IHS Markit™

IHS Markit's 10 Cleantech Trends in 2020

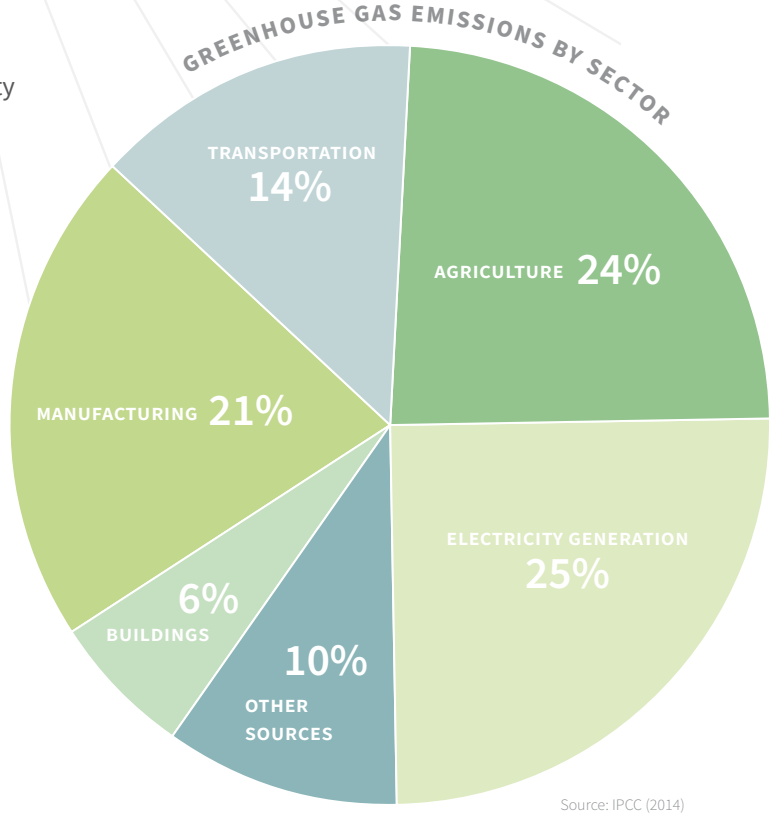
TECHNOLOGIES TO REDUCE EMISSIONS AND CONFRONT CLIMATE CHANGE

How cleantech is the key to reduce emissions and forge the path to a low-carbon future.

Energy fuels heat, light, mobility, and the modern economy. Reducing Greenhouse Gas (GHG) emissions is the biggest challenge for the energy sector today.

A wide spectrum of technologies at various stages of maturity and scalability will be required. Understanding technology roadmaps, costs, and supply chains will be necessary for successful transition to the new energy economy:

- Significant progress is being made to reduce emissions in power generation with large scale deployment of onshore wind and solar PV. Offshore wind presents a big and growing opportunity.
- Coal accounts for 40% of emissions from power generation globally. Emerging technologies including Carbon Capture and Storage (CCS) and Direct Air Capture will be required to eliminate these emissions
- Batteries and large-scale storage will be key enablers to rapidly grow intermittent technologies
- Hydrogen is versatile but expensive to produce. It could support decarbonization of the industrial sector and provide heat in buildings, and it can also fuel transportation.
- Large oil and gas companies will play a significant role in decarbonizing the global energy economy because of their engineering know-how, capital and scale.



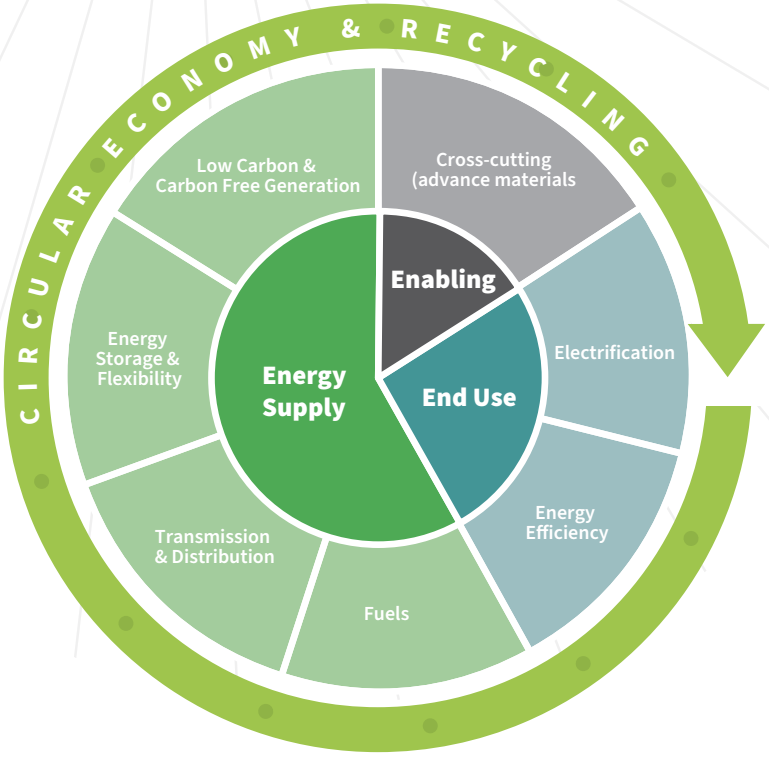
Source: IPCC (2014)

In the following pages, my colleagues provide a brief glimpse of our data, analysis and insights across the cleantech spectrum. Our work is underpinned by deep understanding of the energy sector and how its future will be shaped by government policies, geopolitics and technological developments.

