

Market Update

Global Momentum at COP28: Milestones and Innovations

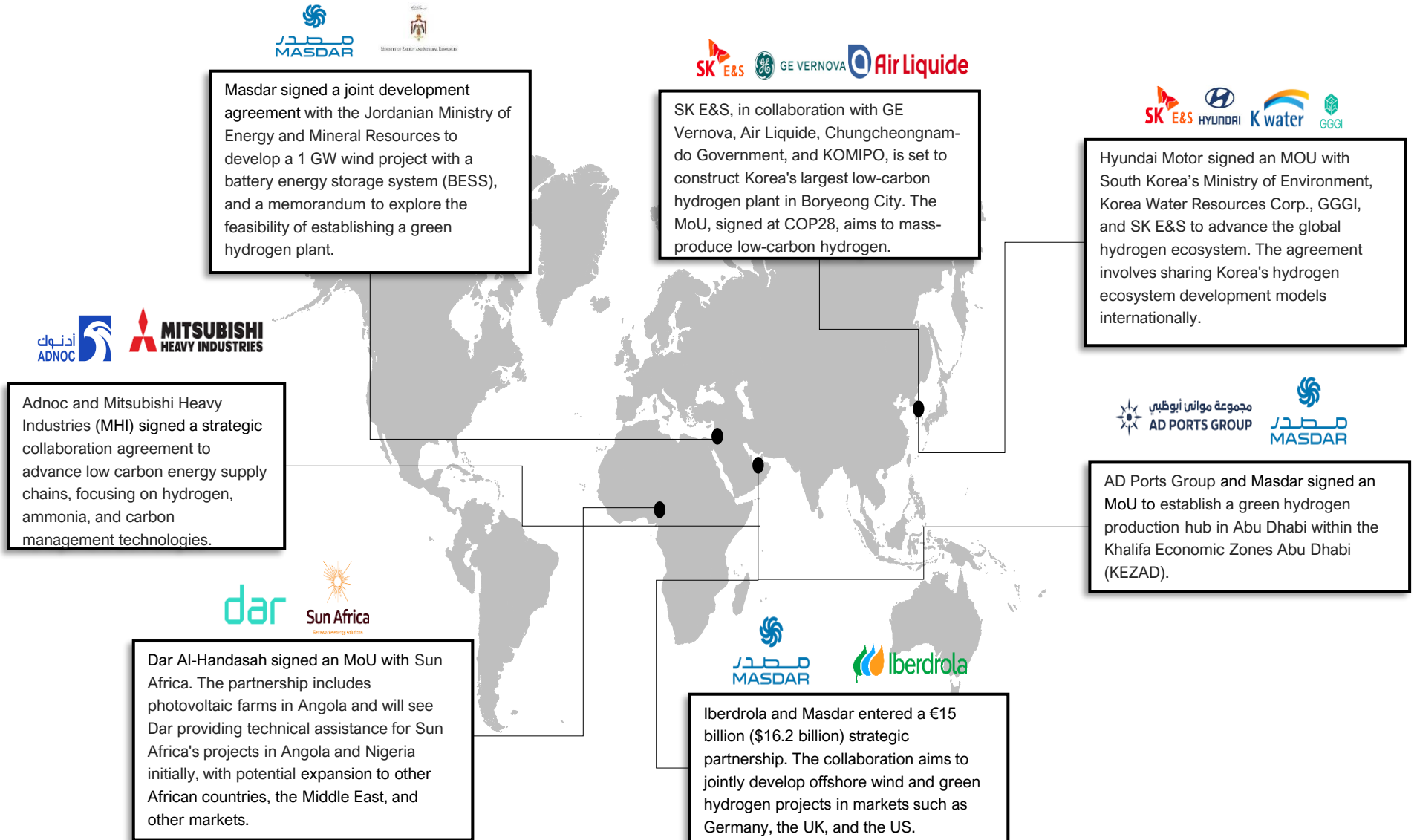


Redefining Climate Change Solutions

Blueprint for Change: Your Guide to COP28 Discoveries

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COP28 Seals Green Hydrogen MOUs Worldwide



COP28 witnesses surge in green hydrogen funding and project announcements

Funding



Oman Arab Bank (OAB) partnered with First Carbon Investments (FCI) to boost clean technology in MENA, exploring financing for projects advancing green fuels like hydrogen and ammonia.






The Ministry of Economic Affairs and Employment in Finland announced an investment aid of €1.96 million for heat recovery from Neste’s green hydrogen production planned for the Porvoo refinery.



The UK allocated £2 billion (\$2.53 billion) for green hydrogen projects in diverse applications like paper mills, port vehicles, and distilleries. This initiative identified 11 strategic locations, advancing hydrogen as the 'fuel of the future.'

Key Investments

Country	Project Owner(s)	Project Details
 India	<ul style="list-style-type: none"> Dubai Electricity and Water Authority (DEWA) 	<ul style="list-style-type: none"> DEWA launched a Green Hydrogen pilot project at the Mohammed bin Rashid Al Maktoum Solar Park, the world's largest single-site solar park with a planned 5,000 MW capacity by 2030, enhancing competitiveness in green hydrogen production.
 Oman	<ul style="list-style-type: none"> Oman’s Ministry of Energy and Renewables, Hydrogen Oman (Hydrom) 	<ul style="list-style-type: none"> Oman’s Ministry of Energy and Minerals and Hydrogen Oman (Hydrom) signed a Joint Study Agreement (JSA) with Port of Amsterdam, Zenith Energy Terminals and GasLog for the development of a liquid hydrogen route to market for green hydrogen produced in the Sultanate.
 Europe	<ul style="list-style-type: none"> Toyota Motor Europe (TME) 	<ul style="list-style-type: none"> Toyota Motor Europe (TME) formed Hydrogen Factory Europe, a local business unit focused on producing fuel cell systems and expanding commercial partnerships. This aligns with Toyota's commitment to achieve carbon neutrality in Europe by 2040, a decade ahead of its global target.

Source: General Authority for Statistics, International Monetary Fund, Bloomberg Commodity Prices

Big oil companies prioritize CCUS initiatives

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Alberta unveils CCUS program ahead of COP28

- Carbon capture initiative modeled on Alberta Petrochemicals Incentive Program
- Provides a refundable tax credit (up to 12%) for eligible capital costs upon project operationalization
- Complements federal government's CCUS tax credit, covering 50% of capital costs

02

Big oil players bet on CCUS

- Carbon Capture, Utilization, and Storage (CCUS) was a major topic at COP28, with 475 CCUS lobbyists in attendance, including ExxonMobil CEO Darren Woods.
- Major oil and gas producers, such as Saudi Arabia, emphasized the importance of CCUS technology in achieving net-zero emissions.

03

CCUS in Cement Industry

The Cement and Concrete Breakthrough, launched by Canada and the United Arab Emirates, aims to focus on speeding up decarbonization in the industry by:

- Sharing best practices
- Working on policy and standards
- Supporting new innovation in emerging areas like carbon capture and storage or utilization, or circular economy

04

CCUS technologies gaining support across nations

- The US-led "Carbon Management Challenge" was launched on December 5, 2023, to accelerate the development and deployment of CCUS and carbon dioxide removal (CDR) technologies gaining support of the UAE, Australia, Canada, Egypt, the EU, US, Japan and Denmark, announcing government support for CCUS and carbon dioxide removal (CDR) technologies.

COP28 commits threefold increase in global renewable capacity by 2030

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Key Global Announcements in COP28

116 countries signed the **Global Renewable Pledge and Energy Efficiency Pledge**, committing to:

- Triple global renewable capacity to 11 TW by 2030
- Achieve over 4% annual global energy efficiency improvement by 2030, surpassing the current 2% rate.

The Utilities for Zero Alliance, with 31 partners, including 25 global utilities and power companies, committed to:

- Advance electrification and renewables-ready grids
- Support clean energy deployment for 2030 Breakthroughs goals
- Implement initiatives for methane reduction and enhance oil and gas sector electrification

02

Latin America's Renewable Focus

The Latin American and Caribbean Renewables Hub increased its renewable energy target for total electricity generation to 80% by 2030 from 70%.

The Hub also aims for renewable energy to account for at least 36% of the total energy supply by 2030.

Pivotal announcements on renewable energy to play crucial role in curbing climate change and ensuring smooth transition toward sustainable energy

Public Funding



- The EU committed €2.3 billion to enhance energy transition efforts within Europe in alignment with the Global Pledge on tripling renewable energy capacity and doubling energy efficiency improvement rates by 2030.
- Additionally, the EU has dedicated over €20 billion to the Africa-EU Green Energy Initiative (AEGEI), furthering its investment in renewable energy and efficiency advancements on an international scale.



- The African Development Bank Group's Board approved a \$1 billion guarantee program with the UK FCDO to boost lending capacity for South Africa's Just Energy Transition (JET).
- Developed in collaboration with the South African government, the program supports JET projects, including renewable energy, energy efficiency, green hydrogen, and electric vehicles.



- The European Investment Bank, Germany, and Ukraine announced a €20 million grant at COP28 for the Renewable Energy Solution (RES) Program.
- The funding, provided by the International Climate Initiative, aims to enhance the energy independence of Ukrainian municipalities.

Private Funding



- Ocean Energy Pathway (OEP) is a new global non-profit, supported by the newly announced Ocean Resilience and Climate Alliance (ORCA), a \$250m funding collaborative.
- OEP will accelerate offshore wind development over the next decade in at least 10 markets with significant wind resources at the frontier of the energy transition, including India, Brazil, Colombia and South Africa.






- Copenhagen Infrastructure Partners announced the launch of its US\$3bn Growth Markets Fund II during COP28 in Dubai.
- The fund will focus on developing and building offshore and onshore wind, solar PV, energy storage and Power-to-X projects in selected high growth middle-income markets across Asia, Latin America and EMEA.



- The Islamic Corporation for the Insurance of Investment and Export Credits and Standard Chartered signed a Non-Honoring of Sovereign Financial Obligation (NHSFO) agreement to fund the installation of 50,000 off-grid solar-powered streetlamps across the rural areas in Senegal.

Source: General Authority for Statistics, International Monetary Fund, Bloomberg Commodity Prices

Pivotal announcements on renewable energy to play crucial role in curbing climate change and ensuring smooth transition toward sustainable energy

Country	Project Owner(s)	Project Partners	Project Details
 United Arab Emirates (UAE)	<ul style="list-style-type: none"> Masdar 	<ul style="list-style-type: none"> Abu Dhabi National Energy Company (TAQA) EDF Renewables JinkoPower 	<ul style="list-style-type: none"> World's largest single-site solar power plant built in a single phase Generates electricity for nearly 200,000 homes, reducing 2.4 million tonnes of carbon emissions annually Installation includes almost 4 million bi-facial solar panels Construction achieved at a rate of 10 megawatts (MW) per day
 Kazakhstan	<ul style="list-style-type: none"> TotalEnergies 	<ul style="list-style-type: none"> Samruk-Kazyna (20% stake) KazMunayGas (20% stake) 	<ul style="list-style-type: none"> Powered by 160 turbines Includes a 600 megawatt-hour battery energy storage system The largest wind farm project in Kazakhstan Expected to generate sufficient clean electricity for one million people
 Malaysia	<ul style="list-style-type: none"> Masdar Malaysian Investment Development Authority (Mida) 	<ul style="list-style-type: none"> Citaglobal Berhad TizaGlobal TNB Renewables Tadau Energy and PSK Cypark Resources Bhd Malakoff 	<ul style="list-style-type: none"> Joint development agreement with Citaglobal Berhad & Tiza Global for 2GW of solar plants in Malaysia Collaboration agreement with Tadau Energy and PSK to develop 2GW of wind power in Malaysia Strategic Memorandum of Understanding with Cypark Resources Berhad for up to 1GW of renewable energy projects in Malaysia

Source: General Authority for Statistics, International Monetary Fund, Bloomberg Commodity Prices

Oil and gas enterprises initiating groundbreaking measures to move closer to net-zero goal

Decarbonization Charter: The Oil and Gas Decarbonization Charter (OGDC) is a global initiative committed to expediting climate action and achieving significant impact throughout the oil and gas sectors.

Commitment: The pledge is to achieve net-zero operations by 2050 at the latest, cease routine flaring by 2030, and minimize upstream methane emissions to near-zero levels.

Signatories: Up until now, the OGDC has garnered commitments from 50 companies, accounting for over 40% of the world's oil production. Notably, National Oil Companies, constituting over 60% of the signatories, mark the highest-ever participation of NOCs in a decarbonization initiative.

Other Actions:

- **Invest in the energy system of the future:** Renewables, low-carbon fuels, and negative emissions technologies
- **Enhance transparency:** Improve measurement, monitoring, reporting, and independent verification of greenhouse gas emissions
- **Align with industry best practices:** Aspire to implement current best practices by 2030 for collective emission intensity reduction
- **Address energy poverty:** Work toward reducing energy poverty and provide secure, affordable energy to support the development of all economies

Key Signatories



Source: General Authority for Statistics, International Monetary Fund, Bloomberg Commodity Prices



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