference  
proceedings



The world of energy is changing, with new demands being placed on both producers and users to address the energy trilemma. It requires new ways of thinking, and the right people to do it.



**Keynote:**

**HRH PRINCE ABDULAZIZ BIN SALMAN AL-SAUD**  
Minister of Energy, Kingdom of Saudi Arabia



**Key Takeaways**

His Royal Highness Prince Abdulaziz bin Salman Al-Saud joined the Baker Hughes Annual Meeting via a virtual keynote address.

During his powerful speech, he reiterated his commitment to energizing change.

**Ministerial Panel Discussion:  
Is Global Governance the Solution for the Energy Trilemma?**

**MODERATOR: DAN MURPHY**, Anchor and Correspondent, CNBC

**U.S.A. | BRAD CRABTREE**, Assistant Secretary for the U.S. Department of Energy's (DOE's) Office of Fossil Energy and Carbon Management

**GERMANY | DR. JÖRG KUKIES**, State Secretary at the Federal Chancellery

**TURKEY | AHMET BERAT CONKAR**, Ministry of Energy and Natural Resources

**ITALY | VALENTINO VALENTINI**, Deputy Minister, Ministry of Enterprise and Made in Italy

The energy trilemma represents the greatest challenge of our time. Governments across the globe are facing ever growing pressure to ensure reliable, affordable supplies of energy while simultaneously focusing on sustainability.

**Key Takeaways**

- With global citizens demanding faster progress towards net zero goals, government policies are adapting to accelerate the achievement of transition targets.
- A global governance framework could eradicate global emissions and the panel discussed how policy can help accelerate.
- The panel reviewed the mechanisms in place to attract and de-risk financing for transition projects and technologies.

**Keynote: QatarEnergy LNG—Energy Transition Journey**

**KHALID BEN KHALIFA AL THANI**  
CEO, QatarEnergy LNG

The keynote primarily focused on three key areas:

- 1 QatarEnergy LNG's expansion projects are being built on company pillars of safety, sustainability, and quality to ensure continued efficient and reliable operations.
- 2 QatarEnergy LNG is committed to building its expansion projects without compromising standards of safety, availability, reliability, and environmental protection.
- 3 QatarEnergy LNG is undertaking robust environmental practices through initiatives such as a CO2 Sequestration project and Coral Management Program.

**Panel Discussion: Building Tomorrow's Energy System Today:  
Energy Solutions for a Net-Zero Future**

**MODERATOR: LUBNA BOUZA**, Editor in Chief of Business News and a Presenter at Sky News Arabia

**MARCO ARCELLI**, CEO, ACWA Power

**MEG GENTLE**, Executive Director, HIF Global

**PRATIMA RANGARAJAN**, CEO, Climate Investment

**DANNY RICE**, CEO, NET Power

**DARRYL WILLIS**, Corporate Vice President, Energy & Resources Industry, Microsoft

Developing a suite of effective and credible climate technology solutions will be critical to eradicating the emissions required to achieve net zero by mid-century.

Panelists reviewed the most promising emerging technologies and how they can work in concert to achieve a rapid and vast transformation to a cleaner global energy system.

Participants acknowledged the challenges to commercial viability and scalability and how they can be overcome.

**Keynote:  
Powering the  
Energy Transition**

**ABDULKARIM A. AL-GHAMDI**,  
EVP Gas, Saudi Aramco



**Key Takeaways**

- The transition towards a lower carbon energy mix requires collective effort. To support a multi-source, multi-speed and multi-dimensional transition, partnership is crucial. Aramco is working with those partners to create a menu of lower carbon energy sources such as e-Fuels, renewables and hydrogen to become a major supplier of lower carbon energy.
- Aramco is using cutting edge technology, like carbon capture, utilization, and storage, to reduce emissions from conventional, reliable sources of energy.
- A new company, Aramco Digital, was created to spearhead digital and AI innovations, where the right investments can deliver lower emissions and higher reliability for the industry.

