



## Transcontinental Drift

Examining energy transition in the USA

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## USA taking a new direction

Europe and the USA are taking different approaches to drive energy system change, but a renewed focus on investor returns is evident on both sides of the Atlantic.

Hot on the heels of COP28, Cripps Leadership Advisors hosted an exclusive energy transition dinner in Houston, Texas. As in London weeks before, the talk focused on how to deliver the energy transition while also making it a meaningful business proposition that delivers clear value to those tasked with footing the bill. In the state that birthed Spindletop and unleashed the century of oil, it was clear that legacy energy companies intend to play a meaningful and ongoing role in meeting the world's energy needs.

### Lowest hanging fruit – Methane or CO<sub>2</sub>?

When it comes to global warming, the villain of the piece is carbon dioxide (CO<sub>2</sub>). Yet at the Cripps Leadership Advisors Energy Transition Dinner in Houston in December 2023, the talk of the night was methane. There are good reasons for this: despite having a shorter lifespan than CO<sub>2</sub>, it is over 28 times more potent at trapping heat in the atmosphere<sup>1</sup>. Over a quarter of the warming the world is experiencing today is due to methane emissions from human activities<sup>2</sup>. Even though CO<sub>2</sub> has a longer-lasting effect, methane sets the pace for near-term warming.

There is a focus on methane in the wake of COP28, where 50 oil and gas companies, representing nearly half of global production, including ExxonMobil and Saudi Aramco, signed up to an agreement to reduce methane leaks to near zero by 2030. In the US, there's a domestic spotlight on methane leaks from the Environmental Protection Agency (EPA). The EPA's new Methane Emissions Reduction Program (MERP), which requires regular leak monitoring at existing and new well sites, a phase-out of pneumatic controllers (process control automation devices that intentionally vent methane) and a new waste charge that will be imposed on operators. By reducing their emissions in-line with industry's own targets, companies can avoid paying the charge while those that choose to continue to pollute excessively will have to pay a fee for each ton of methane they release<sup>3</sup>. The industry isn't overjoyed by this: January 2024 saw the American Petroleum Institute unsurprisingly call for its repeal, describing it as a "misguided new tax on American energy."<sup>4</sup>

Yet methane represents a pathway to real progress on emissions reductions without inflicting too much shareholder pain, a relative win/win. There's money to be made by making a methane play in the carbon marketplace, either by accelerating the shut-in of marginal assets, where the carbon credit for the shut-in fossil fuels exceeds the value of the well's remaining productive economic output, or by earning credits for plugging orphaned wells to reduce methane escape. There's now \$4.7 billion of federal funding available under the Infrastructure Investment & Jobs Act to help plug these orphan wells.



<sup>1</sup> Environmental Protection Agency <https://www.epa.gov/gmi/importance-methane>

<sup>2</sup> Environmental Defense Fund <https://www.edf.org/climate/methane-crucial-opportunity-climate-fight>

<sup>3</sup> <https://www.epa.gov/newsreleases/biden-harris-administration-announces-proposed-rule-reduce-wasteful-methane-emissions>

<sup>4</sup> <https://www.api.org/news-policy-and-issues/news/2024/01/12/API-Calls-on-Congress-to-Repeal-IRA-Methane-Fee>



## Carbon capture: “We all know we have to do it”



Efforts to reduce methane, however pressing, cannot be at the expense of ongoing work to reduce carbon in the atmosphere. For attendees at our Houston dinner, the discussion was less about reducing production to limit emissions but rather how to stop those emissions contributing to global warming. One answer is carbon capture, which is enjoying a big subsidy drive from Washington.

### Not in my backyard

However, unlike the punitive methane legislation, a defined strategy for CO<sub>2</sub> emissions remains vague. “We all know we have to do it,” said one. “I want to do it. But when, and how?”

The government hopes to deliver those answers through its Carbon Capture Large Scale Pilots and Carbon Capture Demonstration Projects programs, backed by billions of dollars of subsidies. There’s more to CCS than piping the unwanted gas underground; there are also huge infrastructure challenges; carbon emissions don’t always take place close to suitable storage locations. The 2000km Navigator pipeline project, designed to shift huge volumes of CO<sub>2</sub> from Midwest ethanol plants and store it permanently underground, was cancelled in Q4 2023 due to the complexities of multi-state permitting and public opposition. CCS is clearly going to play a huge role in a managed and sustainable energy transition, and there’s currently a land grab underway to buy up caverns and depleted reservoirs that can lock the gas underground, but it is going to require joined up policy, along with legislative and public support, to encourage investors to stick with projects in the face of wider challenges.