Atul Arya, Ph.D. Chief Energy Strategist

Atul has international leadership experience in a diverse array of energy fields spanning strategy development, business planning, field operations and technology commercialization. His experience includes leadership in solar energy development as well as oil and gas.

Core Clean Technology Dimensions by IHS Markit



IHS Markit's 10 Cleantech Trends in 2020			
1	220 GW of wind and solar forecast in 2020 as costs continue declining	6	Hydrogen's momentum is accelerating driven by projects in Europe
2	Onshore wind continues to grow in 2020, while offshore wind progresses toward floating foundations and larger turbines sizes	7	Measuring, reporting, and reducing GHG emissions will increasingly be the focus of the oil industry in 2020
3	Battery manufacturing capacity will continue to gravitate towards major EV markets in 2020	8	Oil and gas company investment activity in the low-carbon space will continue to grow, advancing the sector's Energy Transition
4	Energy storage plays a pivotal role in enabling more resilient electricity networks	9	2020 is set to be a critical year for the aviation industry as it seeks solutions for carbon-neutral growth
5	Conditions for EV sales growth remain in place in 2020, despite some short-term headwinds	10	CO2 Removal Technologies will play an increasingly important role to remove emissions from atmosphere

220 GW of wind and solar forecast in 2020 as costs continue declining.

KEY TAKEAWAYS

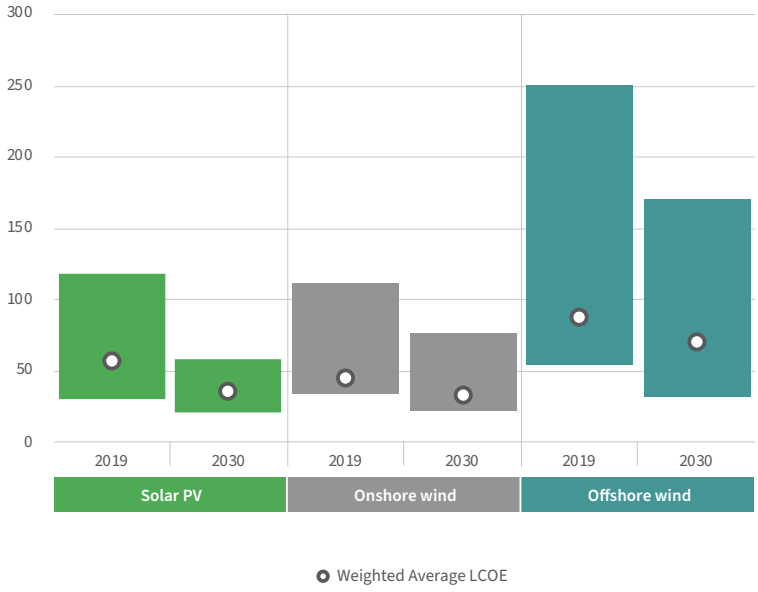
- 220 GW of wind and solar will be installed in 2020, with combined solar- and wind-installed capacity increasing 16% from last year. Annual additions will be up 300% since 2010.
- Investments in wind and solar to accelerate in 2020 driven by growing appetite to meet ESG commitments and as technologies reach scale to be attractive to pension and infrastructure funds. Booming renewable markets in Europe and United States will lead to an increasing number of market players seeking IPO's this year.

Renewable energies, mostly solar, onshore and offshore wind, have been growing faster than conventional fuel sources such as coal and gas for the past 4 years, adding close to 1.3 TW of new power generating capacity since 2010. IHS Markit anticipates that increasingly lower costs of renewables will strengthen renewable growth in all regions, with Asia being the clear leader of net capacity additions in the next decade.

Renewable costs, measured by LCOE (levelized cost of electricity), will continue declining in the 2019-2030 period. Weighted average is forecast to be below $35/MWh for both solar and onshore wind in the next decade, Solar technology will have the fastest declining LCOE costs with a forecast 30% decline in the next decade.

This strong decline will further increase the competitiveness of renewables, By 2030, renewable LCOE ranges are expected to converge across technologies and markets and are to be well within the range of marginal fossil fuel costs in most markets.

SOLAR PV AND WIND POWER LCOE RANGES & WEIGHTED AVERAGES ($/MWH)



Notes: LCOE = "Levelized cost of electricity". Values are in real US$ 2018.
Source: IHS Markit.

Edurne Zoco, Ph.D.
Executive Director, Clean Technology & Renewables

Edurne has 15 years of experience in the industry and manages the Clean Technology & Renewables team at IHS Markit. Edurne and her team lead research activities across renewables, energy storage, batteries. and their role in the energy transition.

Onshore wind continues to grow in 2020, while offshore wind progresses forward for floating foundations and larger turbines sizes.

KEY TAKEAWAYS

- Both onshore and offshore wind is predicted to continue growing in the 2020s, although annual offshore installations will fall in 2020.
- 2020 will see the commissioning of the worlds first floating offshore wind farm with three 8.4 MW turbines, the largest ever installed on floating platforms.