**Panel Discussion: US Energy Policy: The Good, the Bad and the Ugly**

**MODERATOR: RITA LOFANO**, Editor in Chief, AGI  
**JACK FUSCO**, President and CEO, Cheniere Energy  
**PAUL MARSDEN**, President, Bechtel Energy  
**MIKE SOMMERS**, CEO, API

The IRA and IJA have precipitated a seismic shift in investment in and development of low carbon energy solutions in the US and have inspired pro-climate legislation in jurisdictions across the globe.

The panel addressed the potential scale of impact of the IRA and IJA globally on development of new energies, but also discussed the recent decision of the Biden-Harris administration to temporarily pause on pending approvals of LNG exports and its potential implications.

**Panel Discussion: Decarbonizing the Aviation Industry: How Airports  
Deliver Results Through Innovation and Collaboration**

**MODERATOR: NASER EL TIBI**, Senior Producer and Presenter, Al Arabiya  
**STEVE BARTH**, Managing Director, Vitol  
**BRIAN COBB**, CIO, CVG Airport  
**KAVEH DABIRAN**, Managing Director, Planning & Development, Corporate Real Estate, United Airlines  
**DWIGHT PULLEN**, SVP Aviation, AECOM  
**JORGE ROBERTS**, CEO, Avports

With growing concerns related to power demand/supply and climate change, innovative solutions are becoming essential for future airport business continuity and carbon "net-positive" operating scenarios.

The panel assessed the opportunities and best practices that exist to deliver the right solutions through innovative partnership frameworks.

## Keynote: Future Economy: Securing Growth Opportunities in a Period of Profound Change

**ANDREW BUSCH**, Economic Futurist

The keynote primarily focused on three key areas:

**Post-COVID-19 economic transformations:** The talk highlighted the global economic shifts following the COVID-19 pandemic, including changes in consumer behavior and the response of governments and central banks.

**Geopolitical influences on the economy:** The speech delved into the economic impact of the Ukraine war and China's distinct economic strategies, illustrating how geopolitical factors are significantly influencing the global economy.

**Emerging economic opportunities:** It identified new growth prospects in addressing challenges like climate change, demographic shifts, and energy needs, stating these as critical areas for future economic expansion and innovation.

## Panel Discussion: How Oil and Gas Producers can Energize Change Through Their Operations

**MODERATOR: AMRITA SEN**, Founder and Director of Research, Energy Aspects

**ADRIANO MONGINI**, CEO, Azule Energy

**NICOLAS TERRAZ**, President of Exploration & Production, TotalEnergies

**DATUK ADIF ZULKIFLI**, Executive Vice President & CEO Upstream, PETRONAS

Oil and gas will remain vital components of the energy mix for many years to come and production will be essential for delivering the transition. Producers must prioritize the effective decarbonization of upstream operations in order to meet transition goals. What does the decarbonization of upstream operations resemble?



### Key Takeaways

- The industry must ensure its operations are efficient and productive.
- The decarbonization of operations is transforming the lifecycle management of oilfields, from improving output of brownfield sites to fully integrated well abandonment campaigns.
- The role of digitalization of the oilfield is critical to unlock efficiency gains, and help the industry become a part of the circular economy.

## Panel Discussion: Time for Action: How Different Industries are Championing Sustainability

**MODERATOR: PATRICIA FALCO BECCALI**, Moderator & Former Journalist, Principle AG

**JENNIFER HOLMGREN**, CEO, LanzaTech Global

**MARK HUTCHINSON**, CEO, Fortescue Future Industries

**FRÉDÉRIC LISSALDE**, President & CEO, BorgWarner

**DANA THOMAS**, Journalist & New York Times Bestselling Author

Producing an estimated 9.0Gt of CO<sub>2</sub> in 2022, the industrial sector accounts for around 25% of global energy emissions. To reach the net zero target by 2050, the sector's emissions must fall to 7Gt by 2030 (IEA). In pursuit of this goal, organizations have sought to implement creative and innovative programs and partnerships to reduce footprints and promote circular strategies.

