

Sponsored Content


 HOUSTON
BUSINESS JOURNAL

CROWE PUBLISHER'S DINNER ■ TABLE OF EXPERTS

ENERGY TRANSITION

Leaders, stakeholders, and subject matter experts in energy sustainability convened for a roundtable, presented by Crowe LLP, to share insights on the energy transition. They discussed the current state of progress, challenges encountered, emerging trends, and Houston's role in these transformative efforts.

MODERATORS

SHEILA ENRIQUEZ
Texas Market Leader and
Advisory Partner, Crowe

DEVIN HALL
Managing Partner, Energy,
Crowe

CHRIS DUMOND
Business Designer,
Crowe

KERRY KILGORE
Partner,
Crowe

BOB CHARLET
President & Publisher,
Houston Business Journal

PARTICIPANTS

BLAIR BARLOW
Managing Director,
Lime Rock New Energy

KEVIN KELLY
Vice President,
Environment and
Sustainability,
Chord Energy

JAY KOLB
General Counsel,
Lapis Energy

DREW LICHTER
Vice President,
Corporate Strategy and
Development, Mobius
Risk Group

LILAC GUZMAN
Executive Vice President,
Gastech Engineering LLC

JEFFREY WHITTLE
Global Head of Energy
and Natural Resources,
Womble Bond

AMANDA BROCK
CEO, Aris Water Solutions

Bob Charlet, HBJ: What are the trends you're seeing in energy transition?

BLAIR BARLOW, LIME ROCK NEW ENERGY:

We're witnessing a dynamic landscape in the energy transition, with each sector evolving at its own pace. As a firm, we're focused on investing in commercial, growth stage businesses. We are currently spending most of our time in the power generation and grid modernization space. This is the most mature sector in the broader energy transition and has significant tailwinds and capital needs. The shift towards renewable energy and storage, accounting for almost

80% of capacity additions in the US last year, presents a considerable opportunity for the sector and our firm's strategy.

Our investment in Electric Power Engineers, a power systems engineering consulting firm based in Austin, provides us with valuable insights into the challenges of trying to decarbonize the generation mix while ensuring affordability and reliability. The recent increase in US electricity demand, the first in two decades, driven by computing power needs and broader electrification, is creating additional challenges. However, it also presents intriguing

opportunities, particularly in grid modernization. We're exploring opportunities to partner with companies that are providing solutions to increase the efficiency of existing assets and infrastructure without resorting to extensive new transmission projects, although recent positive momentum in new transmission construction is notable.

The increasing complexity of the grid, coupled with the rise of distributed energy resources, necessitates innovative solutions for power management. We're actively exploring opportunities in both transmission and distribution, with a focus on leveraging

Sponsored Content



left to right | Bob Charlet (HBJ), Blair Barlow (Lime Rock New Energy), Drew Lichter (Mobius Risk Group), Jay Kolb (Lapis Energy), Kerry Kilgore (Crowe), Jeffrey Whittle (Womble Bond), Chris Dumond (Crowe), Sheila Enriquez (Crowe), Amanda Brock (Aris Water Solutions), Devin Hall (Crowe)

technologies at the grid edge. Demand response and energy efficiency initiatives are gaining traction, with the latter being particularly crucial in achieving low-cost power. We anticipate continued growth and investment in the power sector, driven by the combination of load growth and the transition towards low carbon energy sources. However, managing the intermittency of renewable resources, exemplified by challenges like the duck curve, remains a significant concern—and opportunity.

Devin Hall, Crowe: *How do you perceive Governor Abbott's efforts to introduce dispatchable electricity into the grid, along with his incentives? And how do you anticipate these initiatives influencing the direction of the market?*

AMANDA BROCK, ARIS WATER SOLUTIONS:

Texas has faced significant challenges, particularly evident during recent storms, highlighting the vulnerabilities of ERCOT's isolated grid. The continued challenges associated with ensuring secure and sufficient sources of electric power generation as demand grows means we have to urgently evaluate diverse power sources including renewable power, baseload power sources, as well as rapidly improve the reliability and connectivity of the Texas power grid.

DREW LICHTER, MOBIUS RISK GROUP:

Upgrading the grid is a heck of a lot easier than getting storage in place. I'm in the metals business in addition to renewables, and the amount of nickel and copper we need to even electrify the vehicle fleet, let alone actually put utility grade storage in place, we're nowhere near there. But upgrading the grid, the utilization can go meaningfully higher, and that's actually something we can do.

