P2N0

NEWS AND VIEWS ON THE DRIVE TOWARDS NET-ZERO GHG EMISSIONS

Welcome to **Edition 27** of **P_2N_0** covering the drive to reduce greenhouse gas (**GHG**) emissions to net-zero (**NZE**).

P_2N_0 covers significant news items globally, reporting on them in short form, focusing on policy settings and legal and project developments and trends. This **Edition 27** covers news items arising during the period **March 1** to **March 16, 2025**.

Edition 28, covering **March 17** to **March 31 , 2025**, will be published on **April 3, 2025**.

P_2N_0 does not cover news items about climate change generally, M&A activity, or news items that are negative.

Access previous editions of **P_2N_0** at bakerbotts.com.

Content

HEADLINES FROM MARCH 1 TO 16, 2025

Opening observations:

- **Natural Gas and Nuclear**: While the original purpose of **P_2N_0** was not to cover hydrocarbon policy settings and projects, given the themes identified in Edition 22 of **P_2N_0**[1], the changing dynamics to address the energy trilemma, and the policy settings of the **Trump-Vance Administration**, going forward **P_2N_0** will cover news items relating to **natural gas** and **nuclear developments**.

[1] A number of themes applied or emerged during 2024 (all covered by news items in **Edition 22** of **P_2N_0**) as follows:
• **Age of electricity**: Throughout 2024, one of the key themes that emerged as anticipated is the increase in supply and demand of electrical energy with each of the flagship reports making predictions on increased supply and demand.
• **Carbon Dioxide Removal (CDR)** and **Carbon Capture and Storage (CCS)**: In order to achieve net-zero, **CDR** and **CCS** together need to remove and avoid around 15 giga-tonnes of CO2 emissions. In this context, the operationalization of **Article 6** of the **Paris Agreement** and enhanced commitments of government to **CCS** is welcome.
• **Critical materials (metals, minerals, and rare earths) (CM3)**: Alongside the anticipated increase in electrical energy supply and demand sits the need to increase the production and supply of **CM3**.
• **Digital and Energy Infrastructure**: With the development of **Generative AI** there will be an increase for electrical energy for data centres, and more broadly the need to develop energy infrastructure. In addition, the development and augmentation of transmission capacity remains a focus in some areas of the world.
• **Photovoltaic solar stepped changes**: A more difficult market for offshore wind field development emerged during 2024. To counter this, the development of photovoltaic capacity continued globally, in many countries accelerating.
A constant theme is the need for government fiscal incentives and funding support (including through concessionary funding, CfDs, and grants) to facilitate decarbonization and energy transition.

While the author has long viewed a key theme that natural gas is an **energy transition fuel**, and with CCS a long-term fuel (having spoken and written about this theme since 2017 in the context of climate change and energy security), this was not the orthodoxy. With this expanded focus of P_2N_0, what better place to start than to report on the ground the themes covered at **CERAWeek 2025**.

One of the key themes out of **CERAWeek 2025** is the resurgence of natural gas and liquified natural gas (**LNG**) development, critically, to address energy affordability and security.

- **Green iron and steel increasingly to the fore**: While in concept, new green iron and steel projects using high-temperature heat from green hydrogen are not new, there appears to be progress on their development, and, seemingly, nuclear power, to provide both power and high-temperature heat. A number of clean and renewable hydrogen projects are being developed to provide high-temperature heat and there is an increased number of publications providing helpful analysis.

News Headlines:

- **CERAWeek 2025**:
  - **About CERAWeek**: **CERAWeek 2025** was the 43rd annual gathering for **CERAWeek**. **Cambridge Energy Research Associates** (**CERA**) was founded by **Daniel Yergin** and **James Rosenfield** in **1983**. The annual **CERAWeek** conference is organized by **S&P Global**, and it takes place in Houston, Texas, each year. **CERAWeek 2025** was held in Houston from **March 10** to **March 14, 2025**.