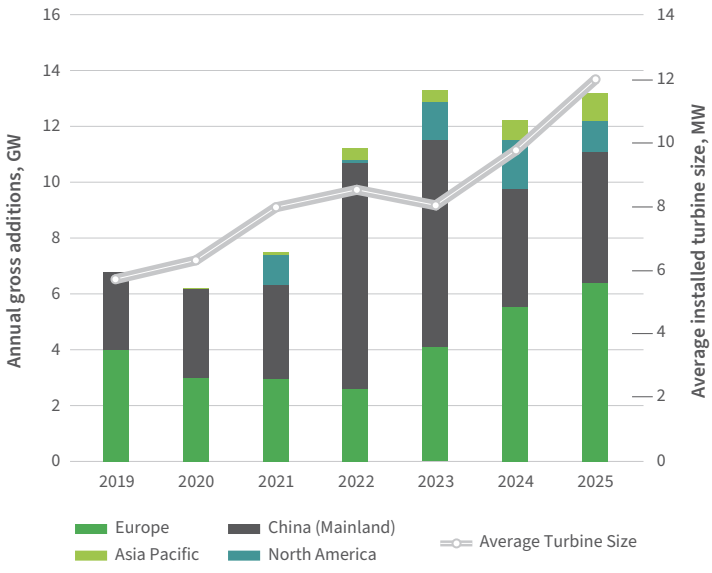
IHS Markit anticipates record capacity additions of over 64 GW for onshore wind in 2020 up by 6% compared to 2019. Growth will be spearheaded by mainland China and the United States as developers rush to complete projects before subsidies expire. By 2030, the global installed base will reach over 1.2 TW, more than double the installed base at the end of 2019. However, NIMBYism remains a constant threat to onshore wind growth and might result in a policy shift towards offshore in select markets.

Offshore wind industry will deploy a more modest 7GW of new capacity in 2020, almost as much as in 2019. The biggest contributions will come from Mainland China, where developers are rushing before the Feed in Tariff expires in 2022, followed by the UK, Netherlands and Taiwan.

Floating offshore wind is expected to reach a new major milestone in 2020 with the full commissioning of the 25-MW WindFloat Atlantic project off the coast of Portugal, as three 8.4 MW turbines will be the largest units ever installed on floating platforms.

A important trend is the growing size of wind turbines. Based on supplier announcements, IHS Markit expects 5 MW+ onshore and 10 MW+ offshore turbines to be commercially available from 2021 onward.

GLOBAL OFFSHORE WIND GROSS ADDITIONS BY REGION VS. AVERAGE TURBINE SIZE



Notes: * - global weighted average turbine size commissioned in the corresponding year

Source: IHS Markit

Indrayuth Mukherjee Senior Analyst, Global Power and Renewables

Indrayuth has over 5 years of consulting and research experience in the energy sector with a focus on market analysis and competitive strategy. Indra leads the global onshore wind research at IHS Markit.

Andrei Utkin Senior Analyst, Global Power and Renewables

Andrei has more than 8 years of project management experience in renewable energy projects. Andrei leads the global offshore wind research at IHS Markit.

Battery manufacturing capacity will continue to gravitate towards major EV markets in 2020.

KEY TAKEAWAYS

- At the end of 2019, 86% of global Li-ion battery manufacturing capacity was in mainland China. However, that share is predicted to fall in 2020, and each year for at least the next three years.
- Of the 339 GWh of new manufacturing facilities announced in Europe and North America since Q4 2018, many of which will start to come online in 2020, over half (181 GWh) will be owned and operated by Asian battery manufacturers.

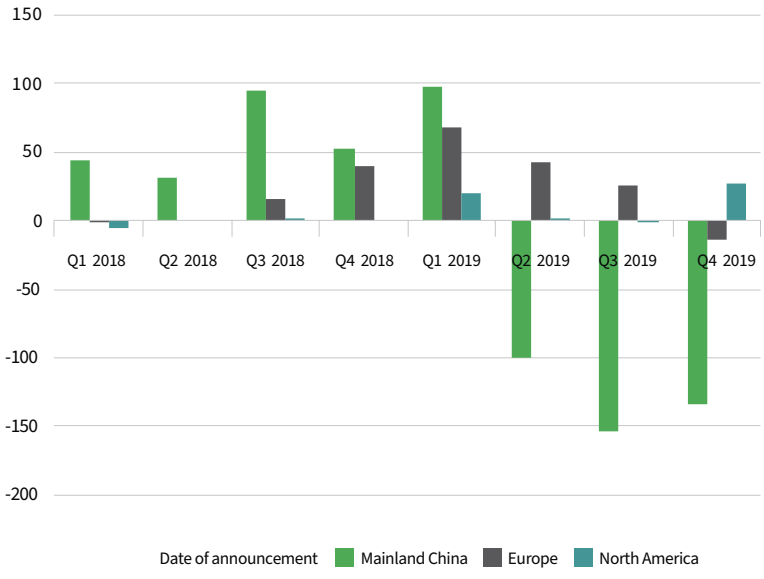
In recent years, as demand for batteries for both grid energy storage applications and electric mobility has quickly grown, Li-ion manufacturing capacity has quickly scaled up. Mainland China has been highly aggressive in its efforts to dominate the supply chain and has seen over 450 GWh of manufacturing capacity built there in the last three years. As a result, at the end of 2019, mainland China accounted for over 80% of operational global Li-ion manufacturing capacity.

However, as electric vehicle demand begins to grow in major markets around the world, new manufacturing capacity is increasingly being added in other regions. In fact, announcements of new capacity in mainland China have declined year-on-year for three consecutive quarters (Q2 2019 to Q4 2019). In contrast, announcements of new manufacturing facilities in Europe increased every quarter from Q3 2018 to Q3 2019. Plans have also been announced for major facilities in North America.

