The fact that GM has released an EV version of its Hummer SUV as a prelude to its announcement that it will be all-electric by 2035 flags up a decarbonisation blind spot shared by the entire automobile industry. As we report in the second of our series on the top 250 publicly traded greenhouse gas emitters, GM has pledged to invest $27bn on 30 EV models by 2025. And its competitors are not far behind: Ford has recently committed $22bn, and VW, which was on our top 25 list in January, is planning on spending a $80bn on rolling out EV models. Meanwhile Toyota, on this month’s list of the top 26-50 polluters, in December said it will produce an electric version of its RAV4 SUV.

As Signal Climate Analytics identified in research last year for Reuters, demand for bigger gas-guzzling SUVs and trucks is rising fast and having an outsized impact on greenhouse gas emissions: according to the IEA SUVs come second highest, behind the power sector, in terms of change in CO₂ emissions by source.

On top of the energy that will be consumed in producing EV versions of SUVs, there are vast amounts of resource-intensive metals like copper, lithium, aluminium and cobalt, whose mining is fraught with environmental and human rights risks.

Reducing transport emissions is very much a driving ambition for Bertrand Piccard, the charismatic Swiss aviator who circumnavigated the globe in his solar-powered light aircraft in 2016. The founder of the non-profit Solar Impulse Foundation talks to Oliver Balch about his 1000 Solutions challenge, which is seeking...
U.S. firms struggle to walk the talk on race equality

In his monthly Brand Watch column, Oliver Balch looks at the difficulties for brands hitting the right tone during Black History Month, given the critical lack of Black people in senior leadership roles on both sides of the Atlantic. He also reports on a spate of efforts to cut down on packaging waste, and rounds up the latest in net-zero commitment.

In ESG Watch, Mike Scott analyses the latest developments in sustainable finance, beginning with BlackRock CEO Larry Fink’s annual letter. This year’s missive ratchets up the pressure to integrate ESG in investment strategies, knocking on a door that is rapidly opening. Scott also reports on research into the extent to which countries are building back better, and how ESG investors are seeing progress in the energy transition.

Angeli Mehta assesses the global progress of carbon pricing in her Policy Watch column, reporting on developments in the European Union, the UK, U.S. and China, as well as Singapore, New Zealand and Australia. She also analyses significant news on biodiversity protection, the just transition, and efforts to take the heat out of the bitter row over vaccine nationalism.

Meanwhile, I dig into the latest climate plans from Shell and ExxonMobil and ask whether, despite being a different points in their journey, the oil majors are fundamentally the same in their commitment to fossil fuels.

There will be much more on the decarbonisation of transport emissions in the March issue of The Ethical Corporation, which will be published along with the next issue of The Sustainable Business Review next month.

I hope you enjoy the second issue of our new magazine.

Terry Slavin
terry.slavin@thomsonreuters.com
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With few Black CEOs, U.S. firms struggle to walk their talk on race equality

February is a difficult month for U.S. brands. Across the country, everyone from schools and civic associations to charities and government agencies are sharing positive messages about Black achievement. For U.S. brands, hitting the right tone during Black History Month is a tricky one, especially in light of last summer’s race riots. UberEats has said it will waive delivery fees for users ordering from black-owned restaurants. Some clothing brands, like Nike, GAP, Under Armour, are hawking limited-issue merch. Other retailers, like Target and Nordstrom, are using their platforms to spotlight their favourite Black-owned suppliers. So, are such actions meaningful or tokenistic?

Critics are not hard to find. A recent Washington Post opinion piece captures the ire felt by many. Under the headline, ‘I don’t need or want corporations celebrating Black History Month’, the author (a Black millennial) describes the celebratory brand messaging during...
these 28 days as “routine”, “empty” and “farcical”. There are two basic criticisms: the first is “show, don’t tell”; the second is what about the other 11 months of the year? Both are fair points. Brands struggle with the “show” piece because, frankly, there’s often not much to show. Black History Month has been running in the U.S. since 1976, yet the boardrooms of today’s Fortune 500 count only three Black CEOs, Marvin Ellison at Lowe’s, René Jones at M&T Bank and Ken Frazier at Merck. Though Frazier, who has been a leader in the U.S. business community on race issues, will be stepping down in June, Walgreens can be added to the list, as Starbucks’ number two Roz Brewer will take up the CEO reins next month.

It is neither a new problem (there have only been 19 Black CEOs in the Fortune 500 since 1955) nor one unique to the U.S. The UK, for example, which ran an inaugural Race Equality Week at the start of February (and holds its own Black History Month every October), has zero Black chief executives in the FTSE 100 at present. The same, incidentally, is true for chairpersons and chief financial officers. According to a new report by UK recruitment agency Green Park, ethnic minorities represent a mere 0.9% of those in the leadership pipeline, suggesting a change is unlikely any time soon.

Clearly, proactive policies to rebalance the situation are critical. In the case of gender diversity, legislation requiring companies to report their leadership stats has helped twist arms. Rules on race could do the same. As a starter, it would ensure brands have systems in place for tracking progress on ethnic diversity, an issue that half of major retailers, food service providers and food manufacturers identify as their “biggest problem”, according to recent research by consumer goods organisation IGD. Such failings point to a more systemic problem of weak governance. Last month’s decision by broadcaster Sky to establish a Diversity Advisory Council is welcome, for instance, but it raises questions over who had oversight of these issues beforehand.

So, should brands keep schtum until their own house is in perfect order? Obviously, making unsubstantiated claims is unwise (not to say unethical). But kicking off a conversation is part of the process of effecting change – and something that the marketing might of brands makes them uniquely placed to do. U.S. retailer Walmart has gone further than most with its pledge to invest $500m over five years to support pro-inclusion charities. Another is to have minority groups front public messaging, preferably from within the brand’s own workforce – an example of employing “cultural intelligence”, as U.S. diversity expert Cassandra Blackburn puts it. Facebook’s investment of $25m to encourage Black creators to support the Black community on its platforms is an example. TikTok’s Black “trailblazers” initiative emerges from a similar rationale.