    CERAWeek 2025 had three streams, the Executive Conference, the Innovation Agora, and the Partner Programs. As might be expected, **S&P Global** provided considerable coverage of **CERAWeek 2025**. Please click on the attached link.
  - **CERAWeek status**: As **The Financial Times** has stated, **CERAWeek** is " … **the most important annual event on the energy industry's calendar**". **The Houston Chronicle** states that it is "**Known as the Super Bowl of energy**".
  - **CERAWeek 2025,** with the theme of **Moving Ahead**, **Energy Strategies for a Complex World**, is reported to have focused on:
    - energy security, and the related issue of energy supply (source and cost); and
    - how to balance increased demand for energy to match increasing population and urbanisation, including increased electrification, and as a result of the deployment of developing technologies, including AI.
  - **Keynote remarks from US Secretary of Energy, Chris Wright**: The core of the keynote remarks from the **Secretary of Energy** is the commitment of the **Department of Energy** to enable expanded production of affordable, reliable and secure energy with the US.

    The recognition of a new energy trilemma[2] reflected the view that: "Energy is not a sector of the economy; it is the sector that enables every other sector. Energy is life".

[2] For most, the concept of the energy trilemma involves affordability, security (aka reliability) and sustainability.

(The full text keynote of the US **Secretary of Energy** is available on the attached link: US Department of Energy, Secretary of Energy Chris Wright Delivers Keynote Remarks at CERAWeek 2025.)

- **Desire to Drill Baby Drill to be balanced with cost of production, and the market price of hydrocarbons produced**: It is fair to say that there was no one common sentiment around the cost of production.
  - On the cost side of the ledger - there seemed to be recognition among many that use of AI across the exploration sector offered the opportunity to realise lower costs to production, and shorter timeframes to production.
  - On the price side of the ledger – there was a clear recognition that for investment to flow the forward price curves needed to be clearer, and contemplate higher prices, than currently.

  For those long in the hydrocarbon industry, the "best cure for higher prices, is higher prices"! With higher prices, will come greater investment to develop new production capacity. Greater investment, will not come with lower prices.

- **Carbon free supply of electrical energy still on the agenda**:

  While a key focus of **CERAWeek 2025** was the resurgence of natural gas as a firm fuel source, the need for carbon free electrical energy continued to be recognised, in particular the need for the development of increased nuclear power generation capacity.
  - "Striving for 24/7 carbon-free energy around the globe at all our data centers and offices" requires "a whole range of technologies that include clean firm resources [of electrical energy] like nuclear to decarbonize the grid and have affordable, clean and reliable power". **Google Head of Clean Energy and Decarbonization Technologies, Lucy Tian**.
  - Natural gas continues to offer a lower carbon primary fuel source, including to provide the clean firm resources for affordable and reliable power, even if not offering the lowest carbon footprint. During **CERA2025**, this sentiment became a theme.

- **Don't forget PV solar and wind**:

  Photovoltaic solar power and wind power did not appear to be part of the broader discussion at **CERAWeek 2025**, they did not need to be. As noted in previous editions of **P_2N_0**, on the basis of falling whole of life cycle costs of renewable electrical energy, purchasers of electrical energy will make their decisions on the basis of affordable , clean and reliable power.

  On **March 3, 2025**, the US **Energy Information Administration** (**EIA**) reported that during **2025**, **32.5 GW** of photovoltaic solar capacity, **18.2 GW** of energy storage capacity, and **7.7 GW** of wind capacity will be installed across the US. The installation of **63 GW of renewable electrical energy capacity** across the US, will represent over **92% of new installed generation capacity**. Also, data from the **EIA** indicates that the prices for electrical energy for residential retail customers sourced from photovoltaic solar, wind and water (**WWS**) capacity were lower in States with over 50% of electrical energy sourced from **WWS**.

- **Natural Gas set for resurgence**: A sentiment that has been at large for a while is that natural gas is going to continue to be important to provide energy security, and, in some sense, act as a transition fuel, and, if combined with carbon capture and storage, a long-term fuel.

  During **CERAWeek 2025**:

  - It was reported widely on **March 14, 2025**, that the **Governor of Alaska**, **Mike Dunleavy**, had said that interest was strong from the LNG markets of **Japan**, **South Korea**, **Taiwan** and **Thailand** in offtaking LNG from Alaska LNG. As reported, the **Governor** indicated that first cargoes of LNG could be exported during 2030. Some reports noted that US **Secretary of Energy**, **Chris Wright**, "is dropping hints about federal loan guarantees" to support the funding of Alaska LNG.
  - It was reported widely on **March 13, 2025**, that the board **US Exim**[3] had approved a **USD 4.7 billion loan** as part of the financing for **TotalEnergies SE Mozambique LNG** (**MLNG**) **project**. Those with longer memories will recall that **US Exim** approved a like loan during the **Trump-Pence Administration**. It is expected that the Netherlands and the UK will confirm their funding support for the **MLNG project** soon.
  - There was considerable coverage of the continued potential of oil and natural gas developments (to the south of the US) in **Guyana** and **Suriname**. E**xxon Mobil** and **TotalEnergies** continue to invest in **Guyana** and **Suriname** (and other developing countries, including **Mozambique** and **Papua New Guinea**) to realise economic development and to provide new production capacity for the long-term.