Bob Charlet, HBJ: *Where are your general perspectives on the energy transition? Where do you see things going?*

AMANDA BROCK, ARIS WATER SOLUTIONS: Isn't it becoming increasingly apparent that the transition to renewable energy is a gradual process rather than an immediate shift? There's growing recognition of the complexities involved, particularly regarding the extraction and sourcing of raw materials essential for renewable technologies. We have to fully examine and weigh the full spectrum of the environmental

impact of renewable energy just as we fully evaluate the impact of fossil fuels.

While we all share the desire for a greener future, there's a sobering acknowledgment of the multifaceted challenges inherent in this transition. Renewable energy has a key role in our future, but it is not without challenges and currently in certain cases requires substantial subsidies. This evolving perspective underscores the need for a comprehensive examination of the consequences and timelines associated with our energy transition goals.

DREW LICHTER, MOBIUS RISK GROUP: I think sustainable aviation fuel (SAF) is great innovation. It's just as good, but much cleaner and somewhat cost effective, to a point. But it's not scalable. You have something that might keep up with growth in aviation fuel demand, but it won't replace it. There's simply not enough. It still has 15%, give or take, of the carbon footprint of traditional jet fuels. It's not zero. Natural gas has 40 or 50% of the carbon footprint of coal. But everybody hates it because it's a fossil fuel. It's a knee jerk reaction. People will wind up at a point that makes sense, it's just a matter of how much pain they have to take to get there. And I'm hopeful that we can learn from mistakes.

People have this myopic view towards wind and solar being the answer. And they're part of the answer. But I always say people need to be way more pragmatic in the present, as far as what we do, and way more bold in the future. We're nowhere near having a grid that can support even 80% renewables, so let's start actually thinking about what will get us there. And hopefully we get there eventually, but I'm actually very concerned about the geopolitical impact of people messing this up.

JAY KOLB, LAPIS ENERGY: I don't possess definitive solutions for optimizing the energy transition either. However, envisioning the future 50 years from now, it's doubtful that merely relying on wind turbines and solar panels will suffice to address our energy challenges comprehensively. We seem distant from implementing truly broad, scalable solutions that can lead us to the desired outcome.

LILAC GUZMAN, GASTECH ENGINEERING: I prefer to frame our current trajectory as an "energy expansion" rather than just an "energy transition."

It's important to acknowledge where we stand today and leverage past knowledge and experiences to shape our future. With decades of experience in the hydrocarbon market, we're now applying similar principles to address carbon capture challenges.

Recent advancements demonstrate significant progress in CO2 capture technology. Traditionally, CO2 capture units operated at around 200 gallons per minute (GPM), but now we're seeing capacities of up to 16,000 GPM, driving innovation in chemical and mechanical designs to enhance efficiency.

This progress encourages us to reevaluate existing infrastructure and explore opportunities for retrofitting and improving CO2 capture capabilities. It's a multifaceted approach that incentivizes the development of more advanced technologies while optimizing current systems.

Just as the introduction of the first car required the creation of supporting infrastructure, the normalization of carbon capture technologies will take time and concerted effort. However, it's a necessary step to address environmental challenges and ensure a sustainable energy future. While this process won't happen overnight, it's essential that we commit to it to avoid potential consequences down the line.

CHRIS DUMOND, CROWE: I've recently completed a six-month research project with a client, exploring various power generation alternatives. What we've found is that many of these options entail significant initial costs. Companies are increasingly committing to publicly stated 2050 net-zero goals without clear and pragmatic pathways to achieve them. This prompts the crucial question: "What concrete steps can we take to reach these ambitious targets?"

DREW LICHTER, MOBIUS RISK GROUP:

The government should be putting 100-200 times more money into fusion research than they do. There's far more that goes towards solar and wind subsidies that won't solve the issue than there is going towards fusion. In the interim, we should also be looking to scale modern nuclear fission where we can. And they put some research into it, but it's a tiny part of our R&D and renewables funding. I'm personally of the opinion that that is the way we solve the issue. And I think we can get there but will take a lot of money that you won't get a return on for a long time.

Sponsored Content

JEFFREY WHITTLE, WOMBLE BOND:

We've observed significant investment in hydrogen technology due to its high efficiency, positioning it as a promising alternative. The government's efforts to mitigate risks by funding hydrogen hubs are notable, with these hubs strategically forming teams to further de-risk the initiative. This trend reflects a substantial push towards utilizing hydrogen in various sectors, particularly in power generation and other alternative applications.