What is true for race is true for other aspects of the inclusion agenda. The recently published Gender Diversity Index 2020, for instance, finds only 42 out of 668 large European, publicly owned corporations are headed by women. As for female board members, the proportion is still in single figures (9%) – far short of the 40% aspiration set by the European Commission way back in 2012. A similarly chequered trend is evident in LGBTQ+ issues, as evidenced by the immense variation between...
firms that participated in the most recent U.S.-based Corporate Equality Index (whose policies rate as 92% inclusive) and their peers who chose not to (26%).

WHITTLING DOWN ON WASTE
Think “packaging” and the words “hip” or “happening” hardly jump to mind. Yet, such is the pressure on brands to whittle down on waste that a mini revolution in wrapping is underway. Recent weeks have witnessed a spate of innovations, from Alibaba and Unilever deploying AI-enabled public recycling machines in China through to new 100% recyclable glass bottles for both Carlsberg Marston’s Brewing Company (also 100% biofuel) and Pernod Ricard’s 200-year-old Beefeater Gin brand.

Nigeria, which discharged around 200,000 tonnes of plastic waste into the ocean in 2018 (a figure that is projected to more than double by next year), is pledging to develop a national plastic action partnership in collaboration with the World Economic Forum, following moves already under way in Ghana, Indonesia and Vietnam. Meantime, UK retailer Tesco hit its target of removing one billion pieces of plastic, an achievement helped in part by its banning of plastic-wrapped multipacks. Going forward, Innovate UK, the government-led innovation accelerator, has promised to put £16m in the pot for smart, sustainable packaging solutions.

A recent study by the Chartered Institute of Marketing says 85% of British consumers believe brands have a packaging problem. Three of the biggest by volume, Coca-Cola, PepsiCo and Nestlé, have topped Greenpeace’s plastic pollution list each year since 2018. For its part, Coca-Cola has been making a huge play of its re-engineered, eco-friendly bottles over recent years. Only last week, the beverage giant said it would be trialling a new paper-based bottle in Europe. The move follows a decision in the U.S. to start rolling out 100% recycled bottles for selected brands. Greenpeace’s verdict? “Not … nearly enough.” The environmental campaign group wants Coca-Cola to set out a credible plan for discontinuing fossil fuel-based plastics across the board. Walmart is also in its sights. The U.S. supermarket chain is currently the subject of a legal complaint filed in California’s Superior Court by Greenpeace, which maintains that marketing its private-labelled plastic products as recyclable is “false, misleading, and likely to deceive members of the public”.

If the wrapping revolution is to progress (as well it must), then brands need to catch up with consumers and get smart. For starters, that means no more gimmicks. If your innovations deliver eco-benefit, then great – but get it audited and authenticated before plastering it on your products. Packaging manufacturer Amcor’s recent request to the Carbon Trust to validate its products with the trust’s low-carbon label is a case in point. (Note: it’s not just consumers on the look-out; regulators are clamping down on questionable claims as well).

Second, it means seeing the bigger picture. Zero-waste packaging is a systems-wide game. That requires guidelines everyone can get behind (see the Ellen MacArthur Foundation’s new circular economy policy goals) and standards they can stick to (like the newly-launched Plastic Waste Reduction Standard). Brand efforts to advance a waste-free ecosystem may not win headlines, but it’s where the revolution’s real battlelines lie. Take IBM. The U.S. tech services firm recently unveiled a free, cloud-based service, where data on key waste
issues – plastic use, collection, leakage, recycling – can be securely collated and openly shared.

NET-ZERO: IN VOGUE, BUT ON COURSE?
The spate of net-zero commitments is showing no signs of slowing. A quick look at the latest batch to make pledges or clarify their implementation strategies demonstrates a huge variety in approach and ambition. Bank of America, for instance, claims to already be “carbon-neutral” in its own operations, but to align itself more fully with the Paris Agreement (and reduce its current offset costs), it has released a series of interim 2030 targets, including purchasing 100% zero-carbon electricity by the end of the decade. Global accountancy firm EY, meanwhile, has promised to hit net-zero by 2025 (reducing its total emissions by 40% in the meantime). For its part, UK supermarket chain Sainsbury’s has given 2040 for its net-zero target date (for its scope 1 and 2 emissions). Last, but not least, oil giant Shell has tied itself to a 2050 deadline, with a strong preference for carbon capture and storage over reducing its consumption of fossil fuels (See Just how far apart are Shell and ExxonMobil on climate?)

Other emerging trends are the number of sector-based plans for a net-zero future emerging, with Europe’s aviation sector and the UK hospitality industry the latest in line. The net-zero agenda is also spreading its wings geographically, expanding from its strong base in Europe and North America to the likes of telecoms firm MTN in South Africa, Indian automaker Tata Motors (albeit on behalf of its UK subsidiary Jaguar Land Rover), and Singapore-based real estate conglomerate CDL. By October last year, the combined revenue of corporations with net-zero pledges in place had already exceeded half the U.S. gross domestic product.

The recent flurry is echoed in the Science Based Targets Initiative’s (SBTI) campaign, which reveals that “hundreds” of companies (current figure: 403) have so far committed to go net-zero through its Business Ambition for 1.5C campaign. Likewise, the UN-backed Race to Zero campaign is gathering momentum in its run-up to the UN climate summit in December, with (to date) 1,397 businesses and 74 large-scale investors signed up.

The momentum engendered by “net-zero” is welcome, but as we
reported in the December issue of The Ethical Corporation (See Giving nature its due place in the race), the whole agenda lingers in the realms of the Wild West at the moment. A critical reason is SBTi’s lack of guidance on corporate strategies for reducing scope 3 emissions (namely, the impact of their products during their use phase), which account for about 80% of most companies’ carbon footprint.

In a move towards clearer rules, SBTi currently has an open consultation to create a new global net-zero carbon standard. The hope is that that standard, which will include rules for offsets, will be ready in time for COP26 later this year.

