Energy Intelligence

ENERGY TRANSITION RESEARCH
Corporate Analysis

Low-Carbon Investment Tracker: Corporate Spending Shifts

Executive Summary

February 22, 2024

CONTACT DETAILS

Alex Martinos
Director, Energy Transition Research
London
+44 (0)20 7518 2248 | amartinos@energyintel.com

Energy Intelligence

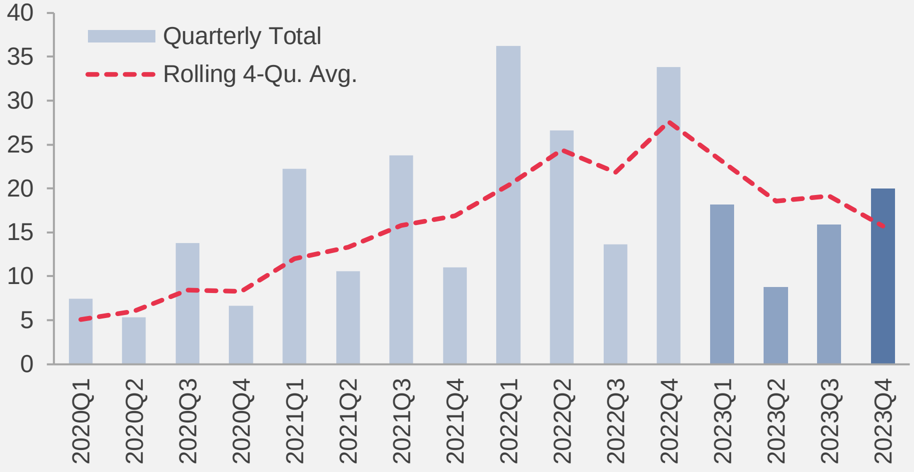
Low-Carbon Investment Tracker: Corporate Spending Shifts

Key findings by segment and technology

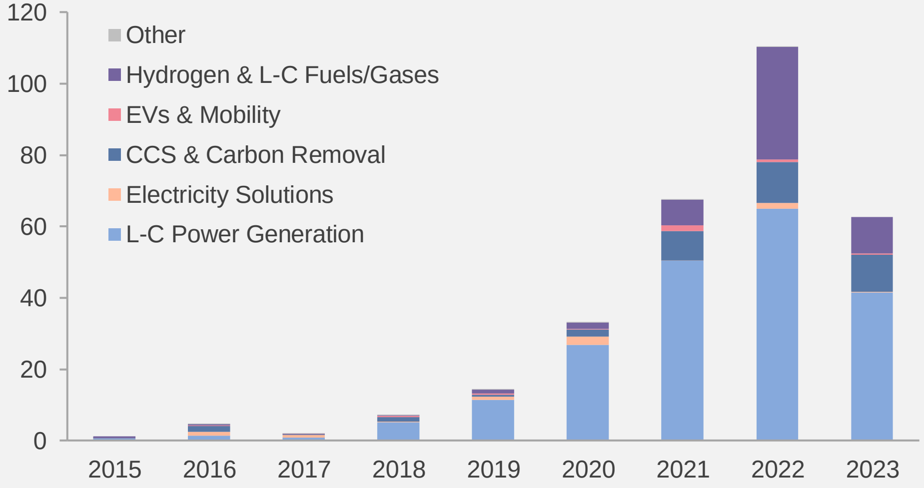
Stabilization in Activity; Spending Trends Evolve

- Low-carbon spending announced and approved by oil and gas firms totaled $63 billion in 2023, but – at 40% below 2022 levels – confirmed a broader slowdown.
- Yet Q3-Q4'23 data shows consecutive quarters of growth, pointing to a wider stabilization, even as the industry investment landscape continues to evolve.
- This new dynamic reflects strategic shifts as western majors seek to balance conflicting priorities, boost low-carbon returns, and streamline project pipelines.
- The mix of investments by technology is evolving. Low-carbon power generation remains the largest area of tracked activity, making up 66% of 2023's total, but new announcements fell 40% versus 2022.
- Strong 2023 interest in CCS* and carbon removal including DAC continued into Q4'23, led by US firms (Exxon, Oxy) and Mideast NOCs (Adnoc).
- New hydrogen investments fell to $7.2 billion in 2023, with a notable lull in activity in Q1-Q3'23, amid doubts over project feasibility, policies, and future demand. However, activity picked up in Q4'23 with major projects unveiled by Asian firms (Inpex, Petronas).