  Ahead of **CERAWeek 2025**, and yet consistent with the resurgence of natural gas developments, and use of natural gas to supply reliable electrical energy to data centers:

  - On **March 4, 2025**, **Williams Companies, Inc.** announced (see **finance.yahoo.com**, under Williams Inks $1.6B Deal to Provide Natural Gas & Power Infrastructure) that it was to invest **USD 1.6 billion** "to provide committed power generation and associated gas pipeline infrastructure".

    In passing, it is important to note that the use of natural gas to supply reliable electrical energy to data centers relates to all existing data centres (as they expand capacity) and new data centres. In addition to the existing 5,381 data centres in the US, 175 new data centres are under construction or are planned.

    The data center market in the US has been characterised as having three tiers: **Primary**, having existing demand of **800 MW** (or greater), **Secondary**, having currently lower demand but high growth potential, and **Emerging**, having recent hyperscale activity.
  - On **March 6, 2025**, it was reported widely that the Australian offshore regulator of natural gas and oil developments, and operations, **National Offshore Petroleum Safety and Environmental Management Authority** (**Nopsema**) had approved the development of the **USD 2.5 billion Crux**

[3] The **US Export-Import Bank** (**EXIM**) provides funding (in the form of working capital loan guarantees and export credit insurance) to support the export of US goods and services.

offshore natural gas field (**Crux Field**), with the natural gas produced from the **Crux Field** to be processed and liquified at **Shell's Prelude FLNG facility**.

- On **March 3, 2025**, it was reported widely that the **European Commission** (**EC**) had indicated that it wants to increase investment in the development of LNG projects from outside the **European Union** so as to secure natural gas supply for use inside the European Union.

  While included in the Affordable Energy Action Plan (covered in **Edition 26** of **P_2N_0**), given the broader focus of P_2N_0, it is worth mentioning the alignment of the EC with the practical need for energy affordability and security: it illustrates the resurgence of natural gas, and, in the context of the European Union, some may say, the rehabilitation of natural gas.

- **On the sidelines of CERAWeek 2025**:

  - **Moroccan Minister of Energy Transition and Sustainable Development, Leila Benali**, met with **US Energy Secretary Chris Wright** (on **March 11, 2025**) to discuss cooperation to promote energy and strategic bilateral investment;

  - **MD & GCEO of ADNOC** and **Executive Chair of XRG, Dr. Sultan Al Jaber**, met with **President & CEO of Oxy, Vicki Hollub** to discuss the importance of natural gas as a transition fuel and the need to invest in low-carbon technologies to reduce GHG emissions arising from the production of energy. By way of background, **XRG** is the international investment company of **ADNOC**; and

  - **MD & GCEO of ADNOC** and **Executive Chair of XRG, Dr. Sultan Al Jaber**, met with former US **Secretary of State for Energy, Dan R. Brouillette**, and **Executive Director** of the **IEA, Dr Fatih Birol**, to discuss the role that **ADNOC** and **XRG** may play in the US, including across the energy sector.

- **International Energy Agency** (**IEA**): During the first two weeks of **March 2025**:

  - the **IEA** published the Policy Toolbox for Industrial Decarbonisation providing (as the title suggests) a toolbox of policy settings to allow governments to assess how best to decarbonise hard to abate industrial sectors. The publication develops the thinking outlined in the **IEA 2022** publication Achieving Net Zero Heavy Industry Sectors in G7 members.

    The publication is helpful to orientate folk to the matters that need to be assessed and addressed, including the fundamental need for frameworks, and the need for targeted actions for technologies and strategics, critically, in each case, the need for government funding support.