### Potential for large scale impact

Another project to raise eyebrows is Stratos, the biggest Direct Air Capture plant in the world, which will extract up to 500,000 tonnes of CO<sub>2</sub> a year for secure storage underground. The plant, a joint venture between Oxy Petroleum and BlackRock, will sell CO<sub>2</sub> removal credits to other polluters, with deals already struck with Amazon, Airbus and All Nippon Airways. The aim is to futureproof oil and gas operations by providing a carbon get-out. Vicki Hollub, Occidental’s chief executive told an industry conference last year that the technology “gives our industry a license to continue to operate for the next 60, 70, 80 years that I think it’s going to be very much needed.”<sup>5</sup>

<sup>5</sup> <https://www.bnnbloomberg.ca/neighbors-don-t-want-to-be-test-dummies-for-biden-s-carbon-removal-hubs-1.1962516>



# ESG: Hardening attitudes, pulling investments

The world cannot go cold turkey on its fossil fuel addiction without risking a serious downgrade in living standards in high income countries, and further impoverishment for those in low and middle-income countries. This reality is already being reflected in shareholder attitudes, which have shown a hardening towards ESG as an investment motive. Indeed, a new report found investors pulled \$5 billion from US sustainable funds in Q4, taking the total pullback for the year to \$13 billion<sup>6</sup>.



According to Morningstar, fund outflows made 2023 the worst year on record for ESG funds.”

**Murray Fox** | Director - Energy

With ethical ambitions sacrificed in favour of more reliable returns, some of the aspiring stars of the energy transition are feeling the pinch. Electrolyser manufacturers including London-listed ITM Power, Oslo-listed NEL and NASDAQ’s Plug Power have all seen their share prices crumble from the highs of 2021. Has the early hype of the hydrogen economy entered a normalisation phase?

This recalibration has also been seen at Big Energy companies, where the push for Net Zero is being slowed in order to give shareholders the kind of returns they have come to expect from fossil fuel investments. Shell’s CEO Wael Sawan, for example, has underlined that oil and gas will remain central to its business for years to come, and has scrapped targets to reduce oil output by 1-2% a year for the rest of the decade. The \$40 billion it will invest in oil and gas production through to 2035 is more than double the \$10-15 billion earmarked for low-carbon energy solutions including biofuels, hydrogen, electric vehicle charging and CCS over the same period<sup>7</sup>.

Similar shifts have been seen in rivals, such as BP and TotalEnergies, as companies wrestle with how to sustain returns when green projects are typically expensive and low margin investments. As one attendee at the dinner pointed out, “no energy major is going to make an irrational decision on behalf of their shareholders”.

Are oil and gas companies doing enough – typically portrayed as the villains - or is their relative spend significant in a global context?

# \$1.6 trillion

Invested by businesses in low and zero-carbon technologies in 2022

# 1.2%

of funding came from oil and gas companies.

# 60%

Of the investment made by oil and gas firms came from five companies.



■ Oil and Gas      ■ Equinor  
■ TotalEnergies   ■ Shell  
■ BP

<sup>6</sup> <https://www.morningstar.com/sustainable-investing/us-sustainable-funds-register-first-annual-outflows-2023>

<sup>7</sup> <https://www.shell.com/media/news-and-media-releases/2023/shell-to-deliver-more-value-with-less-emissions.html>



## Energy solutions: ‘Show me the returns’

As one attendee at the Houston dinner said, “If 2021 was ‘show me the ESG’, 2023 was ‘show me the returns’.” Given the complex regulatory, commercial and technological landscape of new energy solutions, this is going to require a new mindset among investors. As we noted in our last white paper, [“COP28: A destination for pragmatic solutions or climate sell-out?”](#), it is potentially the Big Energy firms that are best placed, and most willing to deliver this.

This is certainly the thinking of Darren Woods, CEO of ExxonMobil, who in a keynote speech of November 2023 stated:



**We’ve got the tools – the skills, the size, and the intellectual and financial resources – to bend the curve on emissions.”<sup>8</sup>**

**Darren Woods** | CEO, ExxonMobil

His company is putting its financial muscle behind CCS and associated CO<sub>2</sub> pipeline infrastructure, low-carbon and low-emission biofuels, and lithium production, which is essential to the world’s effort to electrify as much of the economy as possible.