Additionally, biofuels are emerging as a significant component of the energy transition. As demand and market opportunities expand, there's a growing need for alternative fuel sources. While traditional oil and gas industries remain resilient, there's a clear trend towards enhancing their efficiency and exploring alternative sources to meet evolving demands.

LILAC GUZMAN, GASTECH ENGINEERING:

The question of energy independence, particularly in the oil and gas sector, raises important considerations about the source of our energy resources and the journey towards sustainability. While efforts have been made to reduce dependence on fossil fuels through initiatives like wind and solar energy, ultimately, energy storage solutions such as batteries are crucial. However, the production of these batteries relies heavily on materials like lithium, prompting questions about the source of these resources and the ownership of the mines.

There's a sense of urgency to achieve energy transition goals, but concerns persist about the coherence and planning of these efforts. The metaphorical "shoot, ready, aim" approach reflects a sentiment of moving forward without

“

The energy transition or more appropriately termed the “energy expansion” will take time as new technologies are developed. We will still need oil and natural gas in the future while newer cleaner energy sources are explored. Solving for the trilemma of finding clean energy sources that are reliable, affordable, and readily available is what our energy companies are focused on. Houston is the epicenter of energy and our energy companies are well positioned to help solve our future energy needs.

DEVIN HALL
Energy, Managing Partner (Crowe)

a comprehensive strategy. This dynamic presents challenges and uncertainties that need to be addressed, particularly regarding the regulation and governance of the energy transition.

As we navigate this journey, it's essential to consider the broader implications and ensure that our actions align with long-term sustainability objectives. Normalizing laws and regulations to address inconsistencies and gaps in our understanding of the energy landscape is critical for fostering a smoother transition towards a more sustainable future.

KEVIN KELLY, CHORD ENERGY: We support all forms of energy but take particular pride in our role as an upstream oil and gas company, and with our continuous improvement mindset, we aim to produce hydrocarbons more efficiently every day. In communities like those in North Dakota, where oil and gas revenues contribute more than half of the tax base, the importance of our industry is particularly evident. During a recent petroleum council meeting attended by the governor and other officials, the discussion highlighted North Dakota is approaching a significant milestone of producing its 5 billionth barrel of oil. Now the focus is on how to achieve the next 5 billion barrels to ensure the state's continued growth and prosperity.

Enhanced Oil Recovery (EOR) is a priority for the state, with institutions like the EERC at the University of North Dakota exploring innovative methods, including capturing carbon for utilization and sequestration from anthropogenic sources like ethanol plants. Our company is keen to collaborate on these initiatives, recognizing the importance of expanding affordable energy and identifying additional revenue streams that align with our expertise.

Bob Charlet, HBJ: *As Houston strives to become not only the global energy capital but also the leader in the energy transition expansion, what steps must be taken to achieve this goal?*

DREW LICHTER, MOBIUS RISK GROUP:

Houston is one of the energy capitals of the world. It's certainly the energy capital of the west. And it's very focused on energy transition. I talk to people who are environmental managers, and I don't mean just at oil and gas companies, I mean across industries, from tech to consumer goods. I try to see all sides. Everyone is generally doing the right thing. Most producers in the US are very focused on this. They get that this is an issue, and there are exceptions, but they get that this is an issue.

People want to be a part of powering the world for the future in a clean way that works for everyone. No one wants to put flare gas into the atmosphere. No one wants to not recycle water. They're looking for ways to do it. And if you look at any heavy industry, at any oil and gas production, we are pound for pound better than anybody out there. Our steel production is the cleanest. Our aluminum smelting is the cleanest, our oil and gas production, if you take apples to apples, is the cleanest. And you take all that together, and the fact that we have some of the best talent, I think Houston is very well positioned to continue as one of the energy capitals world will come along.

AMANDA BROCK, ARIS WATER SOLUTIONS:

Houston's journey towards becoming a global energy capital and leading the energy transition expansion necessitates a commitment to factual, non-partisan approaches. Recognizing the role of all energy sources and acknowledging that transition is gradual is key.



left to right | Sheila Enriquez (Crowe), Amanda Brock (Aris Water Solutions) and Devin Hall (Crowe)



left to right | Bob Charlet (HBJ), Kevin Kelly (Chord Energy) and Kerry Kilgore (Crowe)

Sponsored Content

Fossil fuels will continue to play an important role in our future energy security, but we have to acknowledge and understand that the growth of renewable energy will also be essential to meet future demand. The focus should be on fact-based, pragmatic decision-making, with realism guiding discussions. Every stakeholder should have a seat at the table, devoid of partisan politics.