While mainland China's share of manufacturing capacity will fall in 2020, Asian manufacturers still hold a firm grip on the industry, and of the 339 GWh of new manufacturing facilities announced in Europe and North America since Q4 2018 – many of which will start to come online in 2020, 181 GWh will be owned and operated by Chinese and South Korean battery manufacturers, who are increasingly building their factories close to the major automotive OEMs that represent major potential customers for the future.

In 2020, the battery market will not see the end of the big question, " can supply keep up with the growing electric vehicle market", but it will see Asian manufacturers continue to dominate the space.

Y/Y CHANGE IN LI-ION CAPACITY EXPANSION ANNOUNCEMENTS IN KEY MARKETS (GWH)



Notes: Based on announced final capacity of factories included in IHS Markit Battery Manufacturer Database, categorized based on the date the announcement was made, not the build out of the factory; LCO excluded.

Source: IHS Markit

Sam Wilkinson Associate Director, Clean Technology & Renewables

Sam has worked with IHS Markit for over ten years, delivering research and insight on all areas of the solar industry, the energy storage sector, and the battery supply chain.

TREND FOUR

Energy storage will play a pivotal role in enabling more robust electricity networks as resilience concerns grow in 2020.

KEY TAKEAWAYS

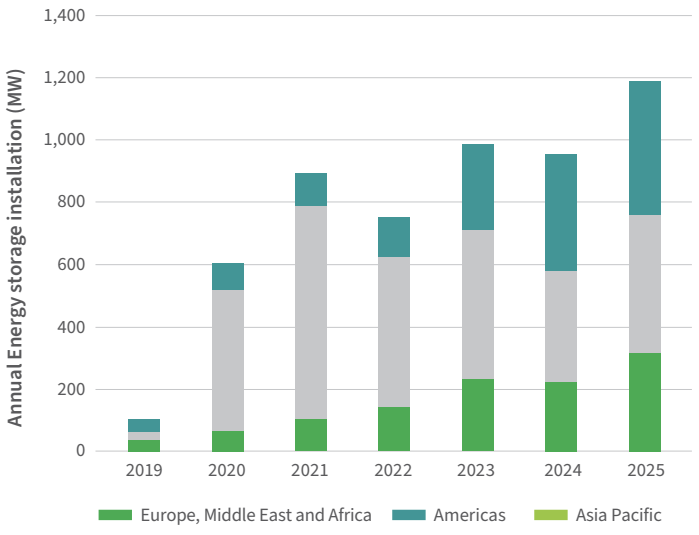
- Without the significant deployment of long duration energy storage, clean energy policy goals will not be met.
- The increase in catastrophic weather events, has elevated the need to ensure reliable and resilient energy networks. Energy storage can provide critical resilience across all parts of the energy system.

With more than half of the states in the United States adopting renewable energy goals, and states such as California targeting 100% clean energy by 2045, the need for storage and especially long-duration bulk storage is becoming more pressing. This is evidenced by ever increasing amounts of curtailed renewable electricity. Finding ways to better match the supply of abundant low-cost renewable generation with demand throughout the year will be crucial to ensure reliability, and require longer duration storage, including multi day and seasonal storage.

Wildfires in California and Australia caused major grid outages, while Hurricanes Maria and Dorian devasted Puerto Rico and the Bahamas. In Northern California, the total losses from power shutoffs were estimated to be up to $2.5 billion. As climate-change is increasing the frequency and strength of natural disasters, this has elevated the critical role that energy storage plays in not only providing resilience, but also supporting the rebuilding in the aftermath of natural disasters.

Deployment of battery energy storage to primarily enhance Transmission & Distribution (T&D) infrastructure will grow from 100 MW in 2019 to 1.2 GW by 2025. in the short-term deployment will be driven by individual utility procurements highlighting the irregularity in future growth. Regulators need to further accelerate the development of frameworks and revenue streams that value the role storage plays in enabling more resilient electricity networks – something that will be crucial in the long-run due to the intermittency of renewable generation and increasing catastrophic weather events.

GLOBAL ANNUAL GRID-CONNECTED ENERGY STORAGE INSTALLATIONS FOR T&D ENHANCEMENT BY REGION



Notes: Upgrade deferral in the IHS Markit tool refers to all types of T&D enhancement. Source: IHS Markit

Julian Jansen Research Manager, Clean Technology & Renewables

Julian is a research manager at IHS Markit. He leads global research on stationary energy storage and provides deep insight on the key value drivers and emerging business models accelerating storage deployment across the world. He also delivers strategic advice for bespoke projects on various new energy technologies.

TREND FIVE

Hydrogen's momentum is accelerating driven by a growing project pipeline in Europe.

