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AT THE SHOW

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WPC Officers for 2021-2023 Cycle
Young Professionals reflect on impressive program
Special thanks to 23rd WPC sponsors and partners

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Photo: PHIL MCCARTEN/CORPORATEEVENTIMAGES/UPSTREAM

Miras gets set for Calgary

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Nearly 60 customers in
more than 20 countries

- 14 LNG TRAINS
- 77 MTPA CAPACITY
- 2 CONDENSATE REFINERIES
- 69 CHARTERED LNG VESSELS



Honorable Mayor of Calgary Jyoti Gondek (left) and Honorable Mayor of Houston Sylvester Turner (right) during the 23rd WPC Closing ceremony

Photo: NICK AGRO/CORPORATEEVENTIMAGES/UPSTREAM

Painchaud leads the way to Calgary

Canada's energy hub is more than five years into its preparations to hold the 24th World Petroleum Congress, with members of the Organising Committee excited to host the Congress in their city in two years' time.

"We're very excited for a number of reasons. We see this as a once in a 25-year opportunity to showcase Canadian energy excellence to the rest of the world," said Denis Painchaud, President of Canadian Organising Committee for the 24th WPC.

"The process was long in the making. We started this effort in September of 2015. And it's only fitting that the event itself will be held in September of 2023."

The unpredictability of current times, including the impacts of the Covid-19 pandemic and the growing urgency of energy transition, mean planning for such an event can be a complex challenge for organisers.

However, some of that complexity was eliminated in the selection of the Congress theme.

"We're fortunate in that the International Secretariat was willing to really take a step in a new direction," he said.

"We're particularly thrilled that the theme for the 24th WPC is *Energy transition, the Path to Net Zero*, which marks a real step-change in the history of the World Petroleum Council and the World Petroleum Congresses, which have traditionally focused on best practices in the industry."

He noted that the 24th WPC will, for the first time ever, have a climate focus.

"We think it is time. It's relevant, and it's going to resonate with industry, government and the general population," he said.

Other new aspects of the programme include an extended reach within the energy industry into areas like petrochemicals, pipelines and supply chains — areas that Painchaud noted have "not had as much attention in the programming" in the past.

"We're also going to have a strong programme on indigenous issues that will be part of the Congress," he said.

"In Canada, our indigenous communities are our partners in the energy sector. But there are critical special considerations about future development that involve those communities and indigenous lands.

"It's important to have these global conversations so the rest of the world can see how we're tackling these challenges together and finding solutions."

Organisers are planning for more than 5000 registered delegates.

Houston hands over WPC reins to Calgary

After three days, thousands of visitors and hundreds of speakers across different forums, the 23rd World Petroleum Congress concluded on Wednesday and Houston handed over the reins to Calgary, in the Canadian province of Alberta.

The Closing Ceremony highlighted the accomplishments of the Houston event and symbolic hand-off of responsibilities from the city known as the "Energy Capital of the World" to the "Energy Capital of Canada".

"We are glad that over 5000 participants attendees were here, representing over 70 countries," Houston Mayor Sylvester Turner said.

"It again shows that even despite the ongoing pandemic, it can be done and we're proud to have done it with this prestigious event which, once again, brought together world leaders, senior

executives, experts and representatives of industry to address the key issues of our energy sector."

Turner said the Congress showed that the oil and gas industry was not only focused on improved production and returns, but understood the implications of the changes occurring in the energy sector.

"We have acknowledged that the energy transition is here and it is on us to lead," he said.

"As I heard this week from many of our energy executives, the industry needs to better tell their story about powering the world while being a critical and fundamental part of reducing the emissions to take on climate change."

During the handover, the Calgary delegation put on a show, including a performance by country musician Michael Daniels and a Strong Man display. But the

message from the city's leadership was more serious.

Calgary Mayor Jyoti Gondek said the 24th World Petroleum Congress would continue the discussion on how to confront the "wicked problems" caused by climate change.

"Calgary has always been a world leader in the energy industry, and is now poised to be a leader in the energy transition economy," she said.