Many will be sceptical, of course. There are already accusations that these technologies are smokescreens behind which it’s business as usual for big polluters. Another view, however, that this is the point in time that the energy transition gets real. As Darren Woods puts it, “We cannot replace overnight an energy system that took 150 years to build. The size and complexity is simply too vast.”

### Carrot versus stick

So, what will help? The difference between the US and Europe, to date, has been that of carrot and stick. And right now, carrot is winning, with President Biden’s Inflation Reduction Act showing what can be done when generous subsidies direct a torrent of investment and talent to energy problems. IRA has undoubtedly been a shot in the arm for the USA’s renewable energy and carbon capture industries while many developers in Europe are wrestling with the slow-moving, complex and still-evolving carbon removal certification framework (CRCF)<sup>9</sup> and the world’s first carbon border tax<sup>10</sup>.

There also has to be a grown-up discussion about nuclear, which presents a way to reach Net Zero without tearing down the energy systems that underpin our way of life. This won’t be a quick fix but nor should it be the job of decades. The potential of small modular reactors is huge - easier and cheaper to build than conventional plants - mini-nuclear could be a winning part of the solution. In January 2024, the UK announced plans to relax planning rules to allow the construction of mini-nuclear power plants across the country as part of its push to get a quarter of the country’s electricity from nuclear power by 2050.

On both sides of the Atlantic then, we see increased willingness to think creatively about how to use what we already have in terms of knowhow, infrastructure and talent to deliver more of what we need – clean, reliable energy – and to do so in a timeframe that leaves a habitable planet to the next generation.

<sup>8</sup> <https://corporate.exxonmobil.com/news/viewpoints/reframing-the-climate-challenge>

<sup>9</sup> <https://www.greenbiz.com/article/europe-encourages-carbon-removal-stick-rather-carrot>

<sup>10</sup> <https://www.reuters.com/business/environment/eu-launches-first-phase-worlds-first-carbon-border-tariff-2023-09-30/>



# Cripps Leadership Advisors viewpoint

Our energy transition dinners always serve up food-for-thought. On both sides of the Atlantic, the political and economic climate is uncertain, prompting investors to be ever more wary of anything that strays too far from existing energy norms. So, what do we need to move the conversation forward?

Some closing thoughts from our dinner:

1. Solving the energy transition question has multiple solutions for different industries, geographies and scales, there is not a one size fits all. In parallel to transitioning to a lower carbon energy system we need to focus on emissions – those already in the atmosphere, and those being emitted now. We can do something about those emissions –we can invest in sequestration land banks and in the future in ocean carbon removal projects and direct air capture technologies<sup>11</sup>. This focus on emissions allows the existing energy systems that underpin our way of life to continue and buys us time to unlock sustainable long-term solutions.
2. We see a decoupling of oil and gas to enable gas to play an important role as a bridging technology to greener fuels.
3. Back nuclear. Energy pundits have been warning for decades of the power deficit that would be left if there wasn't new investment in nuclear. For it to make a meaningful difference to the energy transition, investment needs to be ramping up now.
4. Leadership matters at all levels. The IRA has shown what can be achieved when the funding taps are opened. We need more, and better leadership because blackouts, extreme weather events and food shortages are already unavoidable because of the global temperature rises that are already baked in as a result of past emissions.

There is still time to pull back from more catastrophic scenarios and it's time for leaders to do the right thing. As voters, investors, shareholders, directors, employees, customers, parents and citizens, we all need to be asking harder questions and demanding better answers from those who seek to lead companies or run for office.

## Blurred swim lanes

The future energy system is distributed, localised, collaborative, digitally and technologically advanced and diverse. The path to achieving this will take imagination, persistence and an ability to lead in uncertainty and pivot where necessary. With swim lanes no longer clearly delineated, tomorrow's leaders need to be confident in navigating new and sometimes choppy waters – and to do so at speed. This is a very different proposition to the outlook a number of the current Boards, CEOs and leadership teams faced when they took office and a scenario they may not be best suited to navigate.

Cripps Leadership Advisors is passionate about bringing together industry experts, finance leaders and policy-makers at our exclusive invitation-only events, to create opportunities for debate, discussion and networking with the people who have the insight and resources to bring real solutions to the table.

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<sup>11</sup> <https://time.com/6290814/ocean-carbon-removal-industry/>



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