KEY TAKEAWAYS

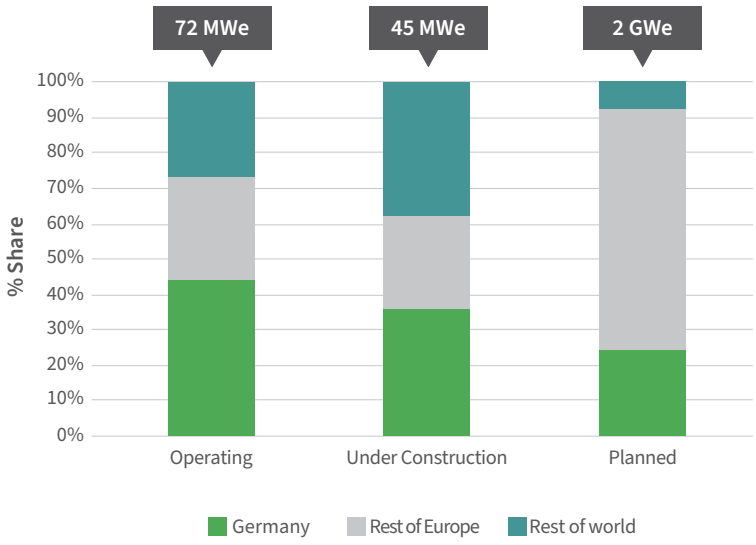
- Dramatic cost reductions have triggered unprecedented investments in power-to-gas projects and an expansion of the project pipeline. 2 GW of electrolysis input capacity is currently planned for the next five years compared with 72 MW installed today, mainly driven by European projects.
- IHS Markit anticipates a 46% decline in the cost by 2030, when renewable hydrogen via electrolysis will become competitive with fossil-based hydrogen coupled with carbon capture.

Low-carbon and renewable hydrogen production via electrolysis experienced a 45% cost reduction from 2015 to 2020. This was driven by a combination of a reduction in renewable electricity costs and in capital costs of electrolysers. As a result, interest in low-carbon hydrogen has soared in every region of the world and in all sectors of the economy in the last 2-3 years, but this time, increased environmental pressure and reductions in production costs are triggering unprecedented investments throughout the value chain.

Advantages of hydrogen include not only its use in storing and peak-shaving intermittent power generation at a large scale and over long duration (which will be a challenge for batteries but also in decarbonizing sectors that have few low carbon alternatives, notably industries requiring high-temperature heat for their processes and for which electrification is costly.

Building on the cost decline seen in the last few years, governments and corporations have been active in drafting policies that promote low carbon hydrogen and launching pilot projects to produce, ship and use hydrogen at a larger scale. For example, Japan, the EU, California, mainland China, Australia are all hopping on the hydrogen train. This can trigger a positive chain reaction leading to further cost reductions. The next few months and years will be critical for hydrogen and should be watched closely.

GLOBAL POWER-TO-X (ELECTROLYSIS) PROJECTS (AS OF JANUARY 2020)



Note: X includes hydrogen and other hydrogen-based synthetic fuels like synthetic methane and synthetic liquids.
Source: IHS Markit - Power to Gas Tracker

Soufien Taamallah, Ph.D. Director, Hydrogen and Renewable Gas Forum

Soufien Taamallah focuses on energy technologies and hydrogen research. He is an expert in energy systems and a technical lead for the IHS Markit Hydrogen and Renewable Gas Forum. Dr. Taamallah has a PhD from MIT with extensive academic and industry experience in the energy field, from startups to large multinationals.

EV sales face headwinds in 2020 due to impact of coronavirus, but conditions in place for long-term growth.

KEY TAKEAWAYS

- EV sales growth in 2019 slowed significantly from previous years. Year-on-year change in EV sales in key markets fell for the first time in August 2019, and once again in October and November.
- Mainland China's manufacturing quotas along with rising fuel economy and emission standards in major markets are key forces that will encourage growth in EV manufacturing and sales in the 2020s.

EV sales in key markets continued to rise in the first three quarters of 2019 in comparison to a year earlier—but at a slower pace than in 2018. Notably, sales in mainland China have been falling year-on-year since July 2019 after a cut in subsidies took full effect. Full-year 2019 data is not yet available, yet year-on-year declines in mainland China's EV sales in October and November 2019 suggest that the growth rate of EV sales slowed significantly for the full year 2019.

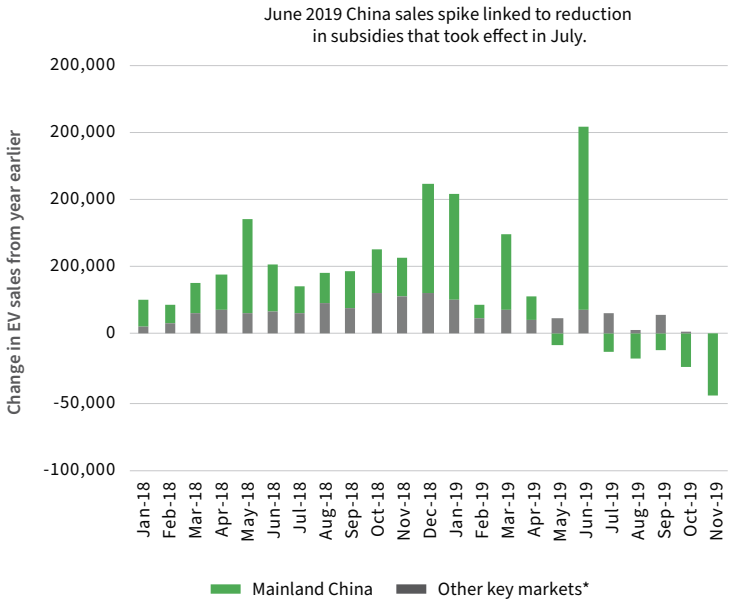
The year 2020 has started with a serious headwind from the impact of the coronavirus on sales in China. It is too early to fully evaluate the impact on sales and the EV supply chain. However, despite these short-term challenges, global conditions still point to long-term sales growth for EVs. Mainland China's manufacturing quotas along with rising fuel economy and emission standards in major markets are key forces that will encourage growth in EV manufacturing and sales in the 2020s.