"It has been uplifting to observe energy industry stakeholders pulling in the same direction on a path to net zero, the theme of the 2023 WPC event.

"I have tremendous optimism about our future, given all of the great minds that are producing innovative ideas that will ultimately produce energy in ways that we have not yet imagined to meet the needs of our future."



Dr Daniel Yergin delivers his lecture after being awarded the prestigious Dewhurst Award at the 23rd WPC

Photos: PHIL MCCARTEN/CORPORATEEVENTIMAGES/UPSTREAM

Yergin delivers insights on the energy transition era

Leading energy expert and Pulitzer Prize-winning author accepts Dewhurst Award and delivers speech on the era of the energy transition and the oil and gas industry's future

Dr Daniel Yergin was recognised for his exceptional contribution to the oil, gas, and energy industry with the highest honour of the World Petroleum Council — the Dewhurst Award — on the final day of the 23rd World Petroleum Congress in Houston.

Yergin joins an esteemed group of industry leaders as only 10 recipients have been selected for the award in the almost 90-year history of the World Petroleum Council.

Former US Secretary of State and former ExxonMobil Chief Executive Rex Tillerson, and 2017 Dewhurst Award honoree, presented the award to Yergin.

It is Yergin's ability to provide a "clear explanation of facts as they are, not playing to what people might wish they were, or hoped would be" that Tillerson said he has found most impressive over the years.

"It's that type of fact-based analysis that is so necessary for leaders in the industry for making decisions about a future role to have people full fill their responsibilities," Tillerson said.

"It really is a great honour to receive the Dewhurst Award," Yergin said after accepting the award.

"I am deeply appreciative for the



Dewhurst Award Dr Daniel Yergin (centre), flanked by outgoing World Petroleum Council President Tor Fjaeren (left) and Former US Secretary of State and former ExxonMobil Chief Executive Rex Tillerson (right)

award and the opportunity to deliver this diverse lecture."

Yergin said it was his recognition of the importance of the energy industry that by a "somewhat winding road that lead [him] to this platform today. There was no master plan that got me here rather, was opportunities and

curiosities and my sheer fascination with the industry".

He noted that much has changed in the four years since the last Dewhurst Lecture, which Tillerson delivered in Istanbul.

"Just three or four years [ago], a major focus would have been the

extraordinary growth of US oil and gas production, going from imported 60% of oil to being self-sufficient. Eight US presidents since the 1970s had called for energy independence and it seemed impossible to ever achieve that," said Yergin.

"It was more or less now achieved with great impact, and yet, is sometimes now just taken for granted."

Now that focus is clearly elsewhere.

"It's clear in this conference, you cannot go anywhere in the world — either in the energy world, the climate world, or the environmental world — without running into that singular phrase energy transition, in ever inevitably linked, of course, to climate change and lower carbon," he said.

The journey the oil and gas industry now finds itself on will create a new industry, and it is "evident in the work of the plenaries, the working sessions, and discussions in the informal dialogues in the corridors of this World Petroleum Congress, that the future already looks different", he said.

"I can assure you that when the WPC meets again in two years, and certainly again in five years, the future will look different," Yergin concluded.



New cycle: incoming World Petroleum Council President Pedro Miras Salamanca pictured during a WPC members meeting in Houston

Photo: TODD BUCHANAN/CORPORATEEVENTIMAGES/UPSTREAM

Miras takes the helm

Newly elected WPC President Pedro Miras Salamanca will steer the organisation through a shorter cycle than usual, due to the impact of the pandemic on the previous cycle, and he is tasked with implementing a new strategy

Pedro Miras Salamanca, elected President of the World Petroleum Council for a cycle that will culminate in the 24th WPC in Calgary, Canada, knows that he has come to the helm at a time of transition.

The global pandemic, accelerating digitalisation and energy transition all spell change for the oil industry, and the WPC has been working to keep in step with the times.

A strategic review, led by outgoing WPC President Tor Fjaeran, was formally presented to Council members on Sunday, and the next cycle will be about implementing the changes.