The World Economic Forum (together with McKinsey) recently weighed into the debate over the role of offsets in net-zero strategies with a consultation of its own. In uncharacteristically direct terms, the influential multi-stakeholder body argues that it is time to “put differences aside” and engage in resolutions at a pragmatic level “instead of the persistent debates”. In an associated opinion piece, WEF points out that natural climate solutions now represent 40% of all carbon credits (up from 5% in 2010).

Microsoft, for instance, used its first ever combined sustainability report to reveal its increase in nature-based carbon credit purchases, a move facilitated by its partnership with carbon removal marketplace platform Puro.earth. Similarly, Ingka (IKEA’s retail arm) has recently invested in a substantial high-value forest in the U.S. state of Georgia, while (back in December) oil giant BP bought a majority stake in forest-based offset developer Finite Carbon.

Meanwhile, luxury fashion house Kering has invested an undisclosed amount in a Regenerative Fund for Nature to transform one million hectares of farmland by 2025. Similarly, Anglian Water revealed plans to invest £300m in river restoration projects and other nature-based schemes.

Net-zero may be in vogue right now but if it the above all reads like double Dutch, then a new online resource from energy consultancy BiU is well worth a peek. Equipped with a “net-zero calculator”, the free Project Net Zero website provides a tailored roadmap for companies that are new to the theme.
When the CEO of the world’s largest asset manager speaks, investors and the corporate world pay attention. BlackRock CEO Larry Fink’s annual letter to clients, and its counterpart to companies, have focused on sustainability and climate change for the past few years, but this year he stepped up a notch.

Fink called on companies to “have a well-articulated long-term strategy to address the energy transition”, including a net-zero compatible business plan, and in a separate letter to its clients, he said BlackRock would set an interim 2030 net-zero target later this year, and would sell out of companies that pose significant climate risk.

Civil society will be watching to see if the firm follows through.

But Fink’s consistent ratcheting up of pressure on companies to integrate environmental, social and governance (ESG) issues into their investment strategies is pushing on a door that is rapidly opening.

A survey from Navex Global says that 88% of public companies have ESG initiatives in place, as do 79% of venture capital and private equity-backed businesses and 67% of privately owned corporations. Almost two thirds of respondents (64%) increased their focus on ESG in 2020.

**THE GREEN RECOVERY**

This comes amid growing evidence that ESG analysis can improve financial performance. Research by New York University’s Stern Center for Sustainable Business and Rockefeller Asset Management, which looked at more than 1,000 research papers over the last five years, found that ESG funds offer better downside protection, especially during a social or economic crisis, and improved financial performance, which becomes more noticeable over time. But it adds that simply disclosing ESG issues without an accompanying ESG strategy does not improve performance.

Bloomberg reports that a record $490bn of green, social and sustainability bonds were issued last year, with another $347bn flowing into ESG-focused investment funds – also a record – while more than 700 new ESG-focused funds were launched to meet this demand. Ratings agency Moody’s expects 2021 to show even stronger growth, with sustainable debt markets set...
Governments are failing to harness the opportunity of combining economic recovery with sustainable growth.

to reach $650bn and the influx of cash into ESG funds showing no signs of abating.

One reason is the trillions of dollars and euros in green stimulus packages being crafted by the major economies to create jobs and cut carbon emissions, Moody’s added.

A new Greenness of Stimulus Index (GSI) by Vivid Economics, which analyses the G20 economies and 10 others, tells a different story. It concludes that “most governments have thus far failed to harness the opportunity of combining economic recovery with sustainable growth by investing in climate and biodiversity.”

According to Vivid, $4.6tn of $14.9tn in stimulus funding announced to date has supported “environmentally relevant” sectors such as agriculture, industry, waste, energy and transport, but only $1.8tn, less than 40%, of that investment has been “green”.

Nevertheless, recent improvements in Canada, China, India, the UK, and most importantly the U.S., where the election of Joe Biden has led to a sea-change in government attitudes to climate, “point to a fiscal and policy shift by a number of countries who are now beginning to rise to meet the climate and biodiversity challenge,” Vivid suggests.

INVESTORS STEP UP PRESSURE

Investors are continuing to innovate in their engagement strategies and the products they offer. Perhaps the most eye-catching announcement was Aviva’s unveiling of its Climate Engagement Escalation Programme, focused on its investments in 30 “systemically important carbon emitters” in the oil and gas, metals and mining, and utilities sectors.

The investment firm will require these companies “to deliver net-zero scope 3 emissions by 2050, and establish robust transition roadmaps to demonstrate their commitment to immediate action on climate change as the world’s carbon budget diminishes,” it said.

Aviva expects companies to
• Adopt a net-zero goal by 2050 (1.5-degree alignment)
• Commit to the Science Based Targets Initiative framework
• Integrate climate goals into business strategy, including capex framework
• Set short- and medium-term climate targets and milestones
• Align management incentives to climate goals
• Report on progress using the TCFD framework
• Prohibit direct and indirect lobbying deemed contrary to the company’s public climate commitment

Mirza Baig, global head of ESG research and stewardship at Aviva Investors said the insurer’s ESG philosophy promotes engagement
over divestment. “However, for our engagement approach to have impact, it must be accompanied by a robust escalation process, including the ultimate sanction of divestment.”

Meanwhile, the impacts of investor engagement with oil and gas companies continues to play out, with European companies such as BP, Shell and Equinor setting targets that include their scope 3 emissions – those from suppliers and the use of their products by customers – as a result of pressure from investor groups such as Climate Action 100+ and Follow This.

Mark van Baal, founder of Follow This, says an unprecedented number of shareholders voted for climate targets resolutions in 2020. This backing persuaded Paris-aligned targets that include their scope 3 emissions – those from suppliers and the use of their products by customers – as a result of pressure from investor groups such as Climate Action 100+ and Follow This.

Van Baal says Shell’s move adds to the pressure on U.S. oil and gas groups, which, with the exception of Occidental, still maintain that scope 3 is beyond their responsibility. “We have seen this attitude before in their European peers, and we know that with enough support from investors, this can change. We hope to bring about the same effect in the U.S.”