JAY KOLB, LAPIS ENERGY: During a meeting some years ago discussing Houston's status as the energy capital of the world, a participant pointed out that it's more accurately described as the engineering capital. This distinction underscores the diverse disciplines and capabilities present in Houston's energy industry. While other regions may have engineering clusters, Houston's strength lies in its multinational clientele, rigorous safety standards, and unmatched expertise.

Despite Texas's reputation as an oil and gas center, technology has long played a significant role, outnumbering energy employment in the past. Houston's industry isn't just rooted in traditional engineering; it's a dynamic, high-tech sector that integrates various skills and disciplines. This versatility enables Houston to adapt and transition into new industries over time, ensuring its continued relevance and sustainability.

BLAIR BARLOW, LIME ROCK NEW ENERGY: Houston has made a lot of progress in mobilizing human talent around the energy transition and rallying the city behind it. To further solidify its position as a leader in the energy transition, Houston must continue to foster an environment of innovation. Houston has a huge advantage in its engineering talent and being the epicenter of

“

Crowe is excited to host leaders in the energy industry in Houston to engage in deep, insightful dialogues about the pressing challenges facing the industry today. Our objective is to ignite discussions that resonate with substance and significance, driving the industry forward. With Crowe's commitment to the energy sector, our team is here to help transform volatility and uncertainty into opportunities, delivering solutions and thought leadership that empower leaders to redefine challenges as stepping stones to success.

SHEILA ENRIQUEZ
Texas Market Leader (Crowe)

large-scale new energy projects. While traditional energy sectors have seen substantial innovation over the years, Houston should continue to prioritize and accelerate innovation in renewable energy and sustainability initiatives.

Sheila Enriquez, Crowe: *What ESG (Environmental, Social, and Governance) criteria do you inquire about when assessing target companies? Is this a primary consideration for you?*

BLAIR BARLOW, LIME ROCK NEW ENERGY: As private equity investors in the energy transition, we underwrite to returns but ensure every company we invest in is making a positive impact on reducing emissions. To assess this impact, we collaborate with third-party experts and work closely with our portfolio companies to accurately assess, measure and report the environmental impact. While ESG can be a controversial topic for some, we see commonsense ESG measurement and monitoring as a way to help our portfolio companies create value.

Bob Charlet, HBJ: *Are energy companies truly committed to sustainability, or is their push for transparency more about public relations?*

KEVIN KELLY, CHORD ENERGY: At Chord, we're deeply committed to sustainability, not just in words but through our actions and reporting. Our first significant sustainability report was published last year, aiming to be both transparent and authentic, even if it meant highlighting areas where we need improvement. We meet or exceed regulatory requirements and strive to adhere to the intent of societal and stakeholder expectations making sure our communications are clear and straightforward. We've integrated sustainability into our core objectives, linking it directly to our goals and incentives, which we refer to as sustainability linked objectives. Safety is paramount; it underpins everything we do. Beyond safety, we've incorporated environmental and emissions goals into our sustainability framework. This commitment is comprehensive, affecting all areas of our operations as we endeavor to embody the principles of ESG fully. ESG is still somewhat new particularly for small and mid-size oil and gas companies. However, at Chord, we believe in leading by example, showing that genuine commitment to sustainability is not just about public relations but is a fundamental part of how we conduct our business.

JEFFREY WHITTLE, WOMBLE BOND: People genuinely feel a commitment to sustainability, aiming to leave the planet in a better state than they found it. There's a clear drive towards improvement, especially evident in efforts like carbon sequestration, which are encouraged both by governmental financial incentives and by the added value products like blue ammonia bring due to their environmental benefits. The influence of ESG reporting standards and guidelines also plays a significant role in promoting transparency and accountability in sustainability efforts. Additionally, the financial markets exert considerable pressure, with a notable push from private equity and institutional investors towards funding projects with a positive environmental impact. While it's challenging to pinpoint the most crucial motivator—be it government incentives, a general sense of responsibility, or financial viability—the collective impact of these factors provides a strong impetus for continuing sustainability projects. ■



center to right | Bob Charlet (HBJ), Lilac Guzman (Gastech Engineering), Drew Lichter (Mobius Risk Group) and Chris Dumond (Crowe)



center to right | Sheila Enriquez (Crowe), Kevin Kelly (Chord Energy), Devin Hall (Crowe), Amanda Brock (Aris Water Solutions) and Jeffrey Whittle (Womble Bond)