"Tor has been a wonderful President. He led the process in very difficult times. His leadership has been very key for this and he has also started the process of modernising the WPC," said Miras.

The Future Strategy Review included a discussion on the future role of the WPC, identifying drivers to be sure that the institution is at the heart of the global energy arena in the next cycle.

Miras said: "We want to be global and we want to look at energy.

"Many oil and gas companies are in their

own process of transformation to become deliverers of energy and we want to be at the heart of this global discussion."

Another aspect of the strategy keenly supported by Miras is a determination to ensure that the WPC is a forum for open discussion, engaging at all levels, rather than taking positions, lobbying or producing reports.

"We also want to make this discussion closer to people," he said. "There is sometimes an outside understanding that we are discussing things among ourselves, but it is very important that wider society understands the things we are doing.

"We want to show society that we are as worried about energy transition and climate change as them. We want to be part of the solution."

Miras stressed that an open debate of this nature allows scope for criticism or controversy.

"We want to hear all points of view in a transparent way. We want to be the voice of reason, and that comes from debate," he said.

Another change, emanating from the

challenges of the Covid-19 pandemic, is an openness to new formats and forums.

"We were very focused on holding the 23rd WPC in person, as we understand there is a special value in that, but we can also adapt our formats, for example holding hybrid meetings during the cycle," Miras said.

For the 23rd WPC in Houston, the organisers were able to maintain a theme of Innovative Energy Solutions that, with the pandemic-induced delay, was decided four years before the proceedings.

"What is more important than technology for solving energy problems?" Miras asked.

Miras' long experience with the WPC includes recent positions as Vice-President for programmes of the WPC Executive Committee.

With Repsol, Miras works for one of the oil companies that has embraced the energy transition most fully — and was the very first to set out its own net-zero emissions target.

He describes himself as comfortable in multilateral institutions bringing together diverse approaches and perspectives, and he hopes to bring this to his new role.

Tor Fjaeran concludes 23rd WPC in Houston

Concluding remarks by Tor Fjaeran, outgoing President of the World Petroleum Council, at the 23rd World Petroleum Congress

Few World Petroleum Congress cycles have faced as many challenges as the one that ends this week in Houston: The coronavirus pandemic delayed the live event by one year until after vaccine roll-outs could allow participants to safely attend.

The sudden global spread of a new Covid-19 variant just ahead of the 23rd WPC event then forced some originally scheduled speakers to remain in their home countries, but for the many industry leaders and thousands of attendees who did turn up in Houston, it was well worth the effort.

The WPC's return to Houston began with a colorful parade of children carrying flags from around the world during the opening ceremony.

US Deputy Secretary of Energy David M. Turk told any doubters in the general assembly hall, "There is not an alternative to stepping up and fixing the threat to climate change."

Amin H. Nasser, Chief Executive of Saudi Aramco, shared a different perspective, warning that curbing investments in oil and gas could stoke inflation and social unrest. He argued that assuming the world could achieve a transition to clean energy "overnight" is "deeply flawed."

Nasser's fellow panelists, Chief Executives from European majors TotalEnergies and Equinor as well as the bp America President, recounted their own efforts to achieve an effective and profitable energy transition, including major investments in renewables, but all agreed that investments in oil and gas will be needed for some time to come.

The official theme of the 23rd World Petroleum Congress was Innovative Energy Solutions, but the backdrop of energy transition was never far away.

In the opening plenary, ExxonMobil Chief Executive Darren Woods said the search for solutions to a wide range of activities currently producing emissions would have to continue. "What's available today is simply not good enough," he said.

Similarly, Chevron Chief Executive Michael Wirth said, "We can't wait for future technological breakthroughs to happen in our industry," adding that diverse approaches to meeting those needs are required. "I leave you with a challenge: Let's keep accelerating progress. We're the industry that knows how to solve the toughest problems."

As the Congress progressed, attendees were treated to a wealth of information on energy transition, including insights on carbon credits, technology for the most diverse challenges and the financial aspects of renewable energy investments.