### Key Takeaways

- Effective programs must scale up to make major gains in emissions reduction. Companies must adapt to the new reality whilst continuing to deliver returns to shareholders.
- The energy industry, agriculture, fashion, transportation and consumer food and drink; these industries are some of the biggest contributors to emissions.
- To do their part to get to net-zero by 2050, the panel acknowledged common challenges and how to solve them.
- It's about managing energy usage and the circular economy, spearheading real change whilst continuing to supply the energy people and industry need.

## Fireside chat: The role of oil and gas in a secure, affordable and lower carbon energy system

**MODERATOR: NASER EL TIBI**, Senior Producer and Presenter, Al Arabiya

**GORDON BIRRELL**, EVP of Production & Operations, bp



### Key Takeaways

- It's clearer than ever that the world wants and needs secure, affordable and lower carbon energy. Achieving that takes balance.
- bp is taking an AND not OR approach to energy. Investing in today's energy system, which is mostly oil and gas – keeping energy flowing to where it is needed. AND, not OR, investing in the businesses driving the energy transition.
- As an integrated energy company, bp aims to safely and efficiently produce a range of energies, such as oil and gas, fast EV charging, renewables, hydrogen and more. bp aims to deliver them to the customers in the way they want.

## Panel Discussion: The Reward and Risk of AI in the Industrial Sectors

**MODERATOR: PATRICIA FALCO BECCALI**, Moderator & Former Journalist, Principle AG

**ED ABBO**, President and CTO, C3.ai

**ARKADIY DOBKIN**, Founder, CEO and Chairman, EPAM Systems. Inc.

**JEFF MIERS**, Global Director of Partners and Alliances for Energy and Utilities, Amazon Web Services (AWS)

**AHMED RAHIMI**, COO, Qatar Fertilizer Company (QAFCO)

**FRENCESCA ZARRI**, Director of Technology, R&D & Digital, Eni

Artificial Intelligence (AI) has the potential to revolutionize the energy industry, driving digitalization and predictive capabilities. However, it also exposes vulnerabilities.

The panel reviewed the role of generative AI versus traditional AI in the energy industry—particularly how it can enable electrification or smart grids supply/demand balancing.

Participants debated the way in which AI can help us reach net-zero and make energy production more sustainable.

## Closing keynote: AI is Eating the World: How to Lead, not Follow in an AI-first world

**BRIAN SOLIS**, Head of Global Innovation, ServiceNow



### Key Takeaways

- Before 2022, the world was already experiencing “digital Darwinism” and was challenging leaders to rethink businesses to become digital-first.
- ChatGPT, the fastest-ever growing technology, shifted the world from becoming digital-first to becoming AI-first. And after that, the world was no longer evolving linearly, AI has put us on a path of unimaginable exponential transformation.
- Becoming AI-first business means acknowledging that in the very near future, AI will be the smartest person in the room, meaning now's the time to power-up, open our minds, and invest in AI to collaborate toward new outcomes.



## Keynote: Energizing change in the chemical industry

**ILHAM KADRI**  
CEO, Syensqo

As a global leader in specialty chemistry and advanced materials, enabling electrification, green hydrogen, lightweighting and biosourced solvents and surfactants, Syensqo is truly energizing change across industries including automotive, aerospace, energy, industrial and consumer goods.



### Key Takeaways

The keynote focused on the following points:

- Participants learnt about Syensqo's 160 years history of change, and its most recent 5-year transformation which recently ended with the separation of Solvay and Syensqo, followed by the IPO of Syensqo.
- The keynote provided examples of collaboration and co-innovation with partners, including Baker Hughes, as well as its 44 active projects across the world, designed to accelerate the energy transition.
- The CEO reminded the audience in her keynote that the company plans to be carbon neutral by 2040, 10 years earlier than its earlier engagement.

## Panel Discussion: The Economic Stairway for Hydrogen

**MODERATOR: TIM MCDONNELL**, Climate & Energy Editor Semafor

**GERRITT MARX**, CEO, Iveco Group

**ALESSANDRA PASINI**, Co-Founder and President, Zhero

**PIERRE-ÉTIENNE FRANC**, CEO, Hy24 and Co-founder & Chairman, FiveT Hydrogen

The pipeline of global hydrogen projects has risen beyond expectations and if all projects are realized, global capacity could exceed 420GW by 2030 (IEA). Concerns remain, however, regarding the assurance of demand in the medium to long term thus the establishment of robust supply chains linking demand centers with production are required to ensure investor confidence and secure funding.