In Europe, stricter CO2 emission limits and extended subsidies in several key markets will push sales of EVs higher. In the United States, buyers of EVs from many automakers can receive up to a $7,500 federal tax credit (although not models from Tesla and General Motors, since these automakers have reached the maximum number of vehicles that can qualify for this incentive). With the unwinding of federal incentives for some EVs, state subsidies for EVs—recently scaled back in California and extended in Massachusetts and Delaware—could play a larger role in some cases.

Jim Burkhard Vice President, Oil Markets, Energy & Mobility

Jim is responsible for the development and coordination of research for global and regional crude oil markets and scenarios. Jim also leads research into how changes in the automotive ecosystem are impacting the future of the energy, automotive, and chemical industries.

Y/Y CHANGE IN EV SALES IN MAINLAND CHINA AND OTHER KEY MARKETS



*Other key markets are the United States, Germany, 7 other European markets, and India. Data for November is China only. *NEVs include BEVs, PHEVs, and fuel-cell electric vehicles.

Measuring, reporting, and reducing GHG emissions will increasingly be the focus of the oil industry in 2020.

KEY TAKEAWAYS

- Oil companies are taking direct steps to reduce the GHG (greenhouse gas) intensity of their businesses, including shifting portfolios toward gas and less GHG intense resources, building up low-carbon business lines, and reducing emissions associated with core operations.
- They are also increasing their levels of disclosure and considering taking a more holistic approach to understanding GHG emissions that occur over the life and use of oil and gas (known as life-cycle GHG analysis).

Governments, investors and other stakeholders are growing increasingly focused on understanding the implications of the energy transition on the competitiveness of the oil and gas industry. Greenhouse gas (GHG) emissions intensity, or emissions per unit of output, has consequently become a key metric of interest.

Oil companies are responding by increasing their levels of disclosure and considering taking a more holistic approach to understanding GHG emissions that occur over the life and use of oil and gas (known as life-cycle GHG analysis). A growing number of third-party estimates, including those of IHS Markit, are proving helpful in advancing these efforts, especially as subtle differences in methodology and scope of emissions continue to pose challenges to comparability that can lead to confusion.

In the meantime, oil companies are also taking direct steps to reduce the GHG intensity of their operations, including shifting asset portfolios toward gas and less GHG intensive resources, and building up their low-carbon business lines. One area that is attracting especially heightened attention, and where company actions can deliver some of the most immediate and tangible results, is reducing GHG emissions associated with core oil and gas operations. Such technology-related efforts include:

- Improving detection and mitigation of unintended methane releases
- Switching to lower carbon power sources (e.g., field-based solar and wind)
- Raising energy and operating efficiencies

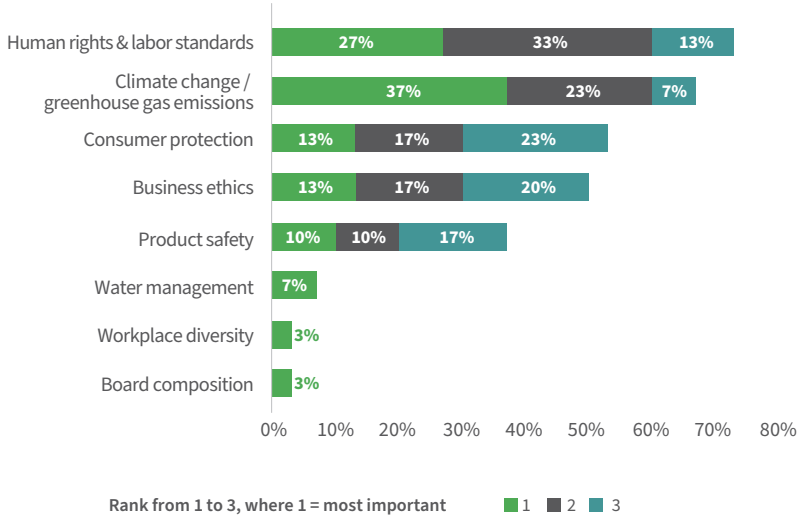
Kevin Birn Vice President, North American Crude Oil Markets

Kevin leads IHS Markit's Canadian crude oil market research, and the oil market's emerging greenhouse gas accounting and estimation capability.

Judson Jacobs Managing Director, Upstream

Judson leads IHS Markit's O&G technology practice, studying the tactical applications and strategic implications of oilfield and digital technologies.

FIRMS AND CURRENT INVESTOR BASE



Source: Mergemarket for IHS Markit

2020 is set to be a critical year for the aviation industry as it seeks solutions for carbon-neutral growth.