More traditional oil and gas themes were highlighted as well, including



Closing remarks: outgoing President of the World Petroleum Council Tor Fjaeran

Photo: PHIL MCCARTEN/CORPORATEEVENTIMAGES/UPSTREAM

lively sessions on mega-projects and exploration hotspots, such as in Brazil, Guyana and the Eastern Mediterranean. Attendees also heard the outlook for new and untapped reserves, including unconventional hydrocarbons.

Insightful ministerial sessions showcased countries from around the world, such as Canada, Kazakhstan and Poland.

The 23rd WPC also staged the latest installments of its Young Professionals and Global Sustainability Programs, at a time when investing in future talent has become a vital and challenging matter in its own right.

The WPC also updated its Untapped Reserves report, in partnership with

Boston Consulting Group (BCG), aimed at spotlighting workforce diversity gaps in the oil and gas industry.

The traditional Excellence Awards Ceremony resulted in recognition for Sakhalin Energy, ExxonMobil, Kayros and Halliburton subsidiary Landmark for standards in social responsibility and technological developments. Pedro Miras, one of our Young Professionals, from Repsol, won the Excellence Award for Youth.

One big highlight was the Plenary session where we heard from the IEF, OGCI and OPEC, which really summed up all issues from our week reflecting the challenges and opportunities for the energy industry worldwide. Other

notable highlights of the 23rd WPC included the election of the World Petroleum Council's new President, Pedro Miras Salamanca. He will take over from me and steer the WPC through a 24th cycle that will culminate in the next Congress, to be held in Canada in 2023.

Denis Painchaud, President of the Canadian Organizing Committee for the 24th World Petroleum Congress, now takes the reins for hosting what promises to be an engaging discussion on the energy transition and the path to net zero, to be held in Calgary in 2023.

In conclusion, thank you, Houston, for hosting the the 23rd WPC in such a good way.

ENERGY TRANSITION



Virtual address: Opec Secretary General Mohammad Sanusi Barkindo speaks at the 23rd WPC

Photo: NICK AGRO/
CORPORATEEVENTIMAGES/
UPSTREAM

Barkindo calls for balance

Opec Secretary General warns of threat to energy security if new oil and gas investment in oil is halted

NISHANT UGAL

Houston

OPEC Secretary General Mohammad Sanusi Barkindo has cautioned that ongoing energy transition needs to be more inclusive and equitable, and ignoring the existing sources of energy can lead to unintended consequences such as market distortions, heightened price volatility and energy shortfalls.

"Climate change and energy poverty are two sides of the same coin," Barkindo told the 23rd World Petroleum Congress in Houston in a recorded address.

Barkindo said that the "narrative around the energy transition has been overtaken by emotional outburst with rational discussions based on facts, data and science taking a backseat".

"The complexity of the challenge calls for the inclusive approach, not the passage of a single one size fits all definition,"

Climate change and energy poverty are two sides of the same coin.

Opec Secretary General Mohammad Sanusi Barkindo

he said. Barkindo said the world faces enormous challenges and it requires a "delicate balance and comprehensive non-sustainable solutions and with all voices heard and listened".

"We need to ensure energy's affordable for all and we need to transition to a more inclusive, fair, equitable world in which every person has access to energy," he said.

Barkindo highlighted that, according to Opec's recently released 2021 World Oil Outlook, global energy demand is forecast to expand by 28% by 2045, with more than 50% of the share still

likely to be dominated by the oil and gas sector.

He added that renewables are coming of age, with wind and solar expanding quickly.

However, it is estimated that even by 2045 they will only account for around 24% of the global energy mix.

"It underlines the need to have a holistic view of the energy sector and appreciate what each energy source can offer," he said.

Barkindo warned that halting new investment in oil and gas is misguided and could lead to serious consequences for world energy security. "If the necessary

(oil and gas) investments are overlooked, It could have knock-on implications and leave long-term scars, particularly for security of supply, affecting not only producers but consumers too," he noted.

Opec's 2021 World Oil Outlook claims that an investment of \$11.8 trillion will be required between now and 2045 in the upstream, midstream and downstream sectors.