### Key Takeaways

- The panel provided perspectives on what a robust hydrogen supply chain could look like.
- With project costs remaining high, developers need to put in place strategies to de-risk investment.
- Panellists shared their views on the different hues of hydrogen and if they really matter.
- One of the conclusions was that producers and consumers need to collaborate to create a global hydrogen economy.

## Panel Discussion: Financing for Net-Zero (or How to Fund the Trilemma?)

**MODERATOR: HELIMA CROFT**, Managing Director and Global Head of Commodity Strategy, RBC Capital Markets

**FAHAD ALAJLAN**, President, King Abdullah Petroleum Studies and Research Center (KAPSARC)

**ARNAUD PIETON**, CEO, Technip Energies

**TAKAYUKI UEDA**, President & CEO, INPEX

**H.E. DR. SAAD HAMAD AL BARRAK**, Former Deputy Prime Minister, Minister of Oil and Minister of State for Economic & Investment Affairs, Kuwait and Executive Chairman, ILA Group

The bill for achieving net zero will total into the trillions of dollars. Someone somewhere has to pay for new infrastructure, new technologies, research and development. But who should it be? Innovative funding models that will meet the disparate needs of economies across the globe will be required to bolster investor confidence and stimulate cash flows to transition projects.



### Key Takeaways

- The panel shared perspectives on how to fund new energies such as hydrogen, CCUS, renewables and geothermal.
- They discussed in turn the role of government in financing mechanisms.
- The group also debated whether the oil and gas industry should have a place at the table when it comes to financing net-zero.

## Panel: Natural Gas as a Credible Accelerator to Net-Zero Future?

**MODERATOR: NASIR EL TIBI**, Senior Producer and Presenter, Al Arabiya

**ALESSANDRO PULITI**, CEO and General Manager, Saipem S.p.A

**TOBY RICE**, CEO, EQT

**TIGHE SMITH**, Chief Nuclear Officer, Paragon Energy Solutions

**MARIA SFERRUZZA**, Executive Director International Engineering, Construction & Solutions, SNAM

Natural Gas and LNG have significantly lower emissions than its other hydrocarbon counterparts, but does this make it the right energy source of the future?

### Key Takeaways

- The group reviewed the potential of natural gas and LNG. The role of CCUS and methane emissions abatement was also discussed in this context.
- The panel debated natural gas' credibility as an accelerator to net-zero, against other energy sources such as nuclear and renewables.
- The discussion covered how to ensure there is enough security of supply.
- The panel concluded the conversation on natural gas reforming being an essential element to enhance hydrogen production, and how hydrogen can interplay with existing natural gas infrastructure based on each perspective.

## Panel Discussion: Not Scorching the Earth: The Role of Responsible Supply Chains post-COP28

**MODERATOR: ALLYSON BOOK**, Chief Sustainability Officer, Baker Hughes

**MORGAN BAZILIAN**, Director, Payne Institute for Public Policy, and Professor at Colorado School of Mines

**RICHARD NEWELL**, President and CEO, Resources for the Future

**DANA THOMAS**, Journalist and New York Times Bestselling Author

**CHARLOTTE WOOLF-BYE**, Vice President, Chief Sustainability Officer, PETRONAS

While the world arrived at a landmark global consensus at COP28 to keep 1.5C within reach, accelerating energy transition means accounting for entire value chain emissions, including indirect emissions (Scope 3).

### Key Takeaways

- The panel agreed that companies must create sustainable supply chains that consider environmental and social impacts.
- Accurate lifecycle assessment is essential to help calculate Scope 3 emissions.
- Cross-industry collaboration is essential to develop best practices in creating responsible supply chains.

In his closing remarks, Mr Simonelli invited the audience to join the next Baker Hughes Annual Meeting, to be hosted on Feb 2-4 2025, in Florence, Italy. Save the date.









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