  - the **IEA** published Oil Market Report March 2025 (on March 13, 2025), among, other things, estimating that during 2025 global demand for oil will increase to 103.9 mb/d. This increased demand will be matched by production, and as such there will be no upward price pressure, rather it is expected that prices will continue at their lower levels. With lower prices comes improved margins for refiners.

  - the **IEA** published The battery industry has entered a new phase (on March 5, 2025), which summarizes the current state of the market for batteries and the deployment of them. The key dynamic is that as prices of batteries have decreased, the deployment of them has increased. The publication is well-worth a read.

- **IEA Bioenergy** reposted Implementation of Anaerobic Digestion Facilities in the Food and Beverage Industry (originally published in January 2025). While the specificity of the title to the publication may not grab the attention, the publication is excellent.

Other IEA publications that may be of interest			
Expectations on flexible bioenergy in different countries	Synergies of bioenergy supply cains and bioeconomy networks	Social and Environmental Sustainability of MSW	Biofuels production and developments in Canada
Meta-data analysis of biofuels in emerging markets of Africa and Asia	Biogas Production – an integral part of evolving integrated biorefinery complex in Quebec	Biological Power to Gas production from waste and wastewater – a Swiss Flagship Project	Case studies of CO2 utilization in the production of ethanol

- **International Renewable Energy Agency (IRENA) 2023 in view**: During the first two weeks of **March 2025**, **IRENA**, with **Copernicus Climate Change Service** (**CS3**) and the **World Meteorological Organization** (**WMO**), published 2023 Year in Review: Climate-driven Renewable Energy Potential Resources and Energy Demand. The publication repeats, the oft repeated point, that scaling up renewable electrical energy deployment is key.
- **Decarbonizing steel production – Is hydrogen the only lever?**

  On **March 4, 2025**, the good folk at **Zenon Research** published Decarbonizing steel production – Is hydrogen the only lever (Zenon Research Paper).

  The **Zenon Research Paper** reminds us that:

  - Primary iron and steel production is essential to the global economy;
  - 90% of current primary iron and steel production of 1.9 gigatonnes uses coal-based blast furnace-basic oxygen furnace (**BF-BOF**) technology; and
  - the total carbon footprint arising from primary iron and steel production (measured by Scope 1 and 2 emissions) is **3.6 giga tonnes of CO_2-e emissions** (or 3.6 billion metric tonnes).

  Stated another way, each year at least 10% of energy related GHG emissions globally arise from the primary production of iron and steel.

  The publication recognises that:

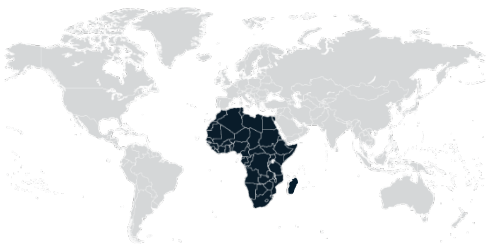
  - end-of-life scrap recycling (aka as secondary iron and steel production) is more energy efficient than iron and steel production using electric arc technology (EAF) rather than BF-BOF technology, and having a considerably lower GHG emissions profile; and
  - while use of carbon capture and storage to prevent CO_2 being emitted to the climate system is possible as part of primary production or iron and steel, for both BF-BOF and DRI technology, for BF-BOF the use of carbon capture is challenging because of the number of sources of CO_2 across each iron and steel mill using BF-BOF technology.

  Given the challenges of deploying carbon capture and storage to reduce CO_2 emissions arising from the use for BF-BOF technology, and for DRI and EAF technology, the focus turned to the use of clean or renewable hydrogen to displace the use of coal as the source of high-temperature heat.

The use of clean and renewable hydrogen for primary iron and steel production using a DRI plant and using EAF technology requires high-grade iron ore.

Another publication worth a read is the **ABB** Your route from A to Zero – Technologies to cut emissions in the five hard-to-abate sectors.

- **Iron and Steel and Aluminium – a new world order**:
  - **Swiss Federal Support for Iron and Steel Industry**: On **March 7, 2025**, the good folk at **swissinfo** (at www.swissinfo.ch) reported that from **January 1, 2025** through **December 31, 2028** (and retrospectively) strategic producers (**Constellium**, **Novells**, **Stahl Gerlafingen**, and **Swiss Steel**) of iron and steel and aluminium would be provided with funding support.
  - The Impact of EU CBAM on Global Steel Trade – Implications for US Steel Tariffs (**CBAM and Tariffs**): During the first two weeks of March 2025, the good folk at **Global Efficiency Intelligence** published **CBAM and Tariffs.** While it is not the intention of **P_2N_0** to fathom the depths of tariff policy settings, the impact of tariff policy settings on progress to net-zero (including for iron, steel, and aluminium) will be something on which **P_2N_0** will report. **CBAM and Tariffs** is an excellent publication, providing a clear and insightful perspective.