However, in the past year alone upstream investments plummeted by 30% and are expected to remain at lower levels this year, which Barkindo

said is a key concern. "Let me stress that the return on investment is a core objective of the declaration of cooperation between Opec and non-Opec producers," he said.

Barkindo added that the "current energy market turmoil seen across the world in recent months is perhaps an insight into some of the issues we are dealing with, and what could augur if we do not see the bigger picture and the interwoven complexities".

He said that the oil and gas industry needs to be a part of the solution to tackle climate change and evolve with the transition.

"I have no doubt the resources and expertise of our industry can be harnessed again to help develop cleaner and more efficient technological solutions contributing to the reduction of emissions," he said.

TRANSFORMATION OF THE OIL & GAS BUSINESS

Leaders focus on industry's future

Key points of agreement on energy transition despite different perspectives around the world

GARETH CHETWYND

Houston

OIL executives from diverse nations gave complementary visions on the transformation process facing the oil and gas industry during a World Petroleum Congress plenary session.

Repsol, in 2019, was the first major oil company to commit to a net zero emissions target but Chief Executive Josu Jon Imaz stressed that a transformation of this kind must not be allowed to undermine the economic well-being of future generations.

"We are seeing high electricity prices impacting families and causing some sectors of industry sectors to lose competitiveness," he said during the Transformation of the Oil & Gas Business plenary session.

"We have been seeing financial speculation on carbon credits. None of this is acceptable," he added.

Imaz gave the industry a vote of confidence for overcoming the challenges in the way. "Our sector has plenty of talent and industrial and technological capability to cope with the challenge of reducing the CO₂ emissions," he said.

He outlined some of the steps that Repsol has been taking toward energy transition, including significant new investments in wind and solar power but also with new products, including e-fuel, advanced bio-fuels and hydrogen.

Geological expertise was highlighted as one of the strengths that the oil industry can bring to bear for energy transition.

He mentioned Repsol's CCS project at Sakakemang in South Sumatra, Indonesia with a storage capacity of 2 million tonnes per annum by 2027, and geothermal studies in the Canary Islands.

The theme of CCUS was picked up by Dong Sub Kim, Chief Executive of Korea National Oil Corporation (KNOC).

The company's first CCS project is scheduled to start up by 2025 and may be scaled up to 4 million tpa by 2030, Dong Sub Kim said.

He highlighted the company's

work on breakthrough technologies for capturing and storing carbon dioxide.

"We need technological breakthroughs, not the extension of what we are doing. Luckily, you know, technologies are on the horizon... some of the membrane technology is very impressive," he said.

KNOC also has a floating wind joint venture with Norway's Equinor and recently launched its own CCS initiative using a depleted gas field off the east coast of Korea.

The company has also signed agreements with South Korean power and industry concerns including shipbuilding, looking at the feasibility of producing low carbon hydrogen and ammonia.

"Social acceptance is a challenge. We have to be good at things like recycling hydrocarbon or greenhouse gases," Dong Sub Kim said.

The idea that technological advances of this kind cannot be achieved by an individual country or company was shared by Subhash Kumar, Managing Director of India's Oil & Natural Gas Corporation, who called for strengthened international collaboration in new energy technologies.

Leparan Ole Morintat, Chief Executive of National Oil Corporation of Kenya, said demand for energy is growing faster in Africa, with demand for oil and gas expected to grow strongly through 2040 in any scenario of increased deployment of renewables.

He pointed out that more than 40% of hydrocarbons discovered in the last 10 years were in Africa, a continent that contributes barely 3% of global emissions from energy.

"We need to have a balanced transition, but we need to remove this discrimination in financing of oil and gas projects. We should not be punished for the sins of those who now need to quickly attain transition," he said.