The time may be right, with S&P recently revising its industry risk assessment up from intermediate to moderately high risk. The ratings agency says that it “believes the energy transition, price volatility, and weaker profitability are increasing risks for oil and gas producers”.

At the same time, BloombergNEF reports that corporations purchased a record 23.7GW of clean energy in 2020, in sectors ranging from big tech to oil and gas.

And a new scheme, Climate Neutral Commodity, was launched to “measure and offset the carbon footprint of commodity transactions, and issue a new label through an independent third-party audited process”. The scheme comes as the commodity industry faces pressures from new environmental regulations and stakeholders to address its carbon impact and climate change.

All of these factors help to explain why, according to a recent DNV research report, a record two-thirds of the sector is actively adapting to a less carbon-intensive energy mix.

FINANCIAL SECTOR

The number of funds committing to net-zero continues to grow, with Scottish Widows announcing its entire £170bn portfolio will be net-zero by 2050 and the emissions associated with them will halve by 2030, the first major UK provider to do so.

Worldwide pension provider Smart Pensions signed up to the filmmaker Richard Curtis’s Make My Money Matter campaign, which commits it to becoming net-zero, meaning more than 13 million UK pensions have now committed to net-zero since Curtis’s campaign launched in 2020. However, a new analysis of UK pension investments says that 85% of pension assets have no meaningful commitments in place to reach net-zero, leaving a massive “green gap” of £2.17tn.

A report from French bank Société Générale on European insurers and reinsurers included, for the first time, a specific ESG weighting to its share valuations: it found that an insurer’s stance on underwriting coal investments can reduce its valuation by up to 3%, while those that avoid coal could see an increase in valuation of up to 9%.

ESG funds are more resilient during a social and economic crisis.

ESG WATCH

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ESG is driving growth in new products, too. Vector Innovation Fund launched a $300m “advanced technology-focused sub-fund for pandemic protection and wider global healthcare” while American Century Investments and Nomura Asset Management have launched...
an Advanced Medical Impact UCITS “focused on innovative healthcare companies creating positive social impact”.

**INDICES OF CHANGE**

There has also been a flurry of ESG product launches from index providers: S&P Dow Jones Indices debuted the S&P MidCap 400 ESG Index and the S&P SmallCap 600 ESG Index, which, combined with its existing S&P 500 ESG Index, form the S&P 1500 Composite covering 90% of U.S. market capitalisation.

The SIX Swiss Stock Exchange launched its first ESG indices for Switzerland’s bond and equity markets, and the Financial Times has returned to the index business, partnering with investment advisors Wilshire to develop ESG-focused indices.

Biodiversity continues to be an important theme for investors in 2021. The Dasgupta review on the Economics of Biodiversity, which was produced for the UK Treasury, highlights the damage that our economic system inflicts on the natural world and the ecosystem services that it provides, such as food, water, clean air and flood protection. (See ‘The UK’s Dasgupta Review shows how we can avoid financing our way to extinction’)

To safeguard them – and us – we need to radically change the way we produce, consume and finance goods and services, and we must fully account for the impacts of our interactions with the natural world, the review said.

And an UN-backed report, Rising Tide: Mapping Ocean Finance for a New Decade, outlines the transition required for financial institutions to create a sustainable blue economy, rebuild ocean prosperity and restore the ocean, which is facing “the triple crises of pollution, nature loss and climate change”.

The report covers five ocean sectors – seafood, ports, shipping, coastal and marine tourism, and marine renewable energy, setting out how private finance can accelerate a more sustainable ocean economy.
China’s national emissions trading market boosts global carbon pricing push

In her monthly column, Angeli Mehta rounds up key recent policy developments, from EU carbon border taxes to the rise of vaccine nationalism.

It is said that one of life’s only certainties is tax. Discussions on taxing carbon have reached a new intensity this year, with the EU set to propose carbon taxes on some imported goods, and the UK examining its options too.

There’s no single carbon price across the globe – individual bloc or country trading systems haven’t linked up as was hoped. Indeed, it’s a moot point as to whether the UK will link to the EU scheme that it has just left. Last week, it announced that when auctions of permits begin in the second quarter of this year, the minimum price will be £22 per tonne. This is still some way off prices in Europe’s ETS, which reached a record of more than €38 (£34) earlier this month.

The European Commission released the results of a consultation exercise on whether to introduce a carbon border tax on imports of carbon-intensive goods from countries that are not taking tough enough action on climate. Respondents certainly seemed to think that a border adjustment...
mechanism would address the issue of carbon leakage and have a positive impact on climate action. The European Parliament’s environment committee voted to support such a scheme, if free carbon allowances being given to heavy industry were phased out.

In an online discussion with former EU Trade commissioner Peter Mandelson, its executive vice president and Green Deal supremo Frans Timmermans said that the more other nations adopt carbon-pricing systems the less need there would be for adjustment at the border.

But he warned that if COP26, the UN climate conference that will be held in Glasgow in November, is not successful in accelerating climate action, the EU would certainly press ahead: “It’s a matter of the survival of [European] industry.”

Boris Johnson is reported to want to use the G7 summit in June (which the UK will also host) to build international consensus on carbon border taxes. He has also asked departments to look at an economy-wide carbon pricing mechanism. In the U.S., President Biden’s newly appointed treasury secretary, Janet Yellen, has previously voiced her support for carbon pricing and the new administration is also considering a carbon border tax. Whether these discussions go anywhere at COP26 will depend on what other kinds of support might be in place for countries who would be hit hardest by such moves.

Biden has also begun the complex process of revising the social cost of carbon, used in cost-benefit analyses to inform climate policy, and which was cut by the Trump administration

Encouragingly, as China prepared to greet the new Year of the Ox, its long-awaited national emissions trading system (ETS) got under way. Initially confined to the power sector, it’s not expected to have a big impact in the short term, but is one tool that can help China meet the more ambitious climate goals laid out in December by President Xi. Other sectors are expected to join later.

One signal, perhaps, of the seriousness of China’s intent came when the National Energy Administration was publicly lambasted for its failure to clamp down on coal. According to Global Energy Monitor, China built three times the coal power capacity of the rest of the world combined last year while construction permits for new coal projects accelerated.

The unusually critical report from an inspection agency that was set up by the president, left observers optimistic its verdict would mean the cancellation of coal projects and a boost for renewables – although a lot depends on the political determination at the top. The growing international momentum on climate action may help put a brake on coal.

Elsewhere, Singapore’s parliamentary environment committee is calling for a 15-fold increase in the country’s carbon tax from its current S$5 per tonne to between S$75 and S$120 a tonne by 2040. The New Zealand government is considering tightening the cap on its ETS after the country’s independent climate commission said it would have to raise its nationally determined contribution because the current pledge is incompatible with the goal of the Paris Agreement.

Australia’s premier Scott Morrison
used an address at the National Press Club to reject any idea he would ever put a price on carbon. Significantly, however, he did say he wants the country to get to zero emissions “preferably by 2050”.

Late last month, Joe Biden signed executive orders for a review of permitting processes to get a doubling of offshore wind capacity by 2030, and to exhort federal government to buy electric vehicles, specifically EVs made in America. Having almost 650,000 vehicles go electric might not put a big dent in U.S. emissions, but observers hope the order will both spur U.S. carmakers to increase their zero-emission vehicle ambitions, and encourage consumers to take the plunge.

A big issue may be availability of raw materials. Analysis by Wood Mackenzie shows just how much of a stranglehold China has on both supply and refining capacity for key battery materials. (See graphic next page.)

**BIODIVERSITY PUSH**

Joe Biden has pledged to make the Amazon a foreign policy priority. Now a group of former U.S. cabinet officials and climate negotiators are urging him to coordinate global action and to pull some key policy levers to protect it. These would include financial aid as well as aligning trade policy with climate policy for the Amazon.

The degraded state of the Amazon rainforest speaks to the findings of a landmark review, commissioned by the UK Treasury, that concludes we must change our measures of economic success to protect biodiversity. The Dasgupta Review says our current path of making demands on nature that far exceed its capacity to supply is born of a “deep-rooted, widespread institutional failure”.

The report’s author, economist Professor Sir Partha Dasgupta, said: “Nature is our home. Good economics demands we manage it better.” His report urges governments to ditch GDP as a means of national accounting and use one that takes account of nature.

It’s ironic, then, that the Dasgupta review emerges just as the UK government is considering proposals to actually protect four of what are designated as Marine Protected Areas (MPAs) around its shores – by banning destructive bottom trawling. (See Time ‘is rapidly running out to save oceans’)

Analysis by NGOs has revealed that the practice, which undermines the capacity of oceans to absorb CO₂ as well as depleting biodiversity, goes on in almost all the UK’s 73 MPAs. The UK government also plans to bring forward legislation to protect peat bogs, which are hugely important carbon sinks. But again, the proposals apply only to a narrow subset of “protected” habitats.

The Colombian government, meanwhile, is to lead efforts to pilot an international initiative to create BiodiverCities – a network...
of nine Colombian cities aiming to include biodiversity in their urban development models.

JUST TRANSITION
There’s been much talk of a just transition as nations and governments decide how to tackle climate change. Denmark’s minister of climate, energy and utilities, Dan Jørgensen, will chair a new initiative launched by the International Energy Agency to look at the social and economic impacts of the shift to clean energy. Ministers from 15 countries, including Guyana, Senegal and Indonesia, will come up with recommendations ahead of COP26.

But citizens are still far ahead of governments in their appetite for climate action: four French environment groups successfully made the case that the French government had failed to address the climate crisis and reneged on its commitments. The case was brought after 2.3 million people signed a petition.

The UN Development programme released the results of its survey of 1.2 million people in 50 countries, and found there was a consistent demand for climate action across all age groups, with more than 60% saying climate change is a global emergency. The most popular policies to address it were conservation of forests and land, renewable energy, climate-friendly farming techniques and investing more in green business and jobs. Support for action was strongest in some of the wealthiest and highest-emitting countries, including the U.S., UK and Australia.

VACCINE NATIONALISM ROW
Like climate change, the Covid-19 pandemic has exposed the fragility of global cooperation. The bitter row over Europe’s vaccine supplies has again put the spotlight on vaccine nationalism, with the very real prospect that many poorer countries won’t have widespread protection from the virus, for at least a couple of years. According to the Bill & Melinda Gates Foundation, supplying low-income countries with vaccines would cost an estimated $25bn while failure to do so could slow the global economic recovery, with high-income countries losing $119bn per year. Yet just $6bn pledged has been pledged to the COVAX programme to ensure equitable access to vaccines, while $5.8bn has been contributed to the WHO’s programme to accelerate access to tools to fight Covid.

Beyond the economics, vaccine nationalism undermines the message to less developed countries that “we are all in this together”. At Friday’s first (virtual) G7 heads of government meeting there were the first stirrings of that realisation, if only because China and Russia are engaging in “vaccine diplomacy” and the emergence of variants threatens vaccine efficacy.

However, while there was more cash for Covax, there were no commitments on sharing current vaccine supply.
Royal Dutch Shell recently coloured in its net-zero plans for investors, announcing that it was cutting back oil production by 1-2% a year and speeding up its timeline to reduce the net carbon intensity of each unit of energy it produces. By 2035 this will be 45% less than 2016, compared with 30% targeted previously, and 100% by mid-century, from 65%.

The oil major said it will increase investment in renewables, including biofuels and hydrogen, and build out its EV charging services network. With its net carbon intensity metric, Shell is taking responsibility for all its emissions, including those of its customers, which account for a whopping 85% of its total carbon footprint, by 2050. This is more ambitious than BP, whose target is a 50% cut in carbon intensity of its products by 2050.

BP’s pledge also excludes more than 40% of its oil production and 15% of its gas from its stake in Russian energy giant Rosneft (see January’s Brand Watch column). But it is notable that Shell’s renewable energy production targets are far less ambitious than those of BP and Total, which earlier this month announced plans to rebrand itself as TotalEnergies as it transforms into a broad energy company over the next decade. Total allocates more than 10% of its capex to low-carbon electricity, which it says is the highest level among the majors, and is planning to double that by 2030.

BP, meanwhile, plans to increase its renewable output 20-fold by 2030, while slashing both oil and gas output by 40% – a far more decisive shift than Shell’s 1-2% decline in oil production per year coupled with Shell’s plans to grow its gas business by 20%. (See Shell wants to be at leading edge, not bleeding edge with climate plan).

So how, exactly, is the Anglo-Dutch company planning to reach net-zero? Efficiency measures and clamping down on methane emissions will play a big part. But a significant amount will be down to offsetting, with a target to offset 120m tonnes of emissions from its products annually by 2030.

By comparison, this is more than the entire voluntary carbon offset market in 2019, which reached 104 million tonnes, according to Ecosystem Marketplace figures. (For details see also How Shell’s offsetting move could help unlock flood of finance for forests)

The company is also looking to boost carbon capture and storage capacity to store an additional 25m tonnes a year by 2035, compared with 4.5m today – another big bet on a nascent and unproven technology, given that figures from the Global...
CCS Institute show that global operational CCS capacity stood at around 40 million tonnes in 2020.

Plans for offsetting and storing emissions are certainly not unique to Shell, as the Transition Pathways Initiative made clear in an assessment of the industry’s net-zero plans last year. (See also Brand Watch for BP’s recent move to buy Finite Carbon)

The industry’s focus on hydrogen is also highly suspect to some analysts. In a recent blog for Green Alliance, David Cebon, professor of mechanical engineering at Cambridge University, argues that hydrogen processes are too expensive to compete with electric solutions in all but specific solutions like aviation and shipping.

He says fossil fuel companies are promoting hydrogen in a bid to delay their own demise, “pursuing a ‘bait and switch’ strategy in which they promise a green hydrogen future, but then fall back to an interim ‘blue’ hydrogen position”, where steam methane is used to reform natural gas, with the resulting CO$_2$ by-product captured and stored in depleted oil wells. Cebon adds that this is a dangerous distraction at a time when CO$_2$ emissions need to come down rapidly, since CCS itself will take decades to deploy. In the meantime unabated, also known as “grey”, hydrogen will generate more CO$_2$ than the status quo, Cebon says.

Seen in that light, one has to ask whether Shell’s commitment to addressing climate risk is much more evolved than that of ExxonMobil, the erstwhile bête noire of the green movement, which also recently announced plans to spend $3bn in the next five years on a new low-carbon business unit.

This comes after a flurry of announcements signalling that America’s biggest fossil fuel producer may have finally accepted that it may need to change course in the face of climate change.

Before Christmas, the Irving-based Texas oil major announced a five-year programme committing to cut CO$_2$ emissions from its upstream production by 15-20% by 2025, increase investment in green hydrogen and advanced biofuels, and decrease emissions of methane, a far more potent greenhouse gas, by 40-50% – though this is far lower than the 65% cut in methane emissions by 2025 being proposed by the Clean Air Task Force and under consideration by the Biden administration.

On the face of it heightened investor pressure from activist investor Engine No. 1, backed by heavyweight institutions such as the Church Commissioners for England and U.S. hedge fund DE Shaw, have forced Exxon to move into line with U.S. number two producer Chevron. Like Chevron, Exxon’s new targets apply only to Exxon’s scope 1 and 2 emissions, from its own operations, though it also announced that it would report on its scope 3 emissions.

It remains to be seen whether such moves will be enough to silence Exxon’s legion of critics, including the Attorney General of Connecticut, who in September filed the latest of a wave of law suits from U.S. states and cities accusing ExxonMobil of “an ongoing, systematic campaign of lies and deception” to discredit the climate change science, despite knowing since the 1970s that fossil fuel production caused global warming.

It’s worth remembering that as late as October, its CEO Darren Woods dismissed the suggestion that climate change concerns posed long-term risk to his industry, reassuring staff that there would be “an ongoing need for the products we produce”.

Is Shell’s climate plan really more evolved than that of ExxonMobil?
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When Bertrand Piccard touched down in Abu Dhabi in July 2016, docking his solar-powered light aircraft for the final time after an epic 42,000-kilometre trip around the globe, he went immediately to the waiting bank of cameras and microphones. “The future is clean,” the charismatic Swiss aviator declared. “Let’s take it further.”

Much has happened in the interim. High on Piccard’s list is the revolution in renewable energy prices, with solar-powered electricity now averaging below $0.05 per kilowatt hour – almost one third of what it was when his breakthrough eco-airplane took to the skies. “A lot of the materials were experimental when I started on the Solar Impulse journey back in 2002. Now the technologies exist to make renewable energy cheaper than fossil fuels,” states 62-year-old Piccard, who practised as a private psychiatrist for two decades prior to his world-record beating flight.

Even so, progress towards a zero-carbon energy system remains a long way off. Around 28% of today’s energy mix derives from renewable fuels, an increase of just four percentage points on 2016. Enter Piccard’s idea for taking the cause of sustainability further. In 2017, his non-profit Solar Impulse Foundation put out a call for cutting-edge ideas from the world’s smartest eco-innovators.
eyes set on resolving other pending crises as well, from water pollution and industrial waste to food insecurity and over-consumption.

The whole endeavour, which he brands his 1000 Solutions challenge, is imbued with his characteristic adventurism. Indeed, averting the “ecological chaos” that he ascribes to patterns of unlimited business growth is to his mind the “greatest adventure of the world today”.

A favourite on the global speaker circuit these days, Piccard is never short of a memorable phrase or motivational maxim. Talk of the planet’s many pending problems evokes one of his favourites: “A crisis you accept becomes an adventure. A crisis you refuse remains a crisis.”

For much of the last three years, he and a small team have been collecting, researching, and analysing the responses to his latest adventure. The result is a list of around 910 firms (he anticipates reaching the 1,000 mark in mid-April) with tangible, tech-based solutions to some of the planet’s largest crises.

Piccard is agnostic about the size, industry, location or ownership structure of the companies in question. “It’s the solutions that matter, not the company,” he says. To qualify, applicants need to prove their financial viability and market potential as well as their sustainable innovation credentials.

“The solutions need to be working already today, they need to be economically profitable, and they need to be better for the environment than anything else in their sector.”

His favourite examples include a small French biogas producer that uses membrane filtration and cryogenic distillation to purify methane from landfills for the grid. Or the storm-management firm that prevents heat islands in cities via an air cooling system based on “evapotranspiration”, while simultaneously preventing floods. Or the food manufacturer that has invented a nutrition-rich protein product derived from mealworm larvae.

It’s not all small startup operations either. Multinational oilfield-services firm Schlumberger makes the cut thanks to a spin-off venture that uses geothermal to provide urban heat pumps. Belgian chemical giant Solvay also features, courtesy of an environmentally friendly cleaning solution for use in the international semiconductor industry.

Unsurprisingly, given Piccard’s penchant for travel, transport solutions feature prominently. One is SkyBreathe, a pilot-oriented software solution that promises to reduce in-flight fuel use by up to 5%. A battery-powered propulsion system for light aircraft – designed and commercialised by André Borschberg, co-pilot on the Solar Impulse flight – also gets a look-in.

**ECONOMY MEETS ECOLOGY**

Piccard is notably reluctant to be drawn on any major structural transformations to the aviation industry. In part, this reflects a life-long passion for flight, something he traces back to attending the launch of Apollo 12 as an 11-year-old – an occasion that also saw him meet his childhood hero, the famous U.S. aviator Charles Lindbergh.

But there are other reasons for his reticence. For one, he feels aviation gets a bad rap in climate circles. At around 3%, the carbon footprint of air travel is a fraction of total transport emissions. Compared to heating our homes, it’s even less significant.

“Rather than picking out individual industries, what we need is efficient solutions across the whole system,” he states.

Bertrand Piccard is actively seeking eco-innovators to tackle planetary crises.
His reticence also stems from a belief in the capacity of clean technologies to wean us off our collective addiction to fossil fuels. Tech-based solutions like those identified by his foundation might resolve 50% of the problems at hand, he conjectures: “The other 50% will rely on common sense.”

From his career in psychiatry, Piccard is also acutely aware of people’s innate reluctance to change, especially if such change implies an element of self-sacrifice. “You can tell people ‘stop with everything’ or you can tell them ‘have a good life but use clean technologies that are more ecofriendly.’ Psychologically, the second is likely to be far more successful.”

This thinking is central to his pitch to business leaders and policymakers. When presenting the 1000 Solutions initiative, he insists it represents a model for delivering economic growth and competitiveness as well as planetary sustainability.

“What I want to show is that the protection of the environment is more profitable than the destruction of the environment,” he states.

Not everyone buys into the argument. Piccard’s preference for “qualitative growth” (a middle road between degrowth and exponential growth) rubs up the more anti-capitalist wings of the green movement, he admits.

Still, he hopes the ideas identified by the 1000 Solutions challenge can gain traction and reach meaningful scale.

Given his media profile, the challenge won’t be getting a photo op but ensuring concrete uptake of the solutions afterwards, he admits. Here, he takes confidence from the climate focus of many of the post-pandemic recovery packages currently on the table.

“There are trillions of dollars flooding into the market right now for the economic recovery, which is great. But it would be counterproductive to use this money to support polluting sectors. Let’s be honest, right now governments have no real idea on which are the most promising technologies.”

To give credibility to his initiative, each of the solutions identified will carry a certification mark, the Solar Impulse Efficient Solution Label.

Running costs are covered by the foundation’s 16 corporate sponsors, which include Michelin, Nestlé, Engie, and Air France, as well as the above-mentioned Schlumberger and Solvay.

Like all good adventurers, Piccard is not blind to the challenges ahead. Reluctance to change is not limited to individuals, he notes. “The problem for many companies is that they have invested massively in expensive, outdated and inefficient technologies, and now they resist to the change instead of diversifying as soon as possible.”

How to break this deadlock? Allow the “pioneering spirit” of the innovators now carrying the Solar Impulse seal to wash off on them, he says. Pioneers, after all, are those willing to “go beyond habits, certainties and beliefs” and create something new.

It is this same spirit that saw Piccard bank on nothing more than sunshine to fly him around the world. This latest eco-tech adventure suggests he still has plenty of pioneering zeal left in the tank.
GM zooms ahead in electric vehicle race, but how green is its e-Hummer?

In the second of our year-long series examining the decarbonisation efforts of the world’s top 250 greenhouse gas emitters, Review editor Terry Slavin and David Lubin of Signal Climate Analytics peer under the hood of America’s biggest carmaker

The change of regime in the White House has prompted some major U.S. companies to unexpectedly pin green colours to the mast, including American’s most greenhouse gas-polluting oil major, ExxonMobil (see Just how far apart are Shell and ExxonMobil on climate?).

But for breathtaking ambition it was hard to beat GM. Within a week of Joe Biden’s inauguration, the world’s fifth-biggest selling carmaker unveiled a plan to become carbon neutral by 2040, and set a deadline of 2035 to sell only electric cars – something none of the major automakers has yet done.

GM’s move set off a series of copy-cat announcements, with Jaguar Land Rover this month saying it would launch EV versions of its entire Jaguar and Land Rover line-up by 2030, followed quickly by Ford, which set a 2030 date for its passenger vehicle line-up to be EV in Europe.

Workers at the EV Chinese joint venture between SAIC, GM and Wuling.
But how confident can we be that these companies’ green new paint job means something has fundamentally changed under the hood? After all, just months ago, GM was one of several car companies still publicly aligned with the Trump administration’s climate plans, which sought to undermine California’s right to ban the sale of new gasoline-powered cars and trucks in the state by 2035.

The question is a vitally important one, given that GM, as well as Toyota and Honda, are among the next 26-50 companies on Reuters’ and Signal Climate Analytics’ tally of the world’s biggest publicly traded 250 CO₂ emitters, with Ford to be included on the 51-75 list in March.

Every month, over the course of 2021, this column will shine a light on what the world’s biggest greenhouse gas emitters are doing in the battle against climate change.

Ford, Toyota and VW, which was in our top-25 listing last month, will collectively introduce at least 76 EV models by 2025. GM alone has pledged to invest $27bn on 30 EV models by 2025 while Ford has recently committed $22bn, and VW a whopping $80bn by 2025, according to the New York Times. Given the typical five- to seven-year product development cycle to build a new model, investments in new fossil-fuelled vehicles is expected to slow to a trickle by the late 2020s.

While GM has previously experimented with Volt and Bolt, market response has been tepid. Signal Climate Analytics looked at 2019 data reported by the company and put it at number 18 out of 27 in “climate impact maturity”, defined as how much a company is demonstrating commitment and success in building and selling low- or zero-emissions vehicles.

In 2020, however, GM passed several rivals to reach the middle of the auto sector pack, jumping to number 11 in overall maturity, leaving Ford far behind at 19. So what happened?

While the Biden administration’s commitment to prioritise climate action may explain the timing of GM’s announcement, we may need to look eastward to fully understand the business logic.

Much of GM’s recent improvement on Signal’s climate impact maturity score in 2020 was due to the introduction of a new electric vehicle with partner SAIC, China’s largest automaker. The Mini EV, a micro vehicle with a very low price point, sold more than 127,000 in 2020, placing the GM joint venture third only to Tesla and BYD in the key new South Asian marketplace.

And 2021 is getting off to an even stronger start. January sales were a remarkable 38,496 vehicles – roughly three times Tesla sales, and nearly half of the number of Bolts GM has sold in the U.S. since its introduction in 2017, according to InsideEVs.

In European and North American markets, however, it will be a different story. GM must not only get all the product innovation right, but successfully manage an undercurrent of union resistance to electric vehicles.

It is estimated that electric vehicles will require 30-40% less labour per vehicle to build, and that may mean fewer jobs, especially in newly redesigned high-efficiency factories – something GM says is a must to be competitive.

But electric vehicles will bring new jobs, too. Last March, GM
announced that it was developing a new battery technology called Ultium that will have more range, and be cheaper than Tesla through using 70% less cobalt. The batteries will be made at a new $2bn plant in Ohio, creating more than 1,100 jobs, and qualifying GM, along with Ford and Tesla, to benefit from Biden’s announcement that the federal government’s fleet of 650,000 vehicles will convert to American-made EVs. However, here too there are challenges to navigate with the workforce. According to the Detroit News, GM CEO Mary Barra acknowledges that battery makers will be paid less than assembly plant workers to remain competitive with other automakers.

GM last year spun out a new company, called BrightDrop, focused on electric delivery vehicles. But the fact that GM’s EV flagship will be the world’s first all-electric Hummer points to a big decarbonisation blind spot shared by the industry at large, which risks putting the policy brakes to EV.

As Signal, under its previous name Constellation Research, identified in research last year for Reuters, over the last decade the auto sector has “truckified”, particularly in the U.S., where demand for bigger gas-guzzling SUVs and trucks continues to rise as demand for passenger cars declines. This chart above in the IEA’s 2019 World Energy Outlook shows the outsized impact of this trend on global CO₂ emissions: with SUVs coming second highest, behind the power sector and ahead of heavy industry, in terms of change in CO₂ emissions by source.

Dan Flores, GM spokesman, says “We have to run our current core business smart and strong, because that will ultimately allow us to invest in this all-electric future”, suggesting that the continued sale of these highly profitable vehicles is key to providing companies like GM with the cash they will need to get the EV revolution on the road.

But Philip Warburg of Boston University’s Institute for Sustainable Energy questions whether the U.S. can meet its decarbonisation goals while continuing its love affair with super-sized vehicles. He points out in a recent blog, “An electrified U.S. fleet dominated by oversized SUVs and pickups will consume substantially more energy than a leaner line of electric vehicles making it much harder for clean electricity sources to edge out the gas and coal plants that still supply most of our electricity.”

Meanwhile, Tesla’s Elon Musk signalled that the carbon footprint of his vehicles would be vastly inflated in future by purchasing $1.5bn in bitcoin and announcing he would accept the cryptocurrency, which is highly energy-intensive to “mine”, as payment from customers. On top of the energy that is consumed in producing EV versions of SUVs, there are vast amounts of resource-intensive metals like copper, lithium, aluminium and cobalt, whose mining is fraught with environmental and human rights risks, as regularly reported on in The Ethical Corporation magazine.

From the planetary boundaries perspective it may be arguably better for GM to focus not on rolling out electric SUVs but expanding its production of mini vehicles with SAIC for the Asian market – though lack of transparency and accountability will be serious concerns for ESG-minded investors. The business case is more straightforward, given that companies in China have access...
to almost all the key supply chain ingredients it takes to build an electric car – batteries, cobalt, high-efficiency LEDs and lighting. (See also Policy Watch)

Being a more prominent member of the EV club will also have other privileges, foremost among them market valuations that bear no resemblance to their petroleum-powered peers.

As Signal/Constellation found in its auto sector report for Reuters in 2018, shareholder returns of the relatively few automakers whose vehicle production consists of between 20-100% EV & PHEV was 26.2% between 2015 and 2019, compared to 5.4% for the entire auto sector.

Morgan Stanley auto analyst Adam Jones was recently quoted as saying that policy moves against the internal combustion engine could “transform what were once profit-generating assets into potentially loss-making and cash-burning businesses” as early as 2030.

Today GM’s market capitalisation is $76.3bn. Were GM’s market capitalisation per vehicle sold to rise to half that of Tesla, GM would be valued at $186.55bn, a level that would solve many problems for GM - making its dream of transformation a practical and profitable reality.

Being the first EV auto major who knows how to scale could put GM back in the drivers’ seat. Its CEO Mary Barra is smart enough to know that transformation requires a compelling case for change and an overwhelming commitment to change. GM’s 2035 goal fits the bill.

Terry Slavin is editor-in-chief of Reuters Events Sustainable Business. David Lubin is chairman of Signal Climate Analytics.