Africa

- **No more US funded energy transition initiatives**: On **March 7, 2025**, it was reported widely that **US Secretary of Energy**, **Chris Wright**, told energy ministers from across countries of Africa that the US will not foster or fund any initiatives to develop renewable electrical energy capacity, rather each country is to use coal or natural gas to power their economies.
- **Morocco to progress USD 32.8 billion of Green Fuel projects**: On **March 7, 2025**, it was reported widely that **Morocco** had identified investors to develop **six green fuel projects** across the south of the country. As reported, each project will produce green hydrogen, and use that hydrogen to produce green ammonia and e-fuels, and as a source of high-temperature heat for use in the production of green iron and steel.
- **Green Hydrogen projects continue to be scoped in Egypt**: On **March 6, 2025**, it was reported widely that the **Egyptian Government**, **EDF** and **Zero Waste** had entered into a **co-operation agreement** to provide a framework for the development of a **€7 billion green hydrogen** project to be located within the vicinity of the **Gulf of Suez**. As reported, the renewable energy to power the electrolysers (to produce the green hydrogen) will be sourced from photovoltaic solar and wind capacity (within the vicinity of Ras Shukeir), with that capacity to be located across an area of 420 km^2.

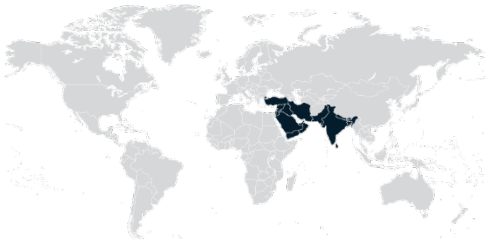
By way of reminder: Edition 26 of P_2N_0 reported that: "On **26 February, 2025**, **hydrogeninsight** reported that Chinese electrolyser and solar panel maker **Longi** and local developer **APPL Hydrogen Ltd** had signed a preliminary **€7.6bn** (**US** $7.98bn) deal that would see a massive green hydrogen project built on the southern coast of **Nigeria**. The plant would produce **1.2 million metric** tonnes of green methanol annually (using **1.1 GW** of clean electricity), and "food grade" CO_2 and green oxygen.

- **Green Hydrogen for use in DRI and green steel:** The Institute for Energy Economics and Financial Analysis (**IEEFA**) on **March 6, 2025**, noted that green hydrogen produced across North Africa (and the Middle East) should be used to provide high-temperature heat for use in direct reduced iron (**DRI**) projects to produce green iron and steel. Rightly, this publication has received a considerable amount of positive comment. This positive comment needs to keep in mind the key issues identified from the Zenon **Research Paper** (see **page 6** above).
- **Canada's Africa Strategy**: During the first two weeks of **March 2025**, the **Government of Canada** released Canada's Africa Strategy: A Partnership for Shared Prosperity and Security. While the content of the **Strategy** does not contain any surprises, its (existence and) content recognize the ever-increasing importance of Africa, not just for critical metals and minerals. This is a welcome development, and outlook.

  By way of reminder: in **January 2025**, the **Africa Policy Research Institute** (**APRI**) Mapping Africa's Green Minerals Partnerships provided a helpful analysis of the bilateral and multilateral agreements between African countries relating to critical metals and minerals.

  This publication is worth revisiting in the context of **African Mining Week** to take place in **Addis Ababa, Ethiopia**, at the **African Union Commission Headquarters** between **March 19** to **21, 2025**, under the theme of **The Africa Mining Vision at 16: Achievements, Challenges and Opportunities**.

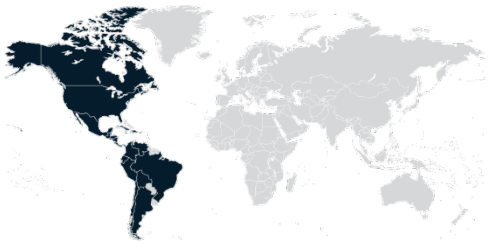
  On **March 9, 2025**, it was reported widely that the **Democratic Republic of Congo** (**DRC**) has initiated discussion with the US to provide the US with access to critical metal and minerals within the **DRC**. For further context, the **US Geological Survey** (**USGS**), part of the US **Department of the Interior**, has recently published World Minerals Outlook – Cobalt, Gallium, Helium, Lithium, Magnesium, Palladium, and Titanium Through 2029. And going back a little further, the **United States Institute of Peace** published Critical Minerals in Africa is worth a re-read.



Middle East and South Asia

- **Microsoft carbon credit purchase in India**: On **March 10, 2025**, the **carbonherald** (at **carbonherald.com**, under Microsoft Inks 30-Year Carbon Credit Deal with Afforestation Project in India) reported that Microsoft had contracted with **Climate Impact Partners** to purchase **1.5 million carbon credits** over **30 years**. The carbon credits will arise as a result of the removal of carbon dioxide from the climate system as an area of 20,000 hectares is afforested in the Panna region of Madhya Pradesh.

- **A blur of publications on DRI and green hydrogen and renewable energy**: As noted above, The Institute for Energy Economics and Financial Analysis (**IEEFA**) publication outlines a positive outlook for the development of DRI and green hydrogen across MENA. This follows the publication in **February 2025** of MENA Energy Outlook 2025 Renewables, Hydrogen and Energy Storage Insights 2030. The publication provides an overview of current, and possible, dynamics, country reports for Egypt, Jordan, Morocco, Oman, The Kingdom of Saudi Arabia, and the United Arab Emirates. The publication has received considerable attention.



Americas

- **PV solar and wind > coal**: On **March 11, 2025**, the good folk at **electrek** (at https://eletrek.co, under In [an] historic first, wind and solar combined to overtake coal in the US) reported that electrical energy dispatch from photovoltaic solar and wind sources in the US amounted to 17% of total electricity generated, for the first time exceeding coal with 15% of total electricity generated.
- **Primacy a go - the profile of primacy continues to increase**: Four US States, Louisiana, North Dakota, West Virginia and Wyoming, have Class VI primacy, with a further nine US States, including Arizona and Texas, having applications pending for primacy. **New Mexico** (between Arizona and Texas) has recently engrossed House Bill 457 (the **Geologic Carbon Dioxide Sequestration Act**) to promote progress towards primacy for Class VI wells, with the State House of Representatives having passed the Bill on **March 11, 2025**.

  By way of background: Edition 26 of P_2N_0 reported (**CCS primacy sought by Texas**) that: "Over the weekend of **February 15** and **16, 2025**, it was reported widely that key energy and industrial interests in the State of Texas were lobbying the US **EPA** to grant the State primacy in respect of CCS permitting on an expedited basis. As reported, Texas has 43 projects that are currently waiting assessment by the US **EPA**".

APAC

- **Nippon Steel Greening**: On **March 11, 2025**, the good folk at **Nippon Steel** published Nippon Steel's Green Transformation (GX) Initiatives. The publication provides a detailed outline of the plans that Nippon

Steel has to address climate change. The publication should be read with the Zenon Research Paper referenced at **page 6** above.

- **Japan progresses to use of nuclear technology to produce carbon free hydrogen**: On **March 8, 2025**, **northernforum** (at **northernforum.net**, under Japan is the first nation to experiment with a complex nuclear technology that also produces hydrogen) reported that the **Japan Atomic Energy Agency** (**JAEA**) intends "to use a fourth-generation nuclear reactor a high-temperature gas-cooled reactor (**HTGR**) to produce hydrogen without emitting carbon dioxide". Because **HTGRs** operate at up to, and beyond, 800°C, this high-temperature heat can be used to power the sulphur-iodine cycle (a thermochemical reaction) to split water to produce hydrogen and oxygen.
- **Indonesia plans CDR carbon offsets**: On **March 11, 2025**, **The Jakarta Post** (at www.jakartapost.com, under Indonesia plans launch of forestry-based carbon offset trade soon) reported that Antara had reported that Indonesia has plans "to launch sales of offsets from its forestry sector soon, while … working on recognising existing international standards". We will follow this development with interest.
- **Singapore progresses carbon credit initiatives**: On **March 7, 2025**, **The Straits Times** (at https://www.straitstimes.com, under S'pore could buy is first tranche of carbon credits in 2025; MTI to call for proposals) reported that the **Ministry of Trade and Industry** (**MTI**) is to issue a "request for proposals to procure carbon credits later in 2025".

  As reported in previous editions of **P_2N_0**, Singapore is leading the way globally in the context of **Article 6.2** (of the Paris Agreements) implementation agreements.
- **Malaysia progresses CCUS with legislation**: On **March 4, 2025**, the **Malaysian Parliament** received the Carbon Capture, Utilization and Storage Bill 2025. The delivery of the **Bill** delivers on a commitment at the end of 2023 to develop the **Bill** within 12 months or so. This is no mean feat. The **Bill** provides a clear framework for the development of carbon capture, transportation and injection and storage capacity across Peninsular Malaysia and the Federal Territory of Labuan. The States of Sarawak and Sabah are not subject to the **Bill**.
- **Mined the Gap**: During the first week of **March 2025**, the good folk at **Deloitte** published Mined the Gap: Australia's place in the emerging green iron value chain. The publication pulls together all relevant strands of thinking, and provides a helpful executive summary, with which it is not possible to take any issue: **1.** The speed and scale of steel decarbonisation will be determined in Asia; **2.** Australia can be a competitive green iron partner for Asian steelmakers; **3.** Australia should accelerate the adoption of green iron production to maximise abatement and economic opportunity; and **4.** Coordinated action is needed to strike while the iron is hot and realise Australia's green iron potential.
- **Carbon capture from waste-to-energy plants**: On **March 4, 2025**, the **Senior Minister of State for Sustainability and Environment, Amy Khor**, announced that Singapore will be assessing the viability of the use of carbon capture technologies. In addition, **Senior Minister Koh** announced that Singapore will invest around **SGD 300 million** (over five years) in improving energy efficiency across government buildings.
- **National Energy Administration (NEA) mandates steady progress**: On **March 3, 2025**, it was reported widely that the **NEA** has instructed provinces and regions of China to:

  > "… develop [steadily] renewable hydrogen production and sustainable fuel industries".

As reported, the instruction is contained in publication entitled Guiding Opinions on Energy Work in 2025. As might be expected, the development of the complete chain for renewable hydrogen is addressed in the publication, with the development of pilot hydrogen transmission projects to transport renewable hydrogen to distribution infrastructure, with the renewable hydrogen to be used by fuel-cell vehicles.

- **One the author missed during February**: During **February 2025**, the China green finance status and trends 2024-2025 was published by **Griffith University**. The publication covers the key policy initiatives and developments across the green financing sector. For those active in green finance the publication is well-worth a read.

Europe and the UK

- **RWE and TotalEnergies go first**: On **March 14, 2025**, the **CEOs** of **RWE** and **TotalEnergies** signed a long-term green hydrogen offtake agreement under which **RWE** will supply green hydrogen produced at its 300 MW electrolysis facility at **Lingen**, **Germany**, to **TotalEnergies** to decarbonise activities at **TotalEnergies'** refinery in **Leuna**, **Germany**. As announced, the long-term agreement commits **RWE** to deliver **30,000 metric tonnes** of green hydrogen a year to **TotalEnergies** for **15 years**.

  The execution of the long-term green hydrogen offtake agreement demonstrates the importance of policy settings, with policy settings book ending the transaction:

  - With **EU** and **German Federal Government** funding of green hydrogen production projects, with € 619 million in funding made available to support the development of the RWE Lingen facility (a book end shaped like a carrot); and
  - With **EU** requirement (under RED III) on refineries to commence the use of renewable hydrogen by 2030 (a book end shaped like a stick).

- **newcleo and Danieli joint vision**: On **March 11, 2025**, the good folk and **newcleo** and **Danieli** entered into a **Memorandum of Understanding** to provide a framework to explore how to integrate the **Lead-cooled Fast Reactor** (**LFR**) technology of **newcleo** with the world leading iron and steel production technologies of **Danieli** to produce green iron and steel. **LFR** technology produces nuclear electrical energy and high-temperature heat. To the knowledge of the author, this is a world first.