African scale: National Oil Corporation of Kenya Chief Executive Leparan Ole Morintat speaks during the plenary session as (from left) Korea National Oil Corporation Chief Executive Dong Sub Kim, Oil & Natural Gas Corporation Managing Director Subhash Kumar and Repsol Chief Executive Josu Jon Imaz listen in

Photo: PHIL MCCARTEN/CORPORATEEVENTIMAGES/UPSTREAM

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In the picture... at USA Night



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Young Professionals reflect on impressive program

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The 23rd World Petroleum Congress Young Professionals Stand hosted an impactful and informative program. Collectively, we, the attendees, speakers, and moderators of the 23rd WPC Young Professionals Program explored a wide range of topics spanning the breadth of our industry.

Speakers and attendees expressed enthusiasm about the future of our industry as we collectively *Lead to a Sustainable Energy Future*.

Coupled with the enthusiasm, discussions focused on the industry keeping its role as responsible energy producers and further increasing access to energy, energy literacy, and building a diverse and inclusive workforce.

Discussions were dynamic, with generous support, engagement, and attendance by a variety of senior leaders.

The 23rd WPC Young Professionals Program is now over, and we are excitedly looking forward to engaging in future discussions with our colleagues in Almaty, Kazakhstan during the next WPC Future Leaders Forum in 2022.

The next World Petroleum Congress will be hosted by our dear northern neighbors, the Canadian National Committee to the World Petroleum Council.

Their theme of *Energy Transition: The Path to Net Zero* will build on the dialogues held here and further highlight our industry's leadership in addressing the dual challenge of combating climate change while energizing the world.

NATURAL GAS



From left: Moderator Dr Raul Camba of Accenture; Jim Teague, Chief Executive of Enterprise Products Partners; Charif Souki, Chairman of Tellurian and Founder of Cheniere Energy

Photo: PHIL MCCARTEN/CORPORATEEVENTIMAGES/UPSTREAM

US natural gas exports 'vital'

Leading LNG executives say clean energy transition would lead US energy dependence to trade Opec for China

NAOMI KLINGE

Houston

GROWING natural gas exports from the US are vital to help address energy crises in other countries, liquefied natural gas executives told the 23rd World Petroleum Congress.

With the upcoming addition of Venture Global's 20 million tonnes per annum LNG facility in Louisiana, US LNG export capacity will get a significant boost.

The US last year produced 48 million tonnes of LNG, Wood Mackenzie Research Director Ian Thom recently told Upstream.

Charif Souki, Chairman of Tellurian and founder of Cheniere Energy, said this natural gas can replace biomass, such as wood or dung, as a cooking fuel in places like sub-Saharan Africa, where millions of people die every year from indoor pollution.

While US politicians last month asked the federal government to

potentially ban crude oil exports, Souki said the US needs to decide how it will approach these global energy crises moving forward — if it will support other regions or turn to isolationism.

"Here in the US, we don't really have to be concerned about an energy crisis, because we define an energy crisis differently than most of the rest of the world," Souki said.

"For us, a dollar [more] at the pump is an energy crisis, or that we're going to have to trade our F-150 for a Toyota."

Meanwhile, about 35% of the world still lacks access to clean cooking, and an estimated 2.4 billion people will still lack access to clean cooking in 2030, according to the International Energy Agency.

Americans have avoided a true energy crisis over the last decade

because of the shale revolution, Souki said. But for the rest of the world, the issues of an energy crisis are much more immediate than those of a climate crisis.

"Until we have addressed the energy crisis, it is going to be very difficult to address a climate crisis with any kind of immediacy or urgency," Souki said.

Natural gas and shale have played a key part in allowing the US to achieve more energy security, but a transition to renewable and clean energy raises concerns that the country will become more dependent on China.

Metals used in clean energy are found all over the world, with hotspots in Chile, Indonesia, the Democratic Republic of Congo and Australia, yet China refines and processes more copper, nickel, cobalt, lithium and rare earth metals than any other

country. "It took us 50 years to become energy independent, hopefully it's going to take us 50 more years to become dependent on somebody else," Souki said.

"It makes absolutely no sense to trade Opec for China."

Jim Teague, Chief Executive of Enterprise Products Partners, said there are barriers in the US that keep oil and gas companies from delving into clean energy technologies, including carbon capture.

"We could repurpose to carbon capture and sequestration, but it's got to make money. We're not going to do it for the hell of it," Teague said.

"If there's not a business there, then we'll probably send those people back to doing something else."

He said the cost of carbon is unclear, and even if the 45Q tax

credit is expanded to \$85 per tonne, he's not sure if that will be enough.

Ultimately, Souki said the US is the land of opportunity, and oil and gas companies will do what they want, regardless of the barriers in front of them.

"This is America. We are not going to be stopped by regulators or by bean counters. When we see an opportunity we're going to pursue it," Souki said.

"Sometimes it will be slower than we like, probably most of the time. But we're going to get to the end result."

Souki and Teague were speaking during the 23rd WPC's session titled Can Natural Gas, Including LNG, Deliver on the Promise of a Clean & Affordable Transition Fuel?

The moderator was Dr Raul Camba of Accenture.

LEADING RESPONSIBLE ENERGY BUSINESS

Call for wider view of transition

23rd WPC is told success of an energy business is defined by community of stakeholders

JENNIFER PRESLEY

Houston

THE energy transition has become a permanent topic in every energy-related event, but it is only one part of the conversation, according to Sonangol Chief Executive Sebastiao Gaspar Martins.

"We share the same concerns of climate change and the need to move towards a cleaner energy," he said at the 23rd World Petroleum Congress on Tuesday in Houston.

"However, despite its importance, we believe that we cannot address energy transition, without first and foremost tackling the issue of the energy poverty."

Martins called for a close collaboration among all stakeholders to balance the reduction of carbon emissions and production of cleaner energy that is affordable for everybody.

"It's imperative that all developing countries be in a very straight collaboration so that we all understand each other and what the needs are of each involved," he said.

Sonangol, for example, is currently transitioning to a national energy company that is strongly committed to sustainability.

"We have integrated our activities. The new business unit for gas and renewable energies is engaged in several concrete projects from solar to biofuels, green, hydrogen, and other renewable sources of energy, for which we are investing over \$100 million in 2022," he said.

The company plans to invest about \$7 billion over the next five years in exploration and production projects, while also investing in its domestic refining capacity to bring additional capacity up to around 425,000 barrels per day of oil, he noted.

Sergio Affronti, Chief Executive of Argentina's YPF, said he believes the market for the efficient, low-carbon, profitable development of oil and gas will continue.

"The imperative of climate change calls us all to action as a

responsible energy business. We are committed to reducing our carbon footprint and becoming more sustainable, while advancing new low-carbon technologies," he told plenary attendees.

According to Affronti, YPF's strategy has two main pillars: low-carbon barrels and a \$1 billion investment in refineries to reduce sulphur in its fuels while optimising ethanol in the fuel mix.

"We're making our oil and gas activities more sustainable by reducing greenhouse gas emissions. We already reached a 2023



Sustainability: YPF Chief Executive Sergio Affronti and Sonangol Chief Executive Sebastiao Gaspar Martins look on as Weatherford Chief Executive Girish Saligram speaks during the Leading Responsible Energy Business plenary session at the 23rd WPC

Photo: NICK AGRO/CORPORATEEVENTIMAGES/UPSTREAM

target of a 10% reduction versus 2017, and we are working on new, more ambitious goals," he said.

The definition of a successfully responsible business is multi-faceted, according to Weatherford International Chief Executive Girish Saligram.

"The definition depends on the stakeholder," he told plenary attendees, adding that customers

want performance, investors want returns and the community wants sustainability.

Weatherford defines its pillars for success on sustainability, Saligram said.

"The first is around transparency of reporting. It's important for us that we are clear about the metrics and the targets that we set, but also where we are in our journey of achieving them," he

said. "The second is taking a hard look at our own operations, understanding our carbon footprint and figuring out how do we make an impact on decarbonising in that sphere."

For sustainable solutions, the company has three platforms: carbon capture and sequestration, geothermal, and plugging and abandonment of mature wells.





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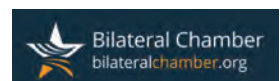
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