2020-23 Investment Value by Quarter ($ billion)



Low-Carbon Investment Value by Category ($ billion)



Source: Energy Intelligence; Note: L-C = Low-Carbon

Note: See Appendix in full report for glossary of abbreviated company names and terms

Energy Intelligence

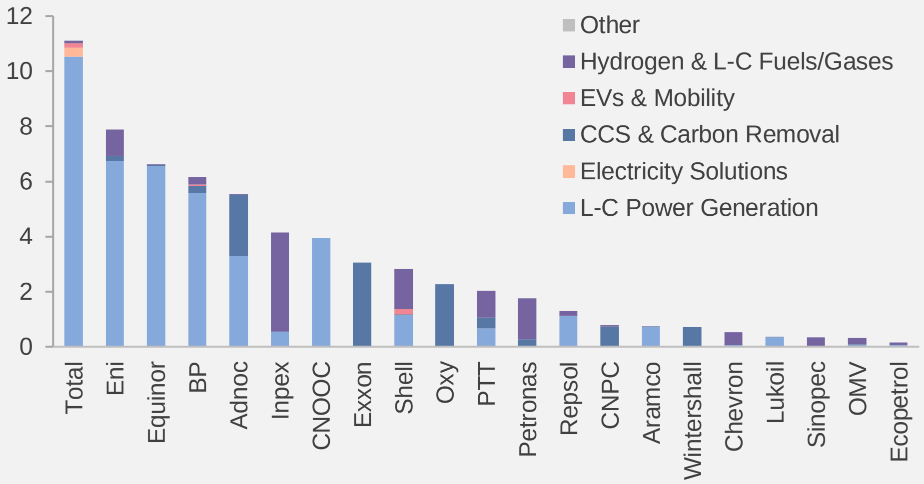
Low-Carbon Investment Tracker: Corporate Spending Shifts

Key findings by company and peer group

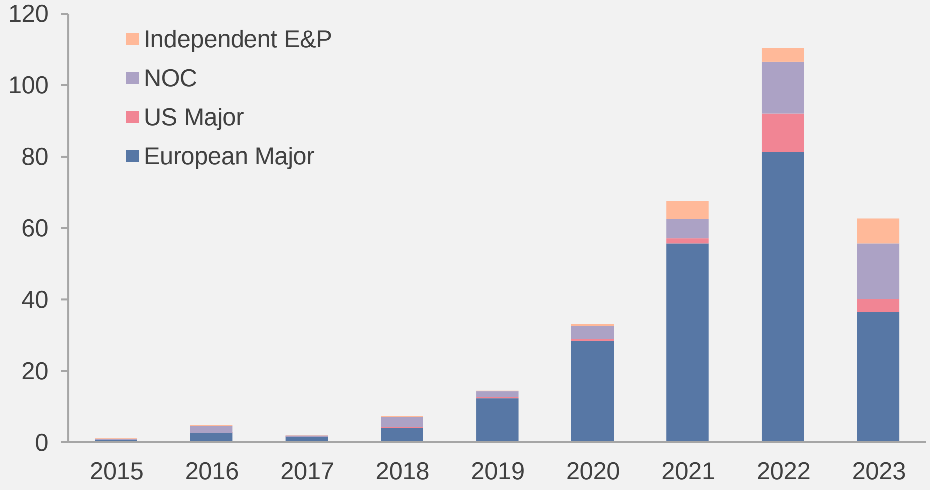
Mixed Trends in Europe; Bright Spots Elsewhere