KEY TAKEAWAYS

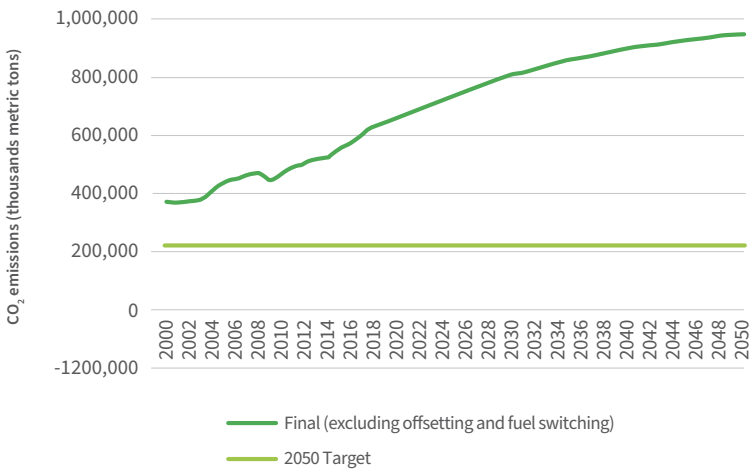
- 2020 will be a critical year for the aviation industry as it seeks to set a baseline for carbon-neutral growth in the challenging context of a rapidly growing industry and with limited decarbonization alternatives on the table. From 2021 onwards airlines will have to pay to offset any emissions above 2020 levels.
- Offsetting could become more than a stopgap measure since battery and fuel-cell technologies are not advancing fast enough to be a viable technical option, and low carbon sustainable aviation fuels will not be competitive in the near future.

At the moment, aviation is facing an acute decarbonization challenge with limited available solutions. The recent IHS Markit Reinventing the Aircraft and the Ship study foresees demand for international aviation increasing fourfold between 2005 and 2050. At the same time, the industry has set aspirational targets to achieve carbon-neutral growth from 2020, and reduce global CO2 emissions from international aviation by 50% in 2050 relative to 2005 levels.

The coronavirus could deliver a hit to global jet fuel demand in 2020, exacerbating the challenge of achieving carbon-neutral growth in coming years .Even before the outbreak of the coronavirus, achieving carbon-neutral growth in a rapidly growing industry appeared challenging. lWith demand for air travel potentially taking a massive hit in 2020, the baseline industry emissions are likely to be lower than previously expected, resulting in a bigger challenge for airlines as they seek to tackle future growth in emissions, and throwing into doubt the participation of some key nations.

With limited options on the table, will buying carbon credits to offset emissions need to be more than a stopgap measure? Battery and fuel-cell technology will advance too slowly to deliver a range competitive with liquid fuels for large commercial aircraft. And although low carbon– intensity sustainable aviation fuels can be part of a long-term decarbonization strategy, they are likely to be more expensive than conventional jet fuel for some time to come. As a result, offsetting will need to be deployed (possibly for the foreseeable future) to move the industry toward its targets.

CO_2 EMMISIONS FROM INTERNATIONAL AVIATION–RIVALRY (EXCLUDING FUEL SWITCHING AND OFFSETTING)



Note: Carbon intensity of 3,0067 metric tons of CO_2/metric tons of oil equivalent has been used for conventional jet fuel. 2050 target refers to IARA's aspirational goal to reduce CO_2 emissions from international aviation by 50% in 2050 relative to 2005 levels.

Source: IHS Markit ©2020 IHS Markit

Daniel Evans Vice President, Refining and Marketing

Daniel Evans, leads IHS Markit's Global Refining and Marketing research. This team is responsible for IHS Markit's global and regional short-term refined product supply, demand, price and margin outlooks, detailed downstream market research, and also contributes to IHS Markit's long-term supply, demand price and margin forecasts. Daniel has been involved in much of IHS Markit's work on the future of energy and mobility, and lead studies focused on the future of trucking, aviation and shipping.

Oil and gas company investment activity in the low-carbon space will continue to grow, advancing the sector's energy transition.

KEY TAKEAWAYS

- Oil and gas company M&A and venture investment activity in cleantech was at a record high in 2019. This trend will continue as the firms leverage these tools to acquire the technologies and capabilities enabling new low-carbon business lines for the Energy Transition.
- While recent M&A (Lundin's wind acquisition from OX2) and venture (Total's investment in Scoop) activity exemplify this trend, individual company activity will be driven by the particular strategy of the firm.

As the oil and gas industry charts its path for the Energy Transition, this sector has accelerated its interest in the low-carbon space in recent years. IHS Markit expects this trend to continue, with over $10 billion in aggregate spending in the low-carbon sector among the Majors by 2025 (vs. $6 billion in 2018). Two instruments of interest are M&A and venture investments, as these tools lay the foundation of low-carbon business lines and provide an important means for oil and gas firms to quickly establish a presence outside their core areas of oil and gas.

Investment activity spans the full low-carbon value chain—from renewable energy generation to mobility to energy efficiency. In 2019, solar generation saw the most M&A activity (17 deals), while mobility comprised the majority of venture activity (16 deals) among oil and gas companies. Areas of investment for the sector will remain focused on renewable generation and new mobility, as these areas build on existing capabilities of the oil and gas industry. For example, companies are leveraging their expertise in building and managing offshore oil platforms to develop offshore wind power. Similarly, the retail service station footprint of integrated oil companies provides a foothold to the mobility space through vehicle charging infrastructure and digital enabled mobility service platforms.

While activity to date has been centered on the European integrated oil and gas companies, a broadening array of oil and gas companies has become active in this space with more recent participation spanning North American independents, international E&Ps, national oil companies, and the services sector as the entire industry rises to meet the challenge of the Energy Transition. IHS Markit envisions increasingly broad participation in this space going forward.

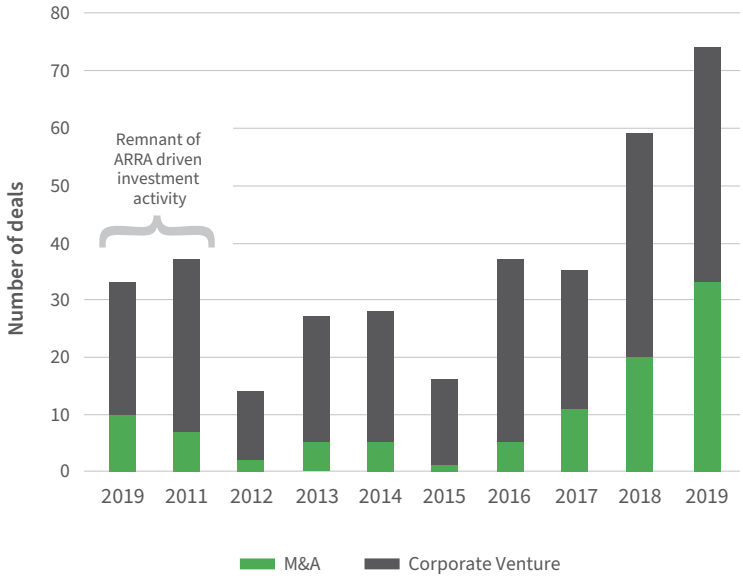
Chris DeLucia, CFA Associate Director, Companies & Transactions

Chris focuses on the strategic and competitive dynamics within the upstream oil and gas segment. He manages the Upstream Competition Service, where he oversees the research and analysis pertaining to upstream portfolio positioning of IOCs.

Carolyn Seto Director, Upstream Technology & Innovation

Carolyn investigates the strategic implications of the role of technology in the energy sector. She focuses on how companies incubate and extract value from emerging technologies to achieve their long term ambitions.

M&A AND CORPORATE VENTURE ACTIVITY IN THE LOW-CARBON SEGMENT BY OIL AND GAS COMPANIES



Notes: M&A includes acqusitions, direct investments, and joint ventures. Corporate venture investments include activity from 26 oil and gas corporate venture capital firms. ARRA = 2009 American Recovery and Reinvestment Act. Source: IHS Markit

CO_2 removal technologies will play an increasingly important role to remove emissions from atmosphere.

KEY TAKEAWAYS

- A wide spectrum of CO_2 removal (CDR) technologies at various stages of maturity and deployment will play increasingly important role to capture emissions.
- Large oil/gas companies are well suited to scale up these technologies due to their complexity, large scale, capital required and need for cross industry collaboration.

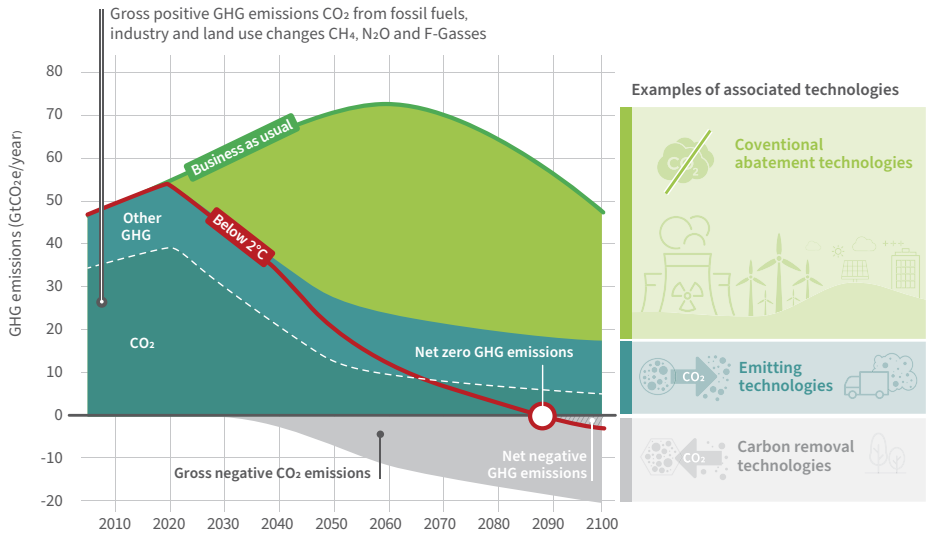
Carbon Capture Use and Storage has been deployed successful by oil and gas companies for decades to increase oil recover; it now needs to be deployed at much larger scale globally to capture and store CO_2 before it is emitted into the atmosphere

There are many CDR technologies in different stages of development, costs and scalability: using plants and soil to absorb carbon, bioenergy with carbon capture and storage, carbon mineralization and direct air capture. These technologies will be essential for abatement of hard to decarbonize sectors: fertilizer, cement and steel and for capturing emissions from coal fired power stations.

Some of the biggest challenges for deployment include lack of financial incentives (e.g., carbon price), funding of large-scale demonstration projects, public acceptance and lack of regulatory frameworks.

Large oil and gas companies are likely to play a significant role in deployment of these technologies.

GHG EMISSIONS AND CO_2 REMOVAL TECHNOLOGIES



Source: © Credit UNEP 2017

Atul Arya, Ph.D. Chief Energy Strategist

Atul has international leadership experience in a diverse array of energy fields spanning strategy development, business planning, field operations and technology commercialization. His experience includes leadership in solar energy development as well as oil and gas.

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About IHS Markit

IHS Markit (NYSE: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 80 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit iscommitted to sustainable, profitable growth.