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What a wonderful world

Finally, America takes the lead in tackling climate change; we look at the global implications. The bold spending plans are fuelling optimism about the 'green revolution' and our podcast looks at the prospects for raw materials that will underpin the transition Sustainable finance is also a key focus in a highly encouraging week for our wonderful world

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Article | 22 April 2021 Sustainability | United States

Biden promises big on climate change and the global impact could be huge

America aims to halve its carbon emissions below 2005 levels by the end of the decade. That's the surprise and ambitious announcement on day one of President Biden's global leaders' summit on the environment. If America is really now leading the charge and if the president succeeds, this could have far-reaching consequences not just in the States

US President, Joe Biden, speaks at the virtual leaders' summit on climate change

Leaders' summit on climate change

Forty global leaders are taking part in Joe Biden's climate summit. And the US President's announcement this Thursday on new emissions targets is clearly designed to show that America is not just back in the environmental game but it wants to lead and encourage countries such as China and India to go down the same route. China's President, Xi Jinping is also attending and it's clear that relationships, at least in this area, are warmer.

But making ambitious announcements and achieving real change are two different things. And there's plenty of scepticism on whether these targets can be achieved. But by putting climate change at the heart of America's coronavirus recovery strategy is a major sign of renewed intent. And it builds on the enormous spending which had already begun under President Trump.

Phase 1 nearly complete – America is back on its feet

Throughout the pandemic, the government's support for the economy has been remarkable. Under President Trump, we saw the $2.2tn Coronavirus Aid, Relief and Economic Security (CARES) Act signed into law within days of the initial lockdowns. This included stimulus payments, uprated unemployment benefits, the Paycheck Protection Program and other support for American businesses.

This was followed by an additional $900bn of relief in the form of December's Consolidated Appropriations Act, 2021. Then in March, President Biden's American Rescue Plan was approved, which provided a further $1.9tn of financial support for the economy with more stimulus payments and other direct payments for households, business and local government.

In total that is $5tn of fiscal stimulus, equivalent to nearly 25% of GDP, to mitigate the effects of the pandemic on America's economy and its people. In combination with a highly successful vaccination programme, falling hospitalisation numbers and a gradual reopening process, it looks as though all of America's lost output will have been fully recovered by the end of June with the majority of lost jobs regained by year-end.

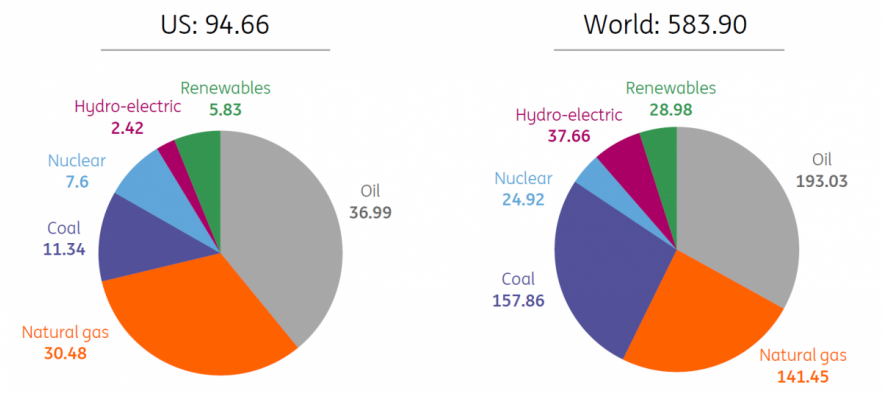
Phase 2 – Building Back Better… and greener

With the US making such good progress, President Biden can push ahead with his key longer-term election manifesto pledges. His most prominent election slogan was "Build Back Better" - a plan to "mobilise" America in four key areas:

1. Manufacturing and innovation to ensure that the future is made in America, and in all of America
2. Build a modern infrastructure and an equitable, clean energy future
3. Build a 21st-century caregiving and education workforce which will ease the burden of care for working parents, especially women
4. Advance racial equity in America

This promise of a more equitable, sustainable and greener America was fleshed out in further detail within his manifesto. It included clear and ambitious climate goals such as decarbonising electricity production, culminating in 100% clean energy and net-zero carbon emissions by 2050 with an intermediate target of zero emissions from the power sector by 2035. There was the doubling of the amount of energy produced from offshore wind turbines by 2030 – wind currently accounts for 8.4% of total US utility-scale electricity generation. There were also pledges to create new efficiency standards for appliances and buildings plus a promise to upgrade electricity grid capacity to facilitate more electric vehicles as the US moves away from fossil fuels.

2019 consumption of energy by fuel (Exajoules)



Source: BP World Energy Factbook

It wasn't just an inward-looking manifesto. There was an obvious desire for ambitious global targets for emissions that we have heard more about today. The decision to appoint former Secretary of State John Kerry as his special envoy for Climate Change is another signal of his intent to make progress.

Despite positive reactions from world leaders at the Climate Summit there is the risk that global action falls short. President Biden has therefore suggested linking current and future trade deals to climate and environmental commitments, stating at his inauguration "a cry for survival comes from the planet itself, a cry that can't be any more desperate or any more clear". Being cut off from American consumers could be a big incentive for change for producers in the rest of the world.

? Money talks – but is it enough?

Having already re-committed the US to the Paris Climate Accord, the President is now steering his American Jobs Plan through Congress. This is a smaller package than was initially mooted – a little over $2tn versus talk of a $3tn+ package and is seemingly spread over more areas than initially proposed while also being drip-fed into the economy over the next eight years.

Put in the context of the $5tn spent over the past 12 months it may feel a little underwhelming especially given the climate targets he has set. This perhaps hints at less of a revolution and more an acceptance of gradual change while also necessitating a lot of return on each dollar spent.

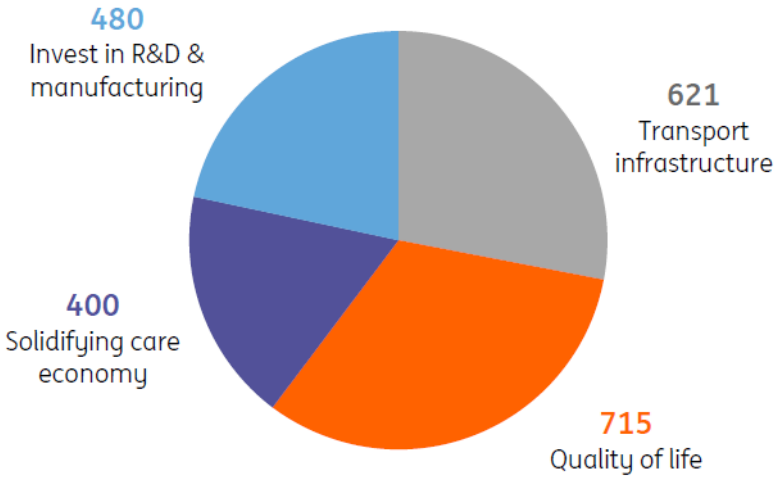
> *This is likely to be just the start of a new way of engaging with sustainability and green issues*

The money is split roughly one third for quality of life, which is a broad category focusing on rebuilding the electric grid, high-speed broadband access and improving clean drinking water infrastructure. Just under a third goes towards improving transport infrastructure together with incentives of moving away from combustion engine vehicles. A fifth then goes on "solidifying the care economy" through expanding access to affordable care for elderly and disabled people. It

concludes with a final fifth of the money going towards research and development projects tied to new technology and several long-term sustainability projects.

This still amounts to spending worth 10% of GDP and marks what is likely to be just the start of a new way of engaging with sustainability and green issues.

The $2.2tn American Jobs Plan



Source: www.whitehouse.gov / ING

Investment – but not as we know it?

Not all of the $2.2tn is going on what might be termed "traditional" physical infrastructure spending projects, which has drawn the ire of Republicans and many in the business community. Instead, it looks to be more focused on people and the planet rather than driving economic growth.

For example, if we look at the $621bn allocated to transport infrastructure, $174bn is put towards electric vehicles and a network of 500,000 charging points. Much of the money will be allocated towards "point of sales rebates and tax incentives to buy American made electric vehicles".

Likewise, the $400bn for solidifying the care economy is effectively current spending. It is "expanding access to quality, affordable care" by "creating new jobs and offering caregiving workers a long-overdue raise, stronger benefits and opportunity to organize or join a union and collectively bargain".

As such, it is fair to say the definition of "investment" is broad. While there certainly is physical investment in the proposals, there is also a lot of what we could term "investment in opportunity". The expanded social care that can allow people to return to work rather than stay at home caring for family members can be characterised in this way. As can the money for training, worker development and worker protection.

This has the potential to boost labour participation and improve the quality of the workforce, which should raise the productive potential of the US economy over the longer term – hence why it comes under the umbrella of investment.

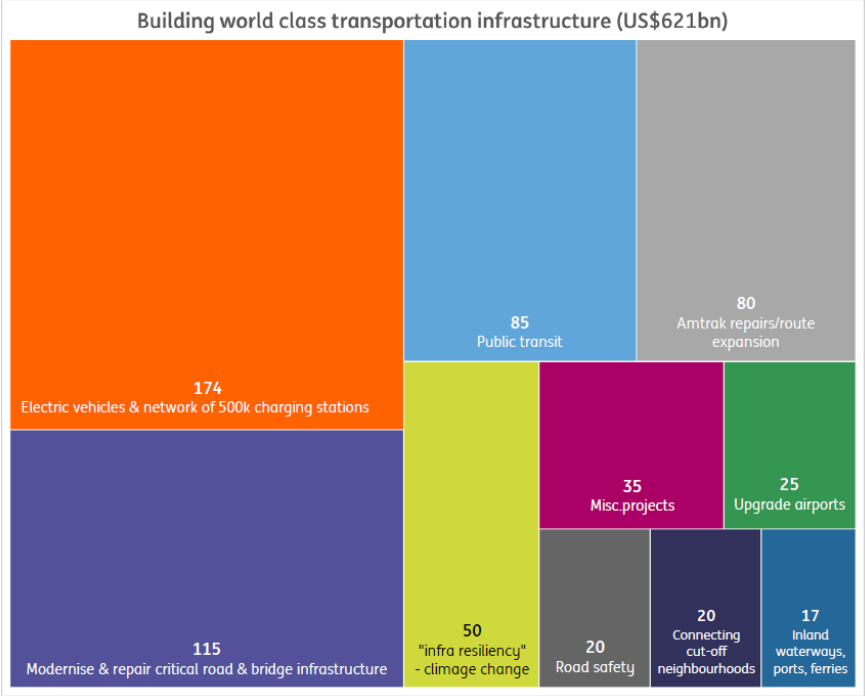
The details: Transport infrastructure:

This is where the bulk of what might historically be termed "traditional" infrastructure can be found. It includes plans to modernise 20,000 miles of highway, roads and streets along with repairing bridges, improving airports and railways stations and modernising and expanding transit and rail networks.

There is also money for public transport metro systems and money for connecting neighbourhoods that are relatively isolated or underserved to try and improve life opportunities.

Some 28% of the money goes on incentivising the use of electric vehicles, as already mentioned. While there will be subsidies to make EVs more affordable – in 2019 the average cost for a new electric vehicle was $55,600 versus $36,600 for a traditional combustion engine vehicle – a substantial proportion of the money will be used to create the required vehicle charging network. The Administration is looking to establish a "grant and incentive program for state and local governments and the private sector to build a national network of 500,000 EV chargers by 2030".

Building World Class Transport Infrastructure



Source: www.whitehouse.gov / ING

2 Quality of life:

This section of the infrastructure plan is again largely what we might term "traditional" infrastructure although it also involves some subsidies for end consumers and lots of tax incentives to stimulate the private sector to participate.

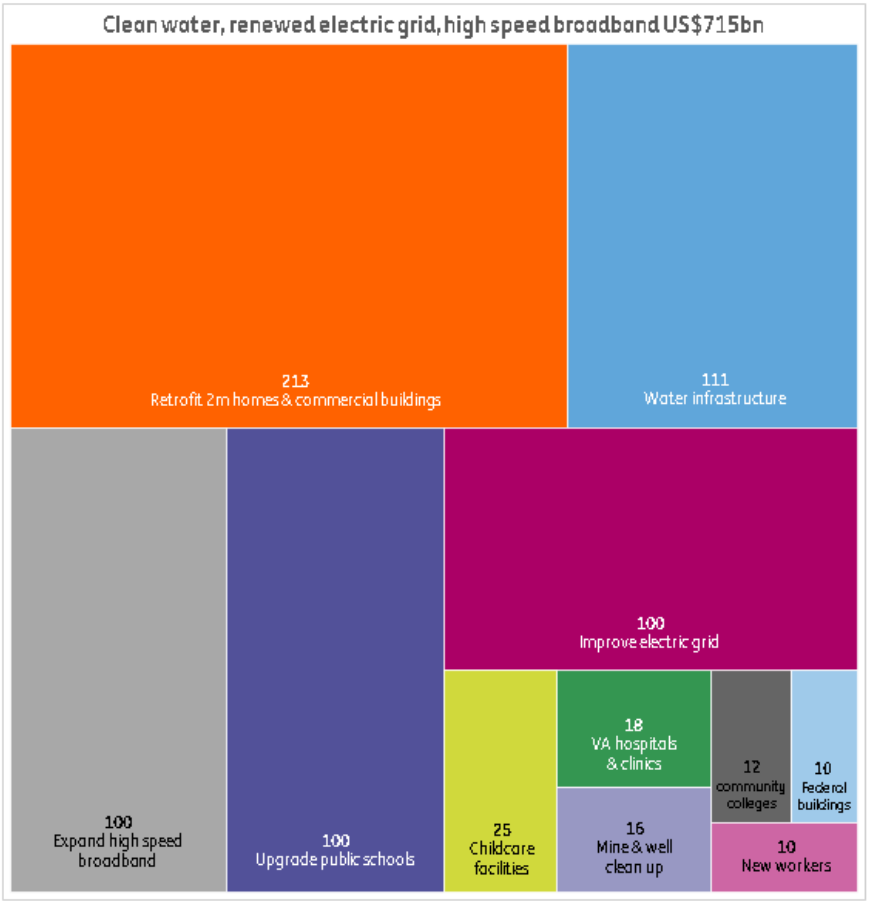
The largest part is money to "build, preserve and retrofit" millions of homes, commercial buildings, schools and Federal buildings to make them fit for modern use and more energy-efficient. For the private sector, this will primarily be done through target grants, tax incentives and "project-based rental assistance" while removing various planning barriers that have historically made it more

expensive and time-consuming to get approval for building and renovation work.

There is $111bn set aside to improve water quality which includes within it a pledge to replace 100% of the nation's lead pipes and service lines. There is an additional $100bn to expand high-speed broadband to 100% of the nation. This will see money prioritised for organisations focused on expanding access to entire communities, but will also try and encourage price transparency to bolster competition as "Americans pay too much for the internet". In the very near term, there may also need to be some money to subsidise high-cost provision, but there is an acknowledgement that this is not a long-term solution.

Another $100bn is set aside to improve the electricity grid; to make it more resilient given the huge economic cost of power cuts and to link up to new greener sources of electricity production. This plan also includes a drive to source all energy for Federal buildings from clean power 100% of the time.

Clean water, renewed electric grid, high speed broadband

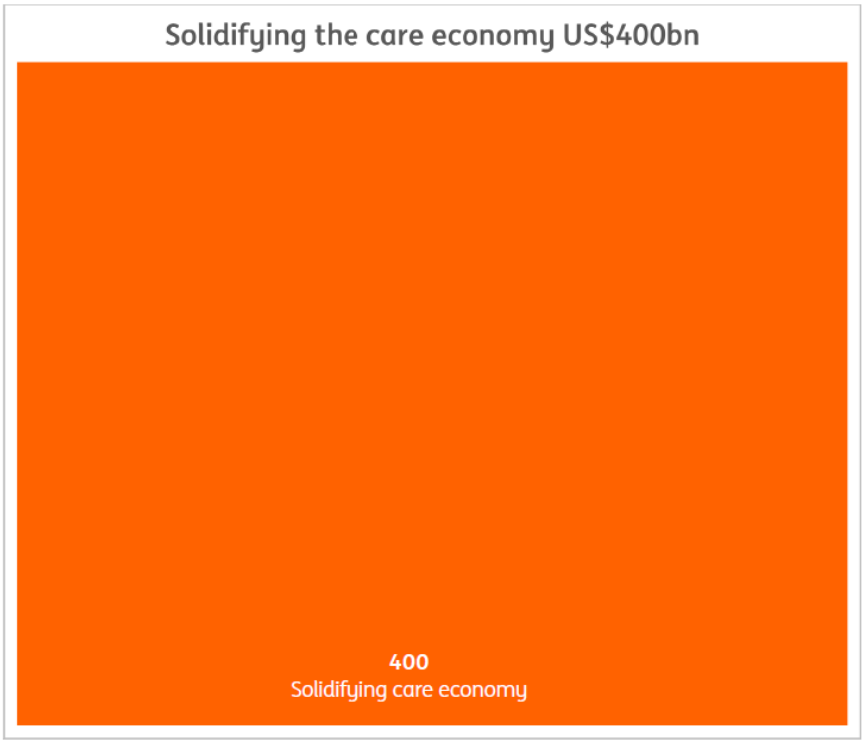


Source: www.whitehouse.gov / ING

3 The care economy

This component has caused the most debate about what "investment" really is. Much of it appears to be what most economists would term current spending. The plan states that the President is calling on Congress to "put $400bn toward expanding access to quality, affordable home or community-based care for ageing relatives and people with disabilities".

This will expand the care sector, create new jobs in the sector and give those people who have left the workforce to stay at home to care for family or friends the opportunity to return to work.



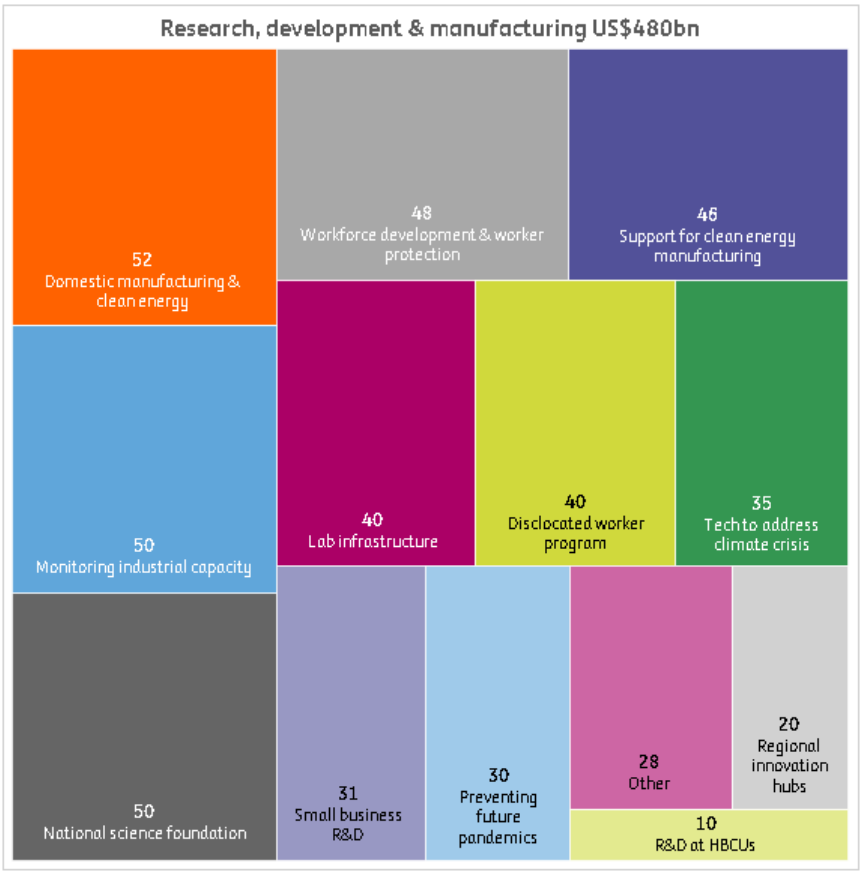
Source: www.whitehouse.gov / ING

4 Research and Development

The final section sees a large number of projects brought under the umbrella of investment in research, development and manufacturing.

It includes money to fund research surrounding critical technologies and climate solutions while also providing money to promote greater equality of opportunity in the sector. There is also funding for a new national science foundation to help promote and upgrade America's research infrastructure while there are also grants for other projects to promote research and development.

Research, development & manufacturing



Source: www.whitehouse.gov / ING

? How is it being paid for?

Unlike the stimulus seen over the past 12 months, the Biden Administration claims the package will be fully paid for through higher taxes and the additional revenue generated by the long-term economic boosting effects of the measures.

Corporate America is expected to make the largest contribution. The Administration has placed heavy emphasis on the corporate share of Federal tax revenue payments having fallen from more than 30% in the early 1950s to just 7% today while for individuals it has gone from 50% to 85% over the same time frame.

Measures include:

1. Corporation tax goes to 28% from 21%
2. Discourage offshoring by strengthening the Global Minimum Tax for US multinational corporations
3. Encourage other countries to join minimum tax strategy
4. Prevent US corporates from claiming tax havens as their residence
5. Deny corporations expense deductions for offshoring jobs and credit expenses for onshoring
6. Eliminate other loopholes
7. Eliminate tax preferences for fossil fuels and make sure companies pay for environmental cleanup

8. Bolster tax enforcement

Additional tax-raising proposals are coming with the American Jobs Plan documentation stating that the President "will be putting forward additional ideas [....] for reforming our tax code so that it rewards work and not wealth, and make sure the highest-income individuals pay their fair share". This will likely result in President Trump's tax cuts for high earners being reversed and potentially changes to the way capital gains charges are calculated.

? Will it pass?

It is fair to say that this plan has its detractors. Many Republicans argue that there is not enough investment and there is too much spending on social issues. There is also push-back from corporate America which argues that this overly burdens them and could result in lower private investment and job creation if they end up paying higher taxes.

Democrats argue this will not be the case and cite Bill Clinton's tax rises which were followed by a period of strong growth, robust corporate profitability and healthy investment growth. They argue that a stronger and "fairer" economy can benefit more people, including corporate America.

On balance, we would suggest that it may not be particularly stimulative in the near term given the heavy tax offset, but if it can raise worker participation that can be beneficial over the longer term. Meanwhile, proponents would argue that the cost of not mitigating climate change will likely be significantly higher than the cost of intervention.

Either way, it is clear that this is not going to get bi-partisan support and given the thin Democrat majorities within the House and the Senate, there may need to be compromises that see some initiative modified. This means that there is the potential for the package ending up being somewhat smaller even if the Administration chooses to go down the budget reconciliations process to get it approved.

? A question of efficacy

There are valid questions about the effectiveness of some of the policies. For example on the adoption of electric vehicles, the Biden administration is only offering incentives – the carrot - and has stopped well short of combining it with the big stick of higher gasoline taxes that could have accelerated adoption/incentivised fewer car journeys.

The Energy Information Administration reports that the average tax and fees levied by US states at the beginning of 2021 was 30 cents per gallon (¢/gal). This is in addition to the federal tax of 18.4¢/gal, which has remained unchanged since 1993. Taxes in Europe are substantially higher and replicating them in the US could raise substantial revenue in addition to spurring more rapid change towards EVs.

However, such policies are unpopular with the electorate[i] due to what it means for household finances, and this is a difficult balancing act for the President. The national average for US gasoline prices is currently $2.87/gallon while in the UK and France it is $6.53/gallon and in the Netherlands, which is Europe's most expensive, it is currently $7.78/gallon.

We are also a little surprised at how little specific investment has been announced regarding decarbonising America's electricity production given the ambitious targets already announced. This ties into our point that the plan sees lots of different areas receiving relatively small amounts

whereas focusing on larger investment in specific projects may have yielded more tangible results. Time will tell.

[i] A review of polling by Mineta Transportation Institute in 2016 found a majority in favour of higher gasoline prices in just 24% of polls conducted, with support in favour of higher fuel taxes reaching 40% or more in just 42% of polling. They found that when polling was conducted there were significant variances in the proposed tax increase of anywhere from 1c/gallon to $2/gallon.

More still to come

That said, this is just the start of the US shift towards a more sustainability-orientated economy. We are yet to hear about regulatory changes that can complement the investment proposed. Michael S. Regan has recently been confirmed as the new head of the Environmental Protection Agency and he is likely to announce plans surrounding guaranteed protection/conservation of key land and water resources and programmes for reforestations and the support for developing renewable energy programmes on federal land.

> *This is just the start of the US shift towards a more sustainability-orientated economy*

Already, the President has halted further development of the Keystone Pipeline through executive order and has directed agencies to review and reverse numerous policy actions on the environment implemented by President Trump. New permits for oil and gas drilling on federal lands and water have already been stopped, for example.

This shift in political attitude towards sustainability-related issues could also see more support for the sustainable bond market, which is currently lagging well behind that of Europe. A positive underpinning factor is the bottom-up sustainability approach that corporate America has already begun to take, embracing environmental and social sustainability issues through their funding programmes. In a recent ING survey of corporate leaders and institutional investors, 58% of US corporates said the Covid-19 pandemic had accelerated their sustainability transformation plans and heightened their ESG targets.

Taking the global lead

The US is also looking to take a global lead on these issues. Within Joe Biden's manifesto, there was a desire to engage with international leaders to create new, more ambitious global targets for emissions that are enforceable. This has already started with the US rejoining the Paris Climate Accord in February 2021 and convening a global climate summit in April 2021. We are certainly going to hear proposals surrounding a global moratorium on offshore Arctic oil drilling, but support from other nations will likely be lacking.

He has already demanded a ban on countries subsidising fossil fuel usage with penalties for those countries that try to "outsource" pollution. China and its Belt and Road initiative could be in the target sights here, but so too Japan, which has been funding coal-fired electricity generation capacity in developing nations including Vietnam, Bangladesh and Indonesia. Funding that has been benefiting Japanese companies.

Linking current and future trade deals to climate and environmental commitments was also included within his manifesto. This would include plans for minimum environmental standards regarding production and power generation. Penalties for failing to comply would include carbon-adjustment fees or quotas on carbon-intensive goods. This could be a huge motivator for other countries to embrace more sustainable practices given that US goods imports totalled $2.33tn in 2020.

Another programme that could accelerate global initiatives is the manifesto proposal of "green debt relief" for developing countries that make and meet climate commitments. Given the scale of debts built up globally during the pandemic, this could be a major inducement to speed up the adoption of more environmentally friendly energy usage around the world.

Bold Steps, but momentum needs to be maintained

The new Administration's attitude towards sustainability, social policy and climate change, and the willingness to work with other world leaders on these issues marks a huge change from what we saw under President Trump. The financial commitments are large and regulatory changes may accelerate developments. They will need to given the ambitious goals the president has set.

> *Taking a global lead on these issues has a wide impact beyond US borders*

Indeed, the intention to take a global lead on these issues and the willingness to apply standards to trade will ensure the shift in position has a wide impact beyond US borders.

The way the investment plan itself is structured with the eight-year time frame and the heavy tax-raising associated with it mean the direct economic stimulus may be somewhat muted in the near term, but the potential for a larger, more productive workforce will benefit longer-term growth.

Moreover, the benefits of attempting to address climate change's long-term impact on the economy could be even greater. It is fair to say this plan is much more orientated towards people and the environment than boosting GDP growth over the next couple of years.

This is the first step in the process and momentum needs to be maintained, which also requires the electorate to remain on board. With mid-term elections coming up in less than two years that will be the first major test of America's newfound desire for a more sustainable future.

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Listen: Why copper is the new black gold

Ambitious new targets for cutting carbon emissions, announced at this week's climate summit, and bold spending plans have fuelled optimism about the green revolution and helped to power a rally in the raw materials that will underpin the transition. In this podcast, Warren Patterson looks at which commodities stand to benefit the most

US President Joe Biden on Thursday pledged to cut greenhouse gas emissions in half by 2030, prompting other countries around the world to step up their own efforts in the fight against climate change. The EU enshrined its climate targets into law this week while the UK vowed to cut carbon emissions by 78% by 2035.

Optimism over the green transition, and new funding from Biden's infrastructure package, Europe's Green Deal and Britain's Build Back Better plan, have pushed up metals prices this year. In this podcast, Warren Patterson, Head of Commodities Strategy, tells Senior Editor Rebecca Byrne which raw materials will benefit the most and whether rising investment in green infrastructure could herald a new supercycle for commodities.

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Article | 19 April 2021 Sustainability

The growing demand - and need - for more US sustainable finance

Sustainable finance has morphed from being a quirky Europhile-type obsession to an obvious discussion point on the agenda of virtually any major financing decision. It has successfully found a firm foothold in the United States in recent years. But how much of a big deal is it in America?

The US President, Joe Biden, spoke of the importance of climate action on the campaign trail

A new tone on the environment from the US administration

Tackling environmental issues is an important part of Joe Biden's Covid stimulus plan. When you look at the sections on climate change, he wants to spend a trillion dollars over an 8-year period on sustainability projects and public-private partnerships are key to this. It's expected that the private sector embraces the initiatives which include renewable energy, electric vehicles and wider decarbonisation of the economy. The other half of the aggregate $2tn plan is also full of socially responsible elements too.

A key positive here is that US policy on sustainability is now

coming from the top

A key positive here is that US policy on sustainability is now coming from the top. It may need more stick (carbon taxes) than carrot (grants and partnerships) for it to prove really effective at long term de-carbonisation, but there is a clear swing of the policy pendulum relative to the previous administration, one that is positioning itself to embrace the need for action on climate change.

A positive underpinning factor is that Corporate America had been embracing many of these ideals through their funding programs; more of a bottom-up approach to sustainable thinking. The Biden plan in that respect cheerleads the existing ambition for Corporate America to do more. And there is room to go further still.

How the US stacks up in the sustainable finance space

Long gone are the days where discussions on sustainable finance were sidelined as a parallel but mostly academic endeavour. US corporates, and indeed the wider issuer base, have increasingly endorsed the advantages that come from engagement with socially constructive projects, even where the politics have at times moved strongly in the opposite direction. Participants will be that bit more receptive still as the wider policy pendulum swings back towards growing projects that are applicable for sustainable financing.

Remember, the size of the global bond market (brown and green) is $128tn. The area of sustainable finance is small in proportion, with cumulative issuance to date of $1.6tn globally, equating to 1.25% of the global bond market capitalisation. That said, it's growing rapidly.

$1.6tn

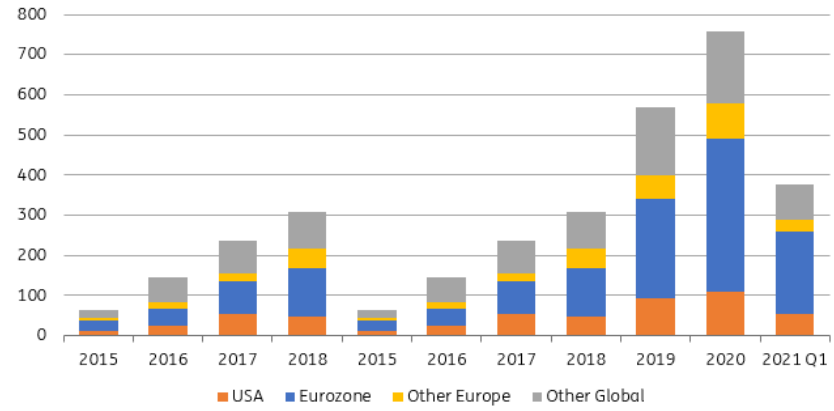
Size of global bond market in green, social and sustainability

1.25% of the global bond market

Of the global bond market (for all bonds, deep green to dark brown), 26% originated in the US, and issuance profiles are broadly reflective of this.

As for sustainable finance, we find that US-based issuers of all guises have accounted for some 19% of global issuance in green, social and sustainability bonds in recent years. So, the US representation is slightly below what is typical in brown bonds, but not by much.

Global issuance in sustainable finance ($bn)



Source: Source: ING estimates, BNEF

The overall proportion of US sustainable financing in fact fell to 15% for 2020, but partly on account of outsized Covid-inspired social bond issuance by non-US entities. But the absolute volumes rose, to $110bn (which includes loans of some $32bn).

15%

Sustainable finance bond issuance by US domiciled entitles

As % of global total (2020)

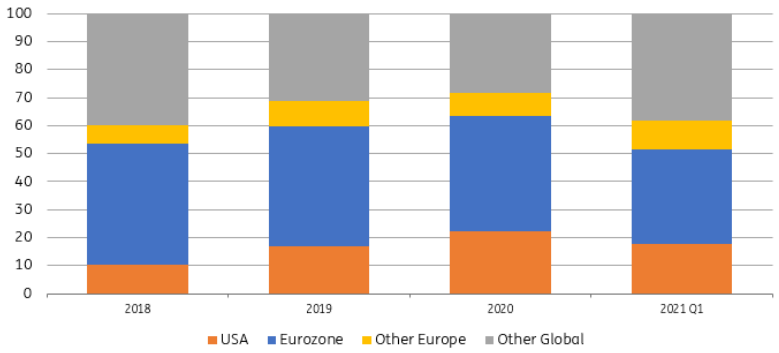
For the first quarter of 2021, bond issues from US entities ran at $34bn. That's not far off half the total amount we saw in 2020, so the pace has quickened. That said, the US proportion of global issuance in sustainable finance has slipped to 11%. It's too early to read too much into this, apart from noting that issuance in this space remains very much on the up.

And when we narrow it down to corporates?

So far we've looked at bond issuance from all entitles. So what happens when we narrow it down to corporates?

The global corporate bond market capitalisation is $41tn, of which some 27% is in US corporate debt, and this is reflective of issuance proportions. And corporate issuance in sustainable finance is running at about 1.8% of global market capitalisation, globally.

Corporate issuance in sustainable finance as proportion (100%)



Digging a bit deeper into pure corporates (excluding financials), some 22% of wider sustainable finance issuance coming from US-domiciled corporates. That is up from 17% in 2019.

22%

Sustainable finance bond issuance by US corporates

As % of global total (2020)

The proportion of US corporate issuance as a proportion of global is back down to 18% for Q1 2021, but the absolute amount of US corporate issuance in the first quarter is already running at half the total issuance seen in 2020 as a whole.

Adding loans to the narrative

The numbers for US corporates get even more interesting when we include loans. In 2020 there was $21bn of sustainable finance corporate loans. In just the first quarter of this year that is already running at $16bn, and the proportion of US corporate loans versus global ones in this space has shot up to 23% (from 16% in 2020). That's a significant build in sustainability-linked loans which is underpinning this growth.

23%

Sustainable finance corporate loans

As % of global (Q1 2021)

In terms of global size, by way of guidance, the amount done in corporate sustainable finance-orientated loans has been running ahead of bonds, at $168bn in loans for 2020 compared with $114bn for bonds.

So, this market is not all about bonds, there's an important dimension coming from loans. Total

cumulative borrowing all things considered is running at $2.5tn (compared with $1.6tn for bonds).

$2.5tn Cumulative global loans for sustainable finance purposes

How Municipalities and the Treasury stack up

Compared with the global market capitalisation of government and semi-government bonds at $87tn, the green, social and sustainability size is small, representing just 0.6%. But, the official sector is becoming a bigger player, and especially in the past couple of years.

The green, social and sustainability size is small

The US has not been a significant player there though, accounting for just 8% of wider sustainable finance issuance across all public issuers globally. The proportion is higher if we focus on Green issuance. In this space, the US accounted for 16% of issuance when compared with global public sector green bond issuance.

The dominant reason for the lower showing of the US in the overall numbers is the under-representation in social bond issuance. The US has issued bonds that could have been eligible and earmarked as social bonds, as the Treasury must finance Covid-impacted projects. Europe has been dominant here in marking out bonds specifically directed at such projects.

There's a similar theme in the supranational space. Here there has been an explosion in social bonds issuance. Partly Covid-induced, this has exploded to $55bn for 2020 from just $1bn in 2019. Such issuance has been euro dominated. Of the $55bn done, only $5bn was denominated in US dollars, and of this just $2bn originated in the US.

The big picture

The first quarter of 2021 has been busy and the US is keeping pace. Big USD issuance shows there is room for much more

Looking at the all-in summary numbers, there was $757bn of sustainable finance issuance in 2020 (bonds and loans). Of this, US-domiciled entitles issued $110bn. That equates to a 15% proportion for the US.

Global USD-denominated issuance from all entities globally was practically double this, at $212bn. In Q1 2021, the proportion of USD-denominated issuance rose further to 32% (from 28% in 2020). There is clearly demand for USD denominated bonds with a sustainable finance twist.

US issuance in Q1 2021 is impressive, at $55bn. That, in just one quarter, is half what was seen over 2020 as a whole. However, that is just keeping pace with what is happening

elsewhere, as the proportion of US borrowing in sustainable finance remains at 15% (bonds and loans).

Bottom line, while about a third of overall sustainable finance issues is denominated in US dollars, issuance from US-domiciled entities is running at under a fifth (of global issuance). So, it's good that the pace is being kept up, but the rise in USD issuance shows there is a solid market out there for more.

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Article | 20 April 2021

Robust green bond market to expand still further

With a robust first quarter of 2021, the issuance of green bonds continues apace. The European Union and its "NextGenerationEU" sustainability bond programme along with the US administration's wish to invest up to $1tn in sustainable projects in the coming eight years is set to keep the market expanding

Fed Chairman, Jerome Powell

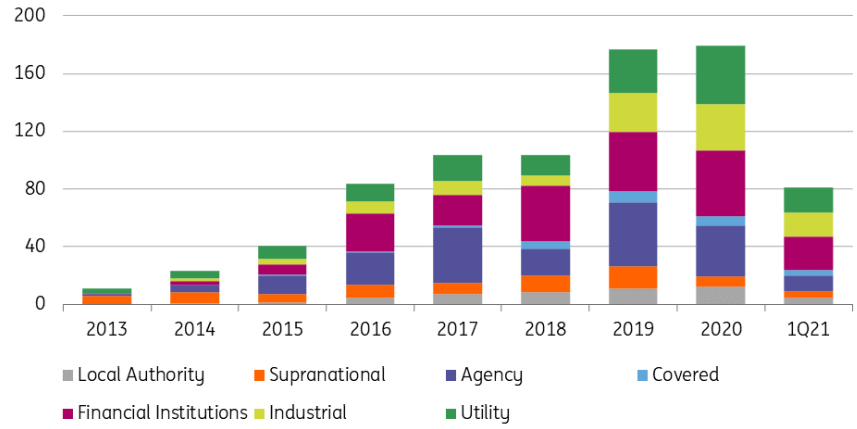
Issuance back on track for another yearly record

All currencies included, more than €81bn of green bonds equal to or larger than €100m were issued on the markets in the first quarter of 2021. These first three months represent a bit less than half the total green bond issuance in 2020. Of course, we believe that 2020 issuance, despite surpassing 2019, lost some steam because of the attention dedicated to the Covid-19 pandemic's negative impact and the need to issue social and sustainable bonds issued to mitigate the effect of the crisis.

The first quarter of 2021 proves that the milder growth in 2020 was just a “technical’ slow down and that the climate and the energy transition issues remain top priorities for governments and a number of companies.

Total Green bonds issuance

2013 - Q1 2021. EUR billion equivalent



Source: Eikon, ING

The most active issuers

Financial institutions and industrials were the most active issuers on the green bond markets with respectively €23.5bn and €20bn, each representing around 25% of total green issuance in the first quarter of 2021. For the first time, a non-financial sector is now top of the issuance leaderboard and that's industrials; the number-one position is usually taken by utilities.

Industrials' players, coming from diverse sub-sectors such as Ardagh Metal Packaging, Novelis, and Faurecia, came to the bond market with green inaugural bonds. Automotive players such as Daimler and Hyundai Motor Company returned to the green bond market to continue their expansion into the eco-friendly vehicles projects.

37% Green bonds issued

In USD in the first quarter of 2021

USD green bond issuance would spike on US administration's new sustainability ambitions

In line with what we have seen in the previous quarters and indeed years, the euro remains the main currency used to print green bond. Bonds issued in USD represented 37% of total issuance in Q1 2021. We believe that issuance in USD, especially from US agencies and corporates could spike up in the coming months and years on the back of the new US administration's ambition to put the country in line with some sustainable targets.

$1tn Spend on sustainable projects by the Biden administration

What's happening in the US

Joe Biden's plan intends to spend a trillion dollars over an 8-year period on sustainability projects, and the wording of the documentation is littered with public-private partnership ambitions. The expectation would be for the private sector to embrace initiatives that list off to include renewable energy, electric vehicles and a wider decarbonisation of the economy and green ambitions over time. We've written in detail about that here, but here are the main points:

- A key positive is that policy is coming from the top. It may need more stick (carbon taxes) than carrot (grants and partnerships) for it to prove really effective at long term de-carbonization, but there is a clear swing of the policy pendulum relative to the previous administration, one that is positioning itself to show more embrace of the need for action on climate change.
- A positive underpinning factor is that corporate America had been embracing many of these ideals through their funding programs; more of a bottom-up approach to sustainable thinking. The Biden plan in that respect cheerleads existing ambition for corporate America to do more. And there is room to do more. While about a third of overall sustainable finance issues is denominated in US dollars, issuance from US-domiciled entities is running at under a fifth (of global issuance).
- The rise in USD dollar-denominated issuance as a proportion of the total shows there is clearly demand for USD denominated bonds with a sustainable finance twist (green, social and sustainability bonds). US sustainable finance issuance in Q1 2021 is impressive, at US$55bn. That, in just one quarter, is half what was seen over 2020 as a whole. However, this is just keeping pace with what is happening elsewhere, as the proportion of US borrowing in sustainable finance remains at just under 20% in bonds (and at 15% when loans are included).

So, it's good that the pace is being kept up, but the rise in USD issuance shows there is a solid market out there for more.

59% Green bonds issued in EUR

Q1 2021

The EUR remains the green bonds' leading currency and the EU programme will keep issuance growing

With 59% of the total green bond issuance in the first three months of the year, the EUR currency continued to support European governments, agencies and companies' leadership as far as sustainability investments are concerned. While governments and agencies' green bond issuance

in the first quarter of 2021 was in line with what we saw in 2020, we think that their participation in the green bond instrument could see a new acceleration when the Covid-19 pandemic is behind us.

On 14 April 2021, The European Union released its objectives in terms of sustainability bond issuance. Between mid-2021 and 2026, the total "NextGenerationEU" bond issuance will amount to €800bn, including 30% (€250bn) as green bonds.

In 2021, up to €65bn will be brought to the market from July onwards after the EU has finalised its European green bond standards. The aim of the programme is to support the European green transition as well as boost the size of the green bonds' market and enable investors to diversify further their portfolio of green investments.

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Article | 16 April 2021 Sustainability | Video

Pang: Agreement on climate action between the US and China is closer

ING's Chief Economist for Greater China, Iris Pang, on what we can expect at next week's global climate summit. Yes, there'll be confrontations, but she's convinced that China is committed to its net-zero carbon emissions goals

Agreement on climate action between the US and China is closer

Next week's global climate summit could see some crucial breakthroughs between the US and China, according to ING's Iris Pang. Iris believes that China is committed to its 2060 net-zero carbon emissions targets and more wind and solar are coming online. Yes, there'll be confrontations and disagreements on various issues. But there's a sense that the mood has changed since the angry exchanges we saw the last time the two countries met in Alaska last month.

Watch video

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Article | 23 February 2021

Singapore Green Plan 2030 – Important steps towards a sustainable future

With the "Green Plan 2030", Singapore has joined the ranks of countries making solid pledges in the direction of sustainable development. The Green Plan 2030 is clearly not the ultimate destination for sustainability in Singapore but with a little imagination, and more plans like this one in subsequent budgets, Singapore can move towards a net-zero carbon future, if not as early as 2050, then soon after

Source: istock

Introduction

In its fiscal response to the Covid-19 crisis in 2020, we noted that the Singapore government's support measures were light on stimulus that could be described as environmentally oriented, or put it another way, "Green". Back then, the over-riding priority was job and income protection so income handouts and corporate cash flow support were appropriate and delivered in a timely and substantial fashion.

Since then, several economies in Asia have put forward new green pledges, following the direction set by the EU with their heavily environment-focused "Rescue and Recovery" plan. For example, Korea's "Green New Deal".

Along with other economies, including most notably China, Korea has now set target dates for net zero carbon emissions ahead of this year's COP26 climate change conference in Glasgow.

> *The Covid-19 crisis has caused governments to wake up to the existential climate emergency that is unfolding.*

It is very clear that around the world, the Covid-19 crisis has caused governments to wake up to the existential climate emergency that is unfolding. And in increasing numbers, they are choosing to press the "re-set button" on their economies and start taking the difficult, but necessary steps towards net zero carbon. It is also apparent that there is an overlap between the job creation needed to undo the damage caused by the Covid-19 pandemic, and plans to decarbonise the economy.

In its latest budget, "Emerging Stronger Together" the Singapore government unveils its "Singapore Green Plan 2030". In this note, we outline the main features of this plan and consider the measures being adopted in a global context, highlighting where additional measures might have been adopted or considered for future budgets.

Any move in the direction of more sustainable development is welcome, and this plan takes some important steps. There is, however, clearly a long way to go. And with COP26 later this year, international pressure to deliver concrete progress at a faster pace is mounting.

Singapore Green Plan 2030

Transport

The first concrete pledge of this Green plan is to expand Singapore's Electric-Vehicle (EV) charging infrastructure, deploying 60,000 charging points at public carparks, airports etc by 2030. This is a substantial increase from the prior 28,000 target. The EV charging goal is boosted by S$30m of earmarked funds aimed at catalysing the initiative.

60,000 is a very competitive figure by current international standards. For example, the Netherlands is one of the EU's best-equipped countries currently for electric charging points, with a 2020 figure of more than 52,000 charging points for a country with more than 500 private cars per thousand adult population (about 7.6m total car fleet). Singapore has far fewer vehicles per adult (about 110 per thousand) so a 60,000 charging unit total looks very good, approximately one for every 8.6 cars.

> *Singapore's new EV charging target by 2030 is good, but it might not be able to take "global best in class", though maybe it can in Asia.*

However, this compares to a current figure (that of the Netherlands) with a future target

(Singapore). Singapore currently has only around two thousand charging points for electric vehicles, one for approximately every 250 cars. The current ratio in the Netherlands is about one for every 150 cars. But the Dutch have announced plans for more than 200,000 units by 2025, and 1.8 million charging points by 2030, which would reduce the figure still further to one for about every four cars. So Singapore's new EV charging target by 2030 is good, but it might not be able to take "global best in class", though maybe it can in Asia.

Equally helpful we believe is the reduction of the "Additional Registration Fee" for new EVs to zero, though this appears to be only temporary at this stage between January 2022 and December 2023.

Road tax treatments are also being revised to bring EVs into line with their ICE equivalents. It looks as if petrol and petrol-hybrid vehicles are also eligible for a 1-year road tax rebate from 1 August 2021 to 31 July 2022, so it may take a bit longer in practice for net road taxes for EVs to fall into line with other vehicles than suggested unless this is taken into account in the pricing scheme. We would hope it would be.

Petrol duties were also raised, though this could be argued as more of a longer-term fiscal adjustment (estimated revenues of $113m) than an environment-aimed policy, especially as it is offset for business users with a road tax rebate worth a similar amount.

The last item under the transport heading was for a S$60bn expansion and renewal of the rail network. The Ministry of Transport has for some time noted its goal to expand the rail network from 230km today to about 360km in 2030. This is a very positive aspiration, which will help keep Singapore a car-lite nation, but as a pre-existing plan, it may be generous to include it as a new item in this budget.

Green Financing

The announcement of $19bn of public sector green bonds will be an important demonstration for the green bond market for Singapore, helping to create references for a rapidly growing market and paving the way for the private sector to embrace green financing more readily.

In a later section, we suggest measures that could make this public financing effort more effective in catalysing the private sector to follow suit. But demonstration by the public sector is a tried and trusted method for promoting green finance.

Actions of our people

This section lays out some public sector initiatives that it is hoped, will spur similar actions elsewhere. Like green finance, these appear to be demonstration efforts by the public sector with the aim of promoting a broader uptake. They include:

- Reduction plans of electricity and water usage by ministries and achieving the "Green Mark" for buildings.
- Adoption of low-global-warming refrigerant chillers (presumