

If climate change is everybody's business, how can all benefit from green leadership by the few?

Large national gaps in access to green capital, technology and knowledge must shrink to enable a global transition to a sustainable future

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Introduction

All countries must transition to green energy, transport and manufacturing systems. Yet green technology, infrastructure and finance are not equitably distributed around the world. This situation – as well as the continued investment in high-carbon sectors – threatens the global effort to achieve the Paris goals.

The inequitable distribution of green technology and finance will give rise to economic and public policy issues worldwide. It also represents the squandering of an immense opportunity to see all countries move toward high-employment, low-carbon futures in which domestic markets can support sustainability rather than risk being stranded.

Accelerating investment in countries that require finance to innovate and transition can provide huge carbon savings as well as financial returns. The International Finance Corporation estimates that the green transition represents an investment opportunity worth about US\$23t between 2016 and 2030.¹ As part of this, The International Energy Agency (IEA) says investment in energy systems has risen in 2021 to US\$820b, with renewables dominating growth.² This figure still needs to triple by 2030 to align with the target of net zero emissions by 2050.

All stakeholders – governments, businesses and financial institutions – need to drive this acceleration by creating investable markets, unlocking funding and stepping up their ambitions to innovate in transition-crucial technologies while scaling manufacturing and distribution. Addressing the “green power gap” that has emerged is a central challenge for COP26 and a huge opportunity for businesses.

Creating financial value from sustainability

EY analysis suggests that future global renewable energy development will require US\$5.2t more investment by 2050, in addition to the US\$7.7t currently committed, to meet current IEA scenarios. The shortfall must be made up through increased activity in leading economies and increased participation by other countries.

Beyond mature energy technologies, like solar and wind, countries will have to explore the potential of biofuels, nuclear power and carbon capture to meet decarbonization goals. Energy systems are just one part of a global transition, which also requires transport, food production, consumer goods, manufacturing and much more to undergo decarbonization on a massive scale. These transformations must be financed to the point where the price of low-carbon alternatives is brought in line with the rest of the market. This change will drive consumers toward sustainability and encourage future investment and lending.

This article investigates whether the distribution of innovation and investment is optimal and whether the right incentives are in place to increase both supply and demand for green capital. It also sets out how countries can drive change and unlock green money flows by outlining:

- The situation: how a few leading countries are driving investment and innovation while other countries are following far behind.
- The complication: the threats to global progress on transitioning to a green economy presented by lack of finance and continued investment in high-carbon markets.
- The proposal: how policymakers, business and financial services can partner to accelerate green money flows and deliver an economically sustainable transition.

These opportunities should not be missed, and policymakers need to consider how to position their economies to access their share of this capital. As the most recent findings of the Intergovernmental Panel on Climate Changes (IPCC) have shown,³ the opportunity to avert catastrophe must be seized now. Not just by a handful of mature green countries, but by them all.



Chapter 1

The situation

A few global leaders are driving change through innovation and attracting the majority of green money flows.

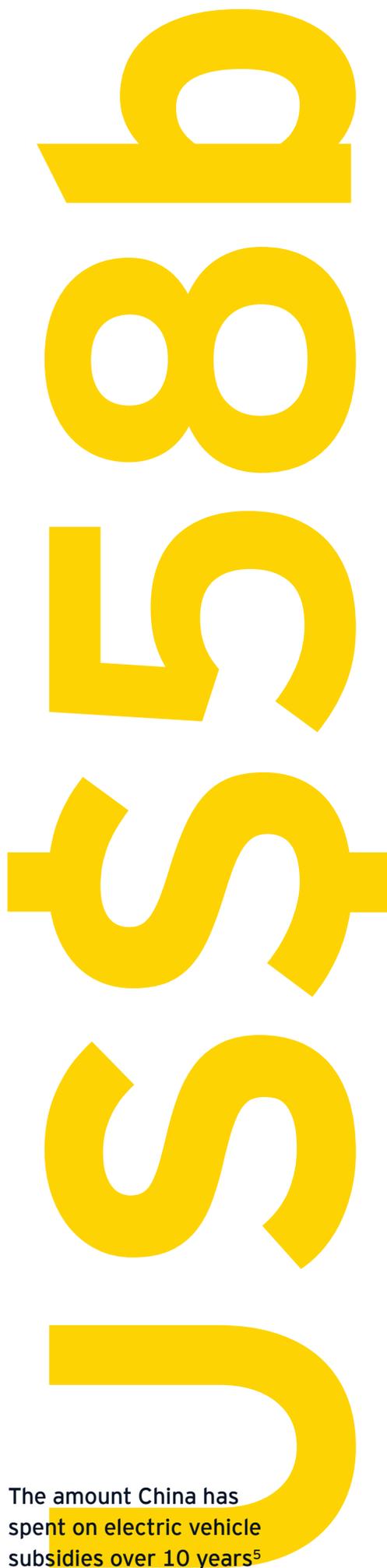


The EY Renewable Country Attractiveness Index (RECAI) has highlighted the competitiveness of a handful of leading nations when it comes to the maturity and potential of their renewable energy sectors. This group, with the most attractive markets and deployment opportunities, is positioned to maintain its lead and possibly to accelerate investment and innovation in renewable energy as well as other green technologies.

In this chapter, we explore the lead these countries hold by considering:

- ▶ The distribution of climate-related research and its impact
- ▶ The distribution of early-stage venture capital in renewable energy, sustainable transport and the many immature technologies that will be crucial to reaching net zero
- ▶ Public funding commitments into key areas of the transition
- ▶ The level of patentable innovation in green technologies produced by countries around the world

This distribution of intellectual and venture capital is only part of the story. Funding is also required to deliver fundamental sustainability improvements through the deployment of existing technologies around the world. Nevertheless, it helps to develop a picture of the global landscape that will determine green money flows and is vital to understanding their distribution and impact.



The amount China has spent on electric vehicle subsidies over 10 years⁵

US and China: green innovation 'superpowers'

The United States and China are the world's biggest green technology markets and have committed to cooperate on "concrete actions to reduce emissions aimed at keeping the Paris Agreement-aligned temperature limit within reach."⁴ They are also driving the global market for electric vehicles (EVs).

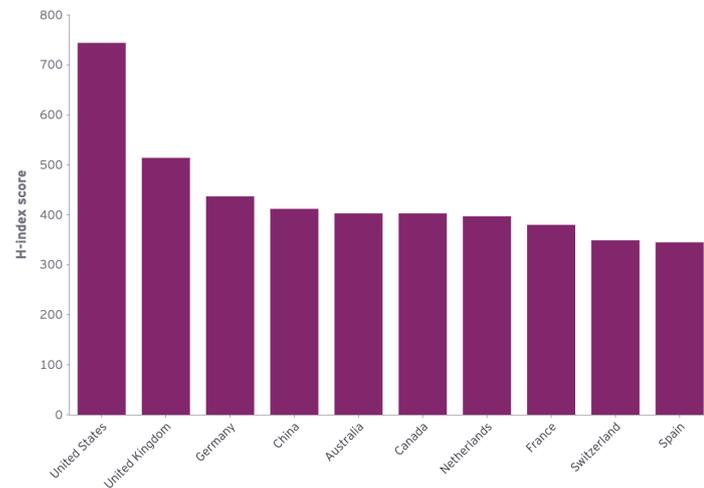
Other countries will also be hugely influential in shaping the global transition to a more carbon-constrained future. EY analysis has spotlighted a number of them (India, the United Kingdom, Germany and France) to examine where green money is flowing and why.

The US produces leading research on sustainability

A leading indicator of US advances in environmental science and climate-related technology is its active academic community. In terms of volume, China published close to 75,000 documents in 2020, almost twice as many as the US. But US research was the most impactful, followed by the UK, Germany, China and Australia.

US research is most impactful, based on H-index scores

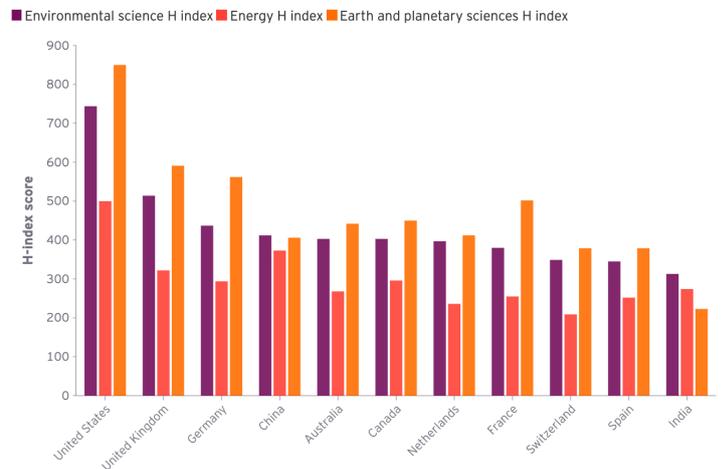
When measuring the citation influence of publications, environmental science research in the US scores most highly



Source: Scimago Journal & Country Rank Index

Research impact varies by country and sector

When measuring the citation influence of publications, research from the US scores most highly

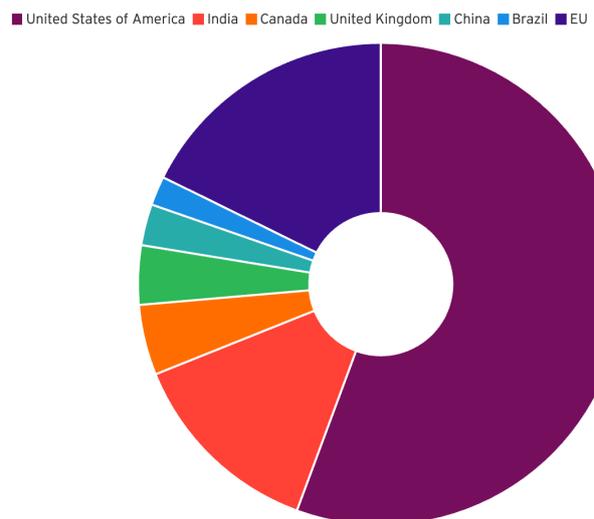


Source: Scimago Journal & Country Rank Index

The US has a massive venture capital ecosystem financing renewable energy and electric vehicles

In terms of enterprise investment, EY analysis shows that the US holds a significant advantage over other economies when it comes to renewable energy enterprises, including early-stage ventures.

US companies have attracted more than half of the venture capital seeking 'green' energy opportunities



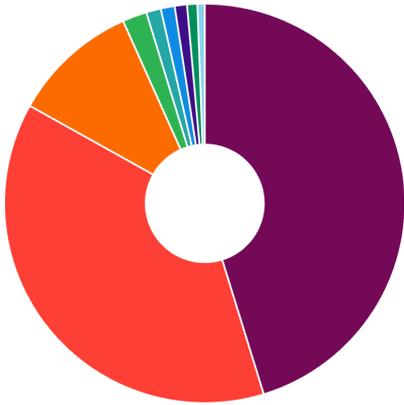
Source: EY, Crunchbase • *2010 to Present.

China leads in installed capacity for renewables and material supply for sustainable transport

China has spent more than US\$58b on electric vehicle subsidies over 10 years,⁵ creating capacity to produce half the world's EVs,⁶ and attracting a large proportion of early-stage venture funding in that sector.

Chinese and US companies dominate the market for early-stage venture capital in both electric vehicles and advanced battery technology

United States of America China Mainland EU United Kingdom India Canada Taiwan Israel Japan



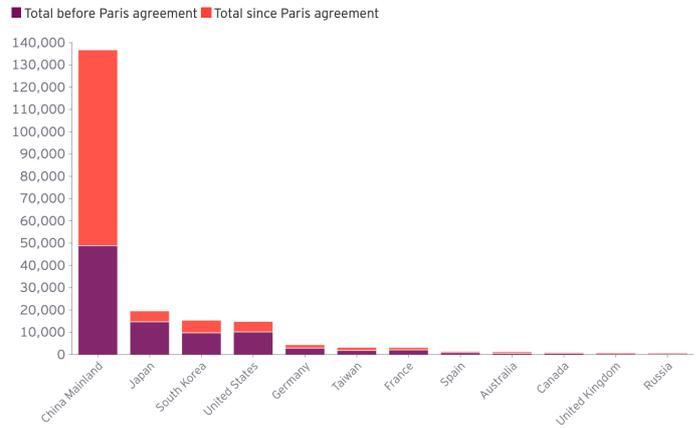
Source: EY, Crunchbase

The geographical concentration of the EV market is clear. Electric car registrations grew by 41% in 2020, with the EU, US and China by far the largest markets, according to the most recent IEA Global EV Outlook, (although electric vehicles still only account for 2.6% of global car sales annually).⁷

Since the 2015 Paris Agreement, China has increased its innovation in electric vehicles and associated battery technologies. EY analysis shows its dominance in related patents (all classified as inventions related to electric vehicles and advancements in battery technology). Coupled with China's leadership in material supply chains, the country's influence over global EV supply is significant.

Total number of patents granted for 'electric vehicles' and 'battery' innovations, by market

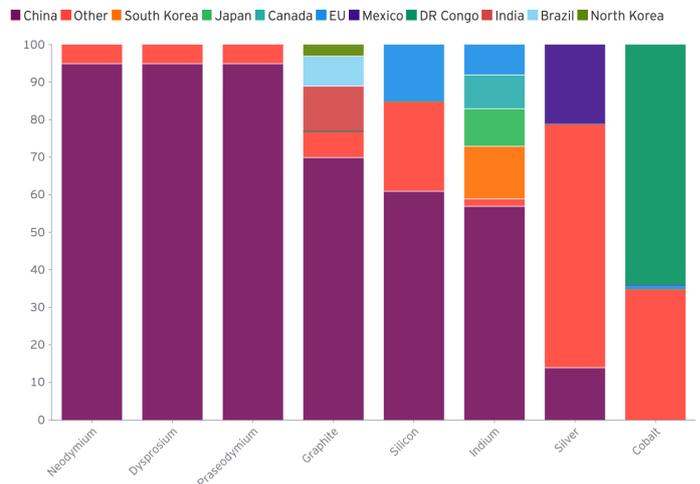
China Mainland has been granted more patents for EV and batteries than the rest of the world combined, most of them since the 2015 Paris agreement



Source: EY, Google Patents Public Data

Along with innovation, raw materials are a key determinant of leadership in green energy and transport technologies. China supplies a large amount of the world's demand for key green technology materials.⁸

Most of the world's materials for crucial green technology manufacture are supplied by China



Source: European Commission

Although underrepresented in early-stage enterprise investment, overall green finance in China reached an annual average of US\$320b in 2018, led by public actors such as central state-owned enterprises and major state-owned banks.