- European Majors remain most active, announcing nearly $37 billion of low-carbon spending in 2023. But their share of tracked activity fell below 60% for the first time in five years, reflecting shifts in transition strategies for many key industry players.
- Some European firms stuck with their renewables-focused approach. In 2023, Total reached top spot with over $11 billion of announced activity, followed by Eni (nearly $8 billion), then Equinor and BP.
- By contrast, after shifting strategy, Shell (the 2022 leader) slid to ninth, with announced spending falling from ~$24 billion in 2022 to under $3 billion in 2023. Repsol also saw a sharp fall in new tracked activity.
- Activity elsewhere is growing fast, led by UAE's Adnoc, which jumped into the top five with over 50 new announcements in 2023, at an estimated value of ~$5.5 billion. This surge reflected ambitious new transition goals, the impact of Adnoc's stake in Masdar, and added impetus of UAE hosting COP28.
- Several Asian firms also accelerated their activity, including Inpex (in hydrogen and renewable power) CNOOC (offshore wind), and PTT (multiple areas).

2023 Investment Value by Company and Category ($ billion)



Low-Carbon Investment Value by Peer Group ($ billion)



Source: Energy Intelligence; Note: L-C = Low-Carbon; upper chart shows firms with >$100 million announced.

Low-Carbon Investment Tracker: Essential Information

Proprietary, data-driven analysis of fast-growing green spending plans

- **Our Low-Carbon Investment Tracker provides valuable data-driven insights into where leading energy firms are directing their expanding low-carbon spending.**
- Investments are covered in five key categories, named: Low-Carbon Power Generation, Electricity Solutions, Hydrogen and Low-Carbon Fuels and Gases, EVs and Mobility, and CCS and Carbon Removal (see right).
- We do not track low-carbon oil-field expenditure (like efficiency improvements or flaring reduction) or investments in petrochemicals or natural gas, even if these do form part of a company's wider decarbonization strategy.
- Our low-carbon investment database covers 34 top oil and gas firms and now contains over 1,600 announced and approved investments, with values totaling over $300 billion, since 2015.
- **We also publish regular, downloadable Low-Carbon Investment Tracker data files. These, as well as our wider research into energy transition trends and technologies, can be found here.**

Low-Carbon Investment Tracker: Methodology*

- Covers announced low-carbon investments of 34 major oil and gas companies† across five categories (see below).
- Tracks projects based on the date initially announced but makes updates as projects reach FID. Historical data may thus evolve.
- Reported investment values are used where available, with estimates made for other cases. Values are the share of total project cost before the impact of project finance is considered.

Category	Main Subcategories
Low-Carbon Power Generation	• Solar • Wind • Other
Electricity Solutions	• Grid-level storage • Electricity distribution and retail • Battery technology • Demand management services
Hydrogen & Low-Carbon Fuels/ Gases	• Hydrogen and ammonia • Biofuels and biogases • Sustainable synthetic fuels
EVs & Mobility	• Electric vehicle (EV) charging • Other EV services • Other transport
CCS & Carbon Removal	• Carbon capture, utilization and storage • Direct air capture • Nature-based solutions

Notes: * See Appendix in full report for further methodology notes; † See Appendix for full list of companies.

Low-Carbon Investment Tracker: Data Download

Accompanying data download file published quarterly

Energy Intelligence

Low-Carbon Investment Tracker Update: November 2023

Energy Transition Research

Contact Details:
Alex Martinos (London)
amartinos@energyintel.com

Sample Extract

Low-Carbon Investment Tracker - Data

Company	Peer Group	Asset Name	Asset Region	Asset Country	Investment Type	Project Category 1	Project Cate
CNPC	NOC	Singapore CCUS MOU	Asia-Pacific	Singapore	MOU	CCS & Carbon Removal	CCS
CNPC	NOC	Yumen Solar PV	Asia-Pacific	China	Capex Investment	L-C Power Generation	L-C Power: Solar
CNPC	NOC	Hainan Province Regional CCS Center	Asia-Pacific	China	MOU	CCS & Carbon Removal	CCS
CNPC	NOC	Junggar Carbon-Neutral Forest	Asia-Pacific	China	Capex Investment	CCS & Carbon Removal	Nature-based Soluti
CNPC	NOC	Ningxia CCUS Phase 1	Asia-Pacific	China	Capex Investment	CCS & Carbon Removal	CCS
CNPC	NOC	Ningxia CCUS Phase 2	Asia-Pacific	China	Capex Investment	CCS & Carbon Removal	CCS
CNPC	NOC	Ningxia CCUS Phase 3	Asia-Pacific	China	Capex Investment	CCS & Carbon Removal	CCS
CNPC	NOC	Yumen Green Hydrogen Phase 1	Asia-Pacific	China	Capex Investment	Hydrogen & L-C Fuels/Gases	L-C Gas: Green H2
Conoco	Independent E&P	Faster Forests	North America	Canada	Capex Investment	CCS & Carbon Removal	Nature-based Soluti
Conoco	Independent E&P	Timor Leste Reforestation Program	Asia-Pacific	Timor-Leste	Capex Investment	CCS & Carbon Removal	Nature-based Soluti
Conoco	Independent E&P	Battery-hybrid Propulsion	Europe	Norway	Capex Investment	Electricity Solutions	Battery Technology
Conoco	Independent E&P	Clean Ammonia Export Project	North America	US	Capex Investment	Hydrogen & L-C Fuels/Gases	L-C Gas: Blue H2
Conoco	Independent E&P	Penglai Offshore Wind Pilot Project	Asia-Pacific	China	Capex Investment	L-C Power Generation	L-C Power: Wind
Conoco	Independent E&P	Avnos	North America	US	VC Investment	CCS & Carbon Removal	Direct Air Capture
Ecopetrol	NOC	Castilla Solar Park	Latin America and the Caribbean	Colombia	Capex Investment	L-C Power Generation	L-C Power: Solar
Ecopetrol	NOC	San Fernando Solar Park	Latin America and the Caribbean	Colombia	Capex Investment	L-C Power Generation	L-C Power: Solar
Ecopetrol	NOC	Solar Plants	Latin America and the Caribbean	Colombia	Capex Investment	L-C Power Generation	L-C Power: Solar
Ecopetrol	NOC	Wind Plants	Latin America and the Caribbean	Colombia	Capex Investment	L-C Power Generation	L-C Power: Wind
Ecopetrol	NOC	Brisas Solar Energy Supply Contract	Latin America and the Caribbean	Colombia	Other	L-C Power Generation	L-C Power: Solar
Ecopetrol	NOC	Green Hydrogen Pilot Project	Latin America and the Caribbean	Colombia	Capex Investment	Hydrogen & L-C Fuels/Gases	L-C Gas: Green H2
Ecopetrol	NOC	Villanueva Biomass To Electricity	Latin America and the Caribbean	Colombia	Capex Investment	Hydrogen & L-C Fuels/Gases	Bio-based Products
Ecopetrol	NOC	HOOY	Latin America and the Caribbean	Colombia	VC Investment	Hydrogen & L-C Fuels/Gases	Bio-based Products
Ecopetrol	NOC	Rubiales Solar PV Park	Latin America and the Caribbean	Colombia	Capex Investment	L-C Power Generation	L-C Power: Solar
Eni	European Major	Gela Bio Refinery	Europe	Italy	Capex Investment	Hydrogen & L-C Fuels/Gases	Bio-based Products
Eni	European Major	Gela Waste-to-Fuel Pilot Plant	Europe	Italy	R&D	Hydrogen & L-C Fuels/Gases	Bio-based Products
Eni	European Major	Saline Conti Vecchi	Europe	Italy	Capex Investment	L-C Power Generation	L-C Power: Solar
Eni	European Major	Bir Rebaa North-1	Middle East and North Africa	Algeria	Capex Investment	L-C Power Generation	L-C Power: Solar
Eni	European Major	Nigeria Solar-powered Water Scheme Project	Sub-Saharan Africa	Nigeria	Capex Investment	L-C Power Generation	L-C Power: Solar
Eni	European Major	HyNet North West	Europe	UK	Capex Investment	CCS & Carbon Removal	CCS

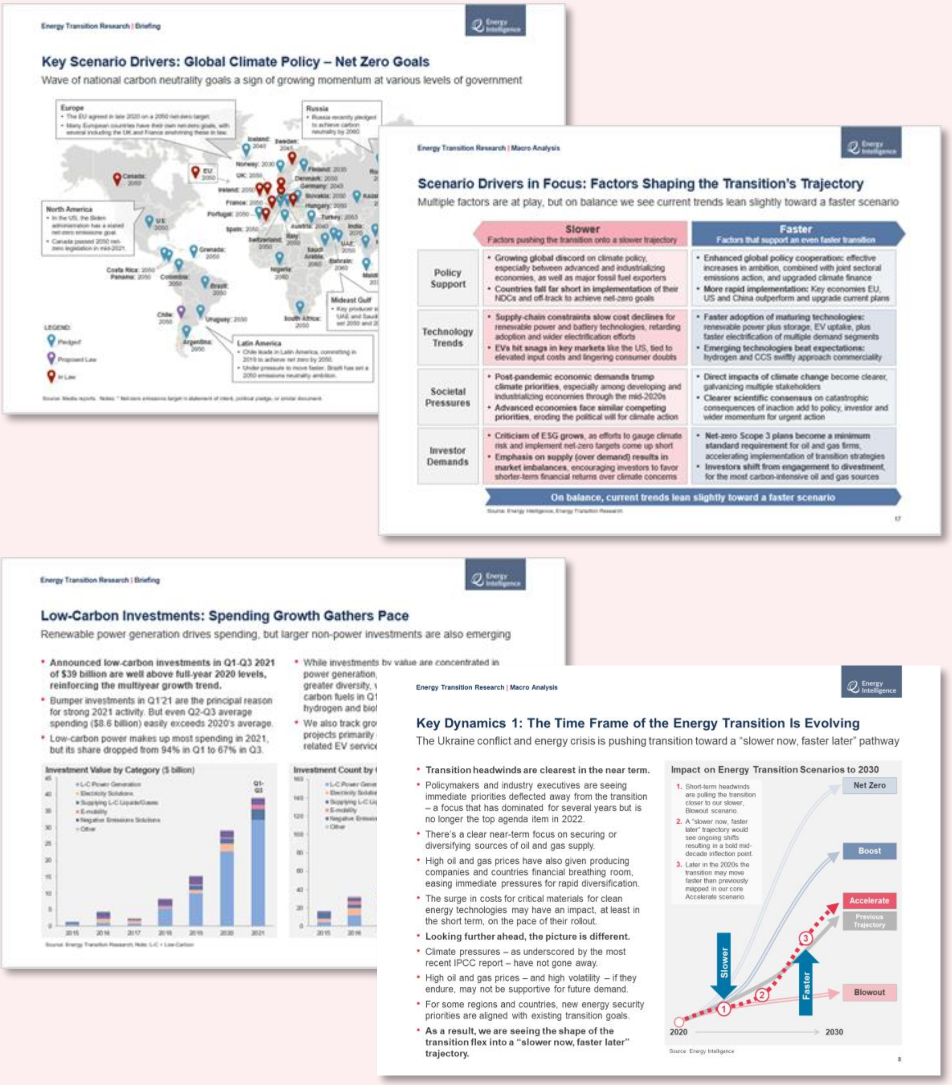
Energy Intelligence

Introducing the Energy Transition Service

Guiding the energy industry through the low-carbon transition

Energy Transition Service

- The **Energy Transition Service guides the energy industry through the low-carbon transition.** (Click here for details.)
- **We offer unparalleled intelligence, analysis and insights** into the pace and direction of the low-carbon transition, with a focus on key industry technologies, costs, market development and policy drivers.
- **Energy Intelligence Research covers various critical facets of the energy transition –** concentrating on macro, market, technology, and investment issues. (Click here for our latest research.)
- Our **Energy Transition Macro Outlook** reports and scenarios analysis offer insights into key industry themes. The **Low-Carbon Investment Tracker** evaluates spending trends for top oil and gas firms.
- We analyze key costs and drivers for **low-carbon technologies** such as hydrogen and CCS, and model **market dynamics** to help understand the disruptive demand impact of transition trends.
- We also offer a wide range of **advisory** solutions, including tailored benchmarking and strategic analysis.



Energy Intelligence

Appendix: Company Coverage

Low-Carbon Investment Tracker

- **The Low-Carbon Investment Tracker currently covers investment activity by a total of 34 IOCs and NOCs.**

European Majors

- BP
- Eni
- Equinor
- Lukoil
- OMV
- Repsol
- Shell
- TotalEnergies (Total)

US Majors

- Chevron
- Exxon Mobil (Exxon)

NOCs

- Abu Dhabi National Oil Co. (Adnoc)
- CNOOC
- CNPC
- Ecopetrol
- Gazprom
- Pemex*
- Petrobras
- Pertamina
- Petronas
- PTT
- QatarEnergy (QE)
- Rosneft
- Saudi Aramco (Aramco)
- Sinopec

Global Independents

- APA Corp. (APA)
- ConocoPhillips (Conoco)
- EOG Resources (EOG)
- Hess Corp.† (Hess)
- Inpex Corp. (Inpex)
- Occidental Petroleum (Oxy)
- Pioneer Natural Resources*† (Pioneer)
- Santos
- Wintershall Dea (Wintershall)
- Woodside

Notes: * No low-carbon projects announced in the period since 2015 currently tracked for Pemex and Pioneer. † Deals to acquire Hess and Pioneer (by Chevron and Exxon, respectively) announced in Q4'23, pending close.

Energy Intelligence

Contact Us

Geoff Wright | New York
Global Head of Sales
+1 646 616 0836
gwright@energyintel.com

Sam Ghrairi | London
Director of Sales EMEA & APAC
+44 (0)20 7518 2244
sghrairi@energyintel.com

Ahmed Eissa | Dubai
Sales, Middle East & Africa
+971 (4) 364 2610
aeissa@energyintel.com

Anurag Joshi | Singapore
Sales, APAC
+65 6538 0363
ajoshi@energyintel.com

The Americas

275 Madison Avenue, Suite 1700
New York, NY 10016
Tel: +1 212 532 1112

National Press Building, Suite 340
529 14th Street NW
Washington, DC 20045
Tel: +1 202 662 0700

808 Travis Street, Suite 1014
Houston, TX 77002
Tel: +1 713 222 9700

Europe

2nd Floor, Berkeley Square House
Berkeley Square
London W1J 6BD, UK
Tel: +44 (0)20 7518 2200

Daev Pereulok 20, Office 509
107045 Moscow, Russia
Tel: +7 495 604 8279/78/77

Middle East & Asia-Pacific

1 Pickering Street, #08-01
Suite 20, Great Eastern Center
Singapore 048659
Tel: +65 6538 0363

Arjaan Office Tower 301
Dubai Media City
P.O. Box 502803
Dubai, UAE
Tel: +971 4 364 2607/2608

Berytech Innovation Park Mathaf
Museum District, Damascus Road
P.O. Box: 11-7503 Riad el Solh, 1107 2240
Beirut, Lebanon
Tel: +961 3 301278

energyintel.com