- **UK National Security Strategy 2025**: On **March 11, 2025**, the **UK Government**, Legislative Branch, (House of Commons Library) published a research briefing, entitled The forthcoming national security strategy 2025: FAQ. The publication recognises that the availability of critical metals and minerals is a key part of national security. The **UK Government** (Department of Business and Trade) is due to publish the UK's critical metals and minerals strategy within the current quarter.

- **European Hydrogen Bank (EHB) second auction oversubscribed**: On **March 7, 2025** (at https://climate.ec.europa.eu, under Over-subscribed European Hydrogen Bank auction receives 61 bids for Innovation Fund support, including 8 maritime projects), it was reported that 61 bids from 11 countries (within the European Economic Area) had been received under the **EHB** second auction for the production of renewable hydrogen. The bids received sought a total of **€4.8 billion** of funding support, in contrast to the funding support of **€1.2 billion** available for award under the second auction.

  The **EHB** second auction opened on **December 3, 2024**, and closed on **February 20, 2025**, with **€1 billion** for renewable hydrogen supply generally, and **€200 million** for renewable hydrogen for the maritime sector.

  Under the **EHB** second auction, funding support will be provided as a fixed amount in respect of each metric tonne of renewable hydrogen produced, with the support available for a period of 10 years from the date of first production.

  The **European Climate, Infrastructure and Environment Executive Agency (CINEA)** is assessing the bids. As understood, each bid will be assessed on a pass / fail basis, with each bid that is a pass then ranked as to the fixed amount bid per metric tonne, the lower the price, the higher the ranking. As reported, the assessment and ranking process will be completed, and the successful bidders notified, by the end of May 2025. Each successful bidder will be invited to enter into a Grant Agreement.

HELPFUL PUBLICATIONS AND DATA BASES

In addition to publications covered by this edition of **P_2N_0**, the most noteworthy publications read by the author during the first two weeks of **March 2025** are:

- **Global Gas Outlook 2050**: On **March 9, 2025**, the good folk at **Gas Exporting Countries Forum (GECF)** published the Global Gas Outlook 2050. This is the ninth edition of this reference publication. As with previous editions, the publication is encyclopaedic.
- **Hydrogen News**: On March 7, 2025, and on March 15, 2025, delphidata.com published Hydrogen News. The publication provides a short-form digest of news items from the prior seven days.
- **The Oxford Institute for Energy Studies (OIES) assesses renewable hydrogen target**: During the first two weeks of **March 2025**, the good folk at **OIES** published Challenges and Opportunities Posed by the EU's 42 Percent Renewable Hydrogen Target by 2030. What is written on the tin is in the tin: the publication provides a description of the "nuts and bolts" of achieving the target, and is well-worth a read.
- State of the Ontario Mining Sector: During the first two weeks of **March 2025**, the good folk at the **Ontario Mining Associated** published the State of the Ontario Mining Sector. The publication is well-worth a read.

Primary Author:

MICHAEL HARRISON*
Partner
michael.harrison@bakerbotts.com

Other Contacts:

JASON BENNETT
Partner
jason.bennett@bakerbotts.com

MARK BISCH
Partner
mark.bisch@bakerbotts.com

JULIE CRESS
Partner
julie.cress@bakerbotts.com

MONA DAJANI
Partner
mona.dajani@bakerbotts.com

RICHARD GUIT
Partner
richard.guit@bakerbotts.com

STUART JORDAN
Partner
stuart.jordan@bakerbotts.com

DANIEL REINBOTT
Partner
daniel.reinbott@bakerbotts.com

ANDREW ROCHE
Partner
andrew.roche@bakerbotts.com

MARK ROWLEY
Partner
mark.rowley@bakerbotts.com

SHAILESH SAHAY
Partner
shailesh.sahay@bakerbotts.com

REBECCA SEIDL
Partner
rebecca.seidl@bakerbotts.com

ELAINE WALSH
Partner
elaine.walsh@bakerbotts.com

SHANE WILSON
Partner
shane.wilson@bakerbotts.com

* Michael Harrison is the primary author of P_2N_0, and editor. Any errors are Michael's. P_2N_0 is written early each Saturday morning. In writing P_2N_0, Michael sources from original material. If a news item is covered broadly, the words **reported widely** connote that at least three sources have covered that news item, and **reported** connotes at least two sources. If there is only one source that is not the original material, that source is named.

[Learn more about Baker Botts' Energy Transition Practice]