China's first National Green Development Fund, launched in July 2020, has raised more than US\$12b in its first phase.⁹ Chinese spending on research and development has outpaced the US, climbing 10.3% to 2.44t yuan (US\$378b) in 2020, according to China's National Bureau of Statistics.¹⁰

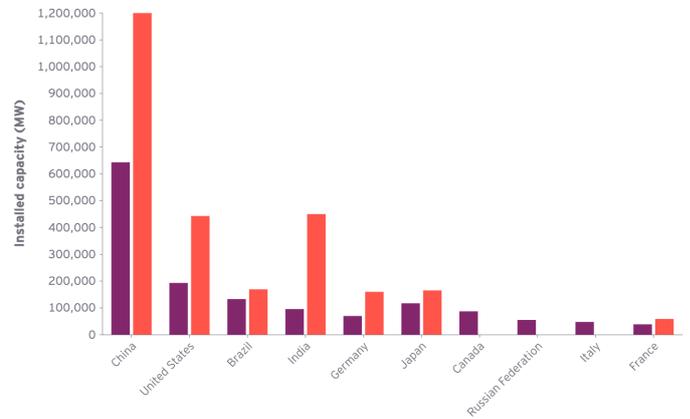
42%

The amount of China's total renewable energy capacity

China, India and the US have the most ambitious 2030 aims for increased renewable capacity

This includes capacity for wind, solar, bioenergy and hydropower

■ Installed capacity in 2021 (MW) ■ Forecast for installed capacity in 2030 (MW)



Source: IRENA • Some forecast data not available.

Renewables now make up 42% of China's total energy generating capacity. China's use of feed-in tariffs to promote the installation of distributed solar power generation, and focused subsidies to promote offshore wind, has led to these significant increases (the country already accounts for 32% of global capacity for generating renewable energy).¹¹

Other leading nations

- ▶ **India** has ambitious goals for attracting green investment. Between 2016 and 2018, green investments outpaced India's GDP growth - as tracked investments in green infrastructure grew at 24%, while GDP rose by 7.2%. In the same period, energy investments in India grew at the fastest rate in the world.¹² Indian renewable energy groups have attracted billions of dollars in investment since 2019. India is expected to set new records for renewables expansion in 2021 and 2022 according to the IEA.¹³
- ▶ The **United Kingdom** couples research capability with plans for offshore wind and other renewables. In 2019, the UK enshrined its 2050 net zero target in law. The UK's position as an academic leader on climate science is also clear. Many of the world's leading climate advisers and scientists are associated with UK-based organizations, and UK publications rank second in terms of influence. All major retail banks in the UK offer green loan programs, and 500 investors have committed to the UN's Principles of Responsible Investment. The UK Centre for Greening Finance & Investment - a national center committed to integrating climate and environmental analysis into financial outlooks - will launch in 2021.
- ▶ **France** targets hybrid and electric vehicles alongside subsidies for renewables. France is looking to increase the attractiveness of investment opportunities in green energy and boost support for renewable energy by 25% by the end of 2021. Planned injections of €6b into diversification of France's energy mix are aimed at boosting renewable energy capacity to 113GW by 2028 (up from 48.6GW in 2018), with offshore wind the dominant renewable source at 34.7GW. France is also decommissioning its older nuclear reactor fleet and replacing some of that capacity with hydroelectricity, which is currently the country's main source of renewable energy.
- ▶ **Germany** is leading Europe on smart grids. Germany's spending on its Energy and Climate Fund (EKF) was expected to triple in 2021 to nearly €27b (though in 2022, spending on the EKF should fall to about €25b and then €21b in the following two years). Germany will also raise its contribution for international climate financing from €4b to €6b annually by 2025. Germany leads the EU in terms of smart grid development, including efficient grid linkages with the rest of the continent, which the country's Federal Ministry of Economic Affairs and Energy says is vital to handle the inherent volatility of renewable energy supply.



If green money flows continue at their current rate and distribution pattern, we risk missing climate change goals, leaving the world vulnerable to warming of more than 1.5 degrees above pre-industrial levels.

These leaders still need to accelerate, with government, business and financial institutions all playing a role

The factors driving the development of the green economies described above include research and development, a relatively high volume of enterprise investment, existing industrial infrastructure and targeted policies to promote the continued growth of investable markets.

The green “superpowers” and other leading developed countries now need to show they can accelerate their own transitions as well as meet their commitment to provide an additional annual US\$5.8b of international climate finance (a commitment that was made between 2016 and 2020), and to collaborate with the developing world in line with the Mission Innovation 2.0 statement.¹⁴

The acceleration of green money flows by both government and institutional investors is a huge opportunity for business if a sufficient number of investable projects can be started, and the financial services ecosystem can adapt to the new demands of funding the global transition.

If green money flows continue at their current rate and distribution pattern, we risk missing climate change goals, leaving the world vulnerable to warming of more than 1.5 degrees above pre-industrial levels.





Chapter 2

The complication

More investment and innovation are needed. Accelerating the global transition will require all economies to take part.

Articles 6 and 9 of the Paris Agreement established a framework for voluntary cooperation between countries via carbon markets and the provision of financial resources to assist developing countries. But sufficient resources have yet to materialize. The Cancún Agreements, which emerged from COP16 in Mexico in 2010, committed developed countries to the UN goal of jointly mobilizing US\$100b a year in international climate finance by 2020 to address the needs of developing countries. This commitment has not been met, with only US\$79.6b mobilized in 2019.

Addressing the global imbalance of green energy investment

Some countries are transitioning, but others have not made much progress in replacing the “brown” with the “green.” The World Economic Forum’s latest Energy Transition Index (ETI) ranks Sweden, Norway and Denmark most highly. The rest of the top 10 is made up of Western European countries and New Zealand. Developing countries are consistently ranked much lower.¹⁵

As we have seen with the development and distribution of vaccines for COVID-19, the inequity of productive capacity and expertise has left many people without the access they need. The current over-reliance on fossil fuels of many of the world’s developing countries constitutes a strong case for more rapid distribution of green finance to drive transition at scale.

What is ETI?

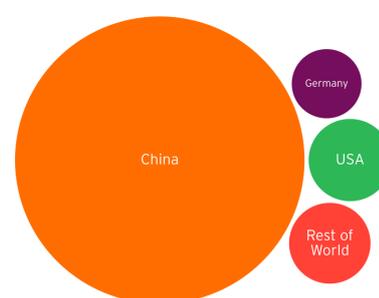
The ETI ranks 115 countries on energy performance, including resilience and efficiency of generation and transmission, and progress to cleaner forms of energy. It measures transition success, although it shows that all countries have a considerable way to go.

Leaders and followers must work to close the gap

A few leading countries within the G20 are set to continue driving innovation in renewable energy technologies – building on their existing capabilities.

A few countries in the G20 have been granted the vast majority of patents for renewable energy technologies and control the main sources of innovation

China's control of patents is proportional to its lead in installed capacity for renewable energy



Source: EY, [Google Patents Public Data](#)

Other nations outside the G20 will be net importers of this green technology and may also face capital deficits that constrain their investment and transition. Specific industry sectors also face a “burning platform” of limited capital and shifting consumer preferences, leaving infrastructure and jobs stranded. If developing countries cannot license, import and scale green technology at a viable price, the incentive to extract and use fossil fuels will remain.

Countries most likely to face these problems are current oil and gas exporters, such as Russia, Libya, Iraq, DR Congo, Angola and South Sudan. Others, like Norway and Nigeria, are more likely to import green technology but may also continue to exploit their reserves of fossil fuel resources and reduced energy import bills in the long term, according to the International Renewable Energy Agency (IRENA).¹⁶

The Paris Agreement has not ensured the necessary transfer of capital and technical assistance to improve this complicated issue. Investment in local mitigation and adaptation must accelerate and developing countries will need more help to

transition successfully. More than 100 developing countries called for international support for technology development and transfer to reach their nationally determined contributions (NDCs), with nearly a third mentioning climate technology specifically.¹⁷

Investment in renewable energy reached US\$322b in 2018 and continues to rise, according to IRENA.¹⁸ However, it still falls well short of the level required to meet global climate goals. The investment gap between the developed and developing world in terms of renewable energy is vast. G20 countries invest almost 50 times more than the rest of the world at the enterprise (earlier) stage in renewable energy. However, the energy outlook for emerging economies in Asia and sub-Saharan Africa predicts dramatic rises in renewable energy generation.¹⁹

Tackling the 'managed decline' of carbon

A range of other factors may be stifling flows of green money: poor incentives in terms of risk and reward, insufficient infrastructure, poor governance and lack of coordination. Another factor is the continued attractiveness of fossil fuel as a financial opportunity.

Despite commitments to decarbonize, G20 governments have continued to finance fossil fuel projects. According to Energy Monitor, more than three-quarters of G20 export credit and development finance between 2013 and 2019 was directed toward fossil fuel projects.²⁰ A recent report by the Energy Policy Tracker found that major economies had continued to commit public money to fossil fuel-intensive sectors.²¹

Without boosting the attractiveness of green investment opportunities, this trend may continue. Financial institutions have a role to play in driving supply and demand for green financing, but they need the support of policy makers and regulators both on the demand side and to ensure the financing can be delivered at an acceptable rate of return.

It is time to set a course for a truly global transition

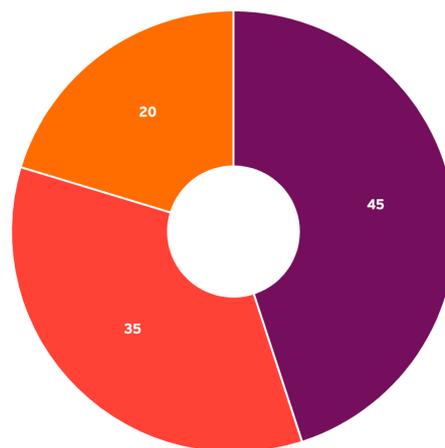
Climate finance flows still appear to be far below the level needed to achieve the Paris goals.²² There is also uncertainty over the mid- to long-term prospects of climate finance due to the ongoing COVID-19 pandemic. The challenge is clear, highlighted by the most recent predictions by the IEA and IPCC.

A host of factors can accelerate green money flows and help to rebalance the overconcentration of green capabilities within mature economies. So how can all countries unlock transition finance, increase innovation and play a part in the global race to net zero?

G20 countries have committed \$658b to energy systems since early 2020

The largest share has gone to fossil-fuel based systems including oil and gas

■ Fossil fuels ■ Clean energy ■ Other inc. nuclear



Source: [Energy Policy Tracker](#)



Chapter 3

The proposal

Public and private sector organizations must collaborate to deliver the innovation, investment and scale needed to meet the climate challenge.



1

Countries must collaborate and play to their strengths

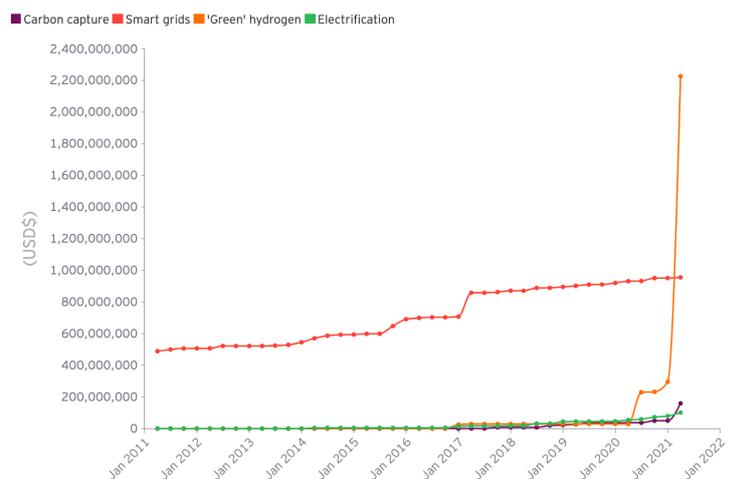
The climate challenge can only be overcome through partnership and collaboration at every level – international and national, public and private sector. The UN has overseen landmark binding international treaties on climate action such as the Paris Agreement; it must now work to deliver more operability and see that the targets are met. Multilateral development banks also have a role to play in monitoring and encouraging finance for adaptation and mitigation of climate change. The World Bank Group recorded its largest ever annual delivery of climate finance in 2020, channeling US\$21.4b into low-carbon infrastructure, mitigation of disaster risk and building green communities.

More needs to be done. We've identified five areas of focus that collectively can create the conditions to accelerate the transition to net zero across all countries.

There are many different stages to the development and implementation of vital green technologies. Based on their own resources and capabilities, policymakers should determine which parts of the value chain to focus on and how they should partner with other countries in ways that play to their collective strengths. That might be research and development for some, manufacturing and distribution for others. For the green “superpowers” and other developed countries, the approach should also include how they fund and enable the transfer of technology and capability to more developing economies.

Mature, market-ready technologies will only account for 25% of the total emissions reductions required to reach net zero worldwide. The IEA predicts that almost half the reductions needed to reach existing 2050 goals will need to come from technologies that are still immature.²³ Of the key technologies – advanced batteries, green hydrogen, and carbon capture – only green hydrogen has seen substantial enterprise investment in recent years.

The total level of venture capital funding for 'immature' climate technologies remains relatively low for carbon capture, smart grids and electrification*



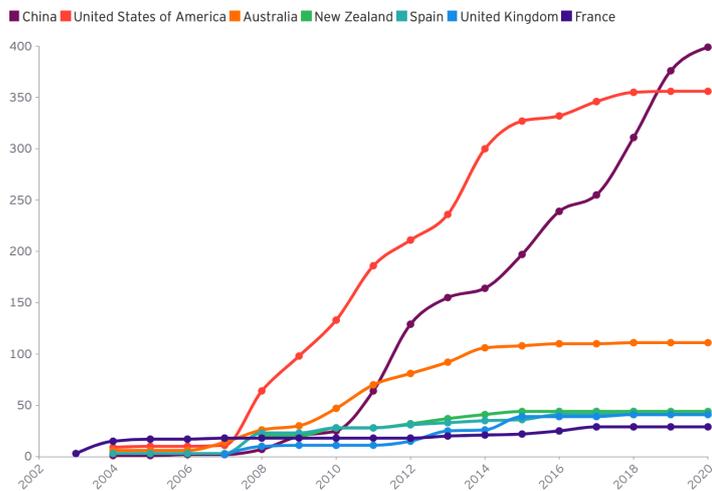
Source: EY, Crunchbase • *2010 to present

Key innovations now at the prototype or demonstration stage can be developed anywhere that has advanced research institutions. Countries with expertise in fuel-type technologies or electricals can specialize in “greening” and exporting these innovations. Governments can liaise with research institutions to determine how they contribute to this development, making subsidies or other forms of funding available where necessary.

Last year, energy companies from Denmark, Spain, Saudi Arabia, Australia, Italy and China joined forces to launch the Green Hydrogen Catapult project, which aims to halve costs of green fuel by increasing production fiftyfold to 25GW by 2026.²⁴ The project is expected to require US\$110b of investment and generate 120,000 jobs. Taking a different approach, three energy tech producers teamed up to invest €260m in a private infrastructure fund dedicated solely to delivering clean hydrogen infrastructure projects at scale. Its ambition is to raise a total of €1b from both financial and industrial investors.²⁵

There are two clear leaders in global carbon capture innovation

As measured by the number of granted patents for such technologies



Source: EY, Google Patents Public Data

Incremental improvements in existing clean energy and transport technologies like wind and solar power generation will be important for reaching net-zero by 2050. But the development of cross-cutting technologies that can be integrated into global energy systems is arguably more important. Carbon capture technologies are set to become more widespread soon, and while the US and China have established a significant footprint, Australian inventors have been granted several patents relevant to the technology.

The Climate Technology Centre and Network aims to provide developing countries with technical assistance, access to information and a network of experts to support collaboration. It was established before 2015 and had started work on its first projects by the time of the Paris Agreement. By the beginning of 2021, requests by developing countries for technical assistance had risen from 53 to 227, although less than US\$62m has been invested so far through the initiative.

All countries can better address climate change through collaboration at every stage of the value chain – funding research and development, adapting technologies to suit local markets and conditions, scaling production and accelerating distribution. COP26 is a moment for greater recognition of the shared responsibility of all governments to leverage their individual capabilities into a global transition.

2

Policymakers must work with business to create investable markets and stimulate the right types of entrepreneurship

It is crucial that all jurisdictions push to create investable markets to attract green money. A key challenge in the global transition is stimulating the market for investable projects in regions with extensive fossil fuel legacy infrastructure and growing domestic energy demand.

This step should involve “market enablement” strategies that remove barriers to investment, give green energy businesses access to the grid (where necessary), simplify planning regimes and allow private competition with state-owned operators. Government intervention to create alternative markets, break up monopolies and encourage entrepreneurship, as well as increase the inherent price of carbon, may also be necessary. To transition from fossil fuels, countries will need to use a variety of means to develop investable markets in a range of green technologies and systems. EY has identified several countries in which this is already taking place.

UK: crowdfunding renewable energy projects

In the UK, using crowdfunding to accelerate financing for small- and medium-scale renewable energy projects has proven effective. The Abundance Generation platform allows members of the public to invest in green projects that stand to benefit their communities and the planet. It has facilitated the investment of £116m (US\$158m) in investment in alternative energy and social impact ventures.

The UK has also announced £265m (US\$366m) for its biggest ever round of the contracts for difference (CfD) process, as it seeks to reach record extra renewable energy capacity. The scheme has been instrumental in driving investment in green energy, incentivizing investment by providing protection from volatile energy prices for developers of projects with high upfront costs. In August, the UK launched its hydrogen strategy, which will also use a CfD mechanism. The strategy will adopt a twin-track approach to support both zero-carbon green hydrogen and low-carbon blue hydrogen.

Denmark: incentivizing growth in wind and solar

Denmark is a world leader in wind and solar power generation. Most of its energy is now from renewable sources, and it aims for 100% renewable power before 2030. The use of premium tariffs to incentivize renewable generation has meant green providers are paid a variable bonus on top of the market price for their energy. In addition, these producers are not subject to a Public Service Obligation charge normally applied to electricity. This in turn encourages producers to expand their renewable capacity and de-risks their investments in renewable infrastructure.

Morocco: seeking energy independence

Morocco depends on imported energy and fossil fuels for 97% of its total energy use. The government's strategy to expand production of renewable energy to meet 50% of demand by 2030 means adding 1.5GW of capacity per year until then. To do this, the country needs to create an investable market for renewable energy, and to that end the Moroccan Solar Energy Program aims to develop five major solar power complexes. A consortium of foreign and multilateral investors has contributed US\$3b to fund projects operated as public-private partnerships. This approach has meant even risk-averse investors have been willing to syndicate finance and get projects off the ground.

3

Governments should support the shift from brown to green through both incentives and disincentives

G20 countries have committed US\$297b to fossil fuel production since early 2020 – a trend that could unfortunately be accompanied by a slowdown in investment in green energy investment.²⁶ To avoid such a trend, governments should look at how they use both incentives and disincentives across all aspects of society to support their net zero ambitions. As we outlined above, they need to encourage the private sector to scale up the production of mature green technologies. Governments must also nudge businesses across all sectors to make net zero commitments and consumers and citizens to change behaviors.

Policy options could include assessing new planning applications against greenhouse gas emissions targets, reviewing taxation policies, subsidizing home improvements and funding training programs and research grants. These policies can help to accelerate the shift to green innovation and investment. They can also reduce the cost of transition for those least able to afford it and mitigate the negative impact of transition on communities previously reliant on “brown” industries.

Helping businesses to improve their efficiency and drive down costs by taking advantage of green policy incentives is a straightforward way to boost innovation and investment - from start-up incubator programs to industry collaborations.

In Australia, the New South Wales (NSW) Government's renewable energy roadmap will target AUS\$32b (US\$32b) of new private investment in electricity infrastructure by 2030 to replace aging fossil infrastructure with a cleaner, more efficient system (including the development of renewable energy zones and energy storage projects). An Electricity Infrastructure Investment Safeguard will support it. Under the agreements, the government will offer an electricity price floor to projects that align with its strategy, ensuring the right investment signals are being sent to the market to build the right projects in the right places while also working to reduce the risk and cost of finance for the projects. The roadmap is expected to reduce electricity sector emissions by around half and turn NSW into one of the lowest cost regions in the developed world. Modeling undertaken by the NSW Government suggests that the plan would reduce retail electricity prices by an estimated 8%, compared to a scenario where no action is taken and would save around US\$12.4b in energy system costs. And it will support the creation of 6,300 new construction jobs, with a net gain of 23,600 jobs expected across the wider economy between 2032 and 2037.

By stimulating private investment and collaborating with businesses, government can also target secondary markets for green technology. By licensing proprietary technologies from innovators and specializing in the manufacture and distribution of those goods, some countries may be able to participate in the syndication of the huge number of electric vehicles, solar panels, turbines, batteries and circuits that will be needed.

4

Financial institutions must do more to support transition and green innovation

More funding needs to be directed toward green initiatives by the financial services sector. While current financing may be sufficient to satisfy current demand in some parts of the world, total funding requirements for the global transition will rise. Financial institutions have a role to play in promoting demand and facilitating the supply of green money through new green finance products. Working with governments and regulators, they can identify policy and regulatory changes to enable financial product and service innovation, simplify guidelines, harmonize taxonomies,²⁷ and track green money flows to ensure that transition needs are being met worldwide.

Reallocating capital to low-emission, resilient infrastructure is equally urgent. The financial sector needs to do more to integrate climate impact into investment decisions and to incentivize transparency and disclosure in financial markets.

The green bond market is by far the most developed example of financial services involvement in transition. Worldwide, green bonds worth a record US\$269.5b were issued in 2020, and new issues worth US\$400b-US\$450b are predicted for this year.²⁸ China is currently the world's second-largest green bond market after the United States, but its sales of green bonds exceeded those in the US in the first quarter of 2021.²⁹

The Association of British Insurers (ABI) recently announced its Climate Change Roadmap for the insurance and long-term savings industry.³⁰ The roadmap sets out a plan for making £900b (US\$1.2t) of investment available to businesses looking to meet net zero targets by 2035. This would amount to £60b (US\$82b) per year and could contribute up to a third of the UK's total finance requirement for reaching its national net zero target.

5

Businesses' net zero commitments can be a catalyst for change

Businesses are under increased pressure to develop their own net zero strategies and to demonstrate that their investment decisions, as well as their products and services, are both carbon-efficient and likely to help deliver sustainability goals. As more organizations make that commitment, and ideally accelerate plans in place already, they will stimulate demand for green energy, transport and manufacturing capabilities.

Investing in emerging green technologies may be one way in which they can both demonstrate commitment to reducing their own emissions and also enable nascent technologies to scale. They should also consider how they use green financing, such as sustainability-linked bonds, to fund at least part of their transition plans.

Businesses should help to stimulate consumer demand by prioritizing the development of sustainable products and services that offer an affordable alternative to current ones. EY research has shown consumers are keen to choose green, but cost remains a significant barrier. Companies may also need to partner with financial institutions to help their customers transition to green products and services. Consumers will require new financial products that support the sharing economy, where payment is based on usage rather than owning a product. Household will also need support to take on the initial costs of greening, such as retrofitting a house with more sustainable insulation and replacing fossil fuel heating systems.

What next?

Humanity has never faced a challenge like this. Climate change will have profound impacts on our ecosystems and economies, which makes it everybody's business. Those with the power also have the responsibility to seize the opportunity to create a better future and focus on long-term value.

To do this, our systems must adapt. We cannot reinvent all the world's economic systems, but the developed economies must do more to ensure affordable access for all to green technologies and capabilities. Markets can help to identify both conventional returns and the huge social and environmental gains to be had through investment in cleaner energy, infrastructure and transport. Businesses are best placed to deliver the vital technologies that must account for 50% of global emissions reductions by 2050. They can work with governments to provide expertise and insight for all transitioning sectors by forming mission-oriented partnerships. In most countries, the public sector is not equipped to take on this responsibility alone. Solutions will be delivered through joint efforts that leverage the expertise of both government and business.

Businesses, governments and citizens can work together toward global decarbonization through investment, taxation, subsidy and behavior change. Bringing the price of low-carbon alternatives in line with existing markets is crucial and will ultimately drive the world toward a more sustainable future.

The expectations of COP26 as a threshold moment in global action on climate change are daunting. So are the complications and obstacles. The hard work of making fundamental changes within business and society must accelerate now. The Paris Agreement is regarded as the most significant climate policy in history. Yet, it has not delivered sizeable changes for all countries, and time is running out. COP26 will reiterate the more ambitious target of limiting warming to 1.5°C above pre-industrial levels and emphasize that both mitigation and adaptation strategies are crucial in response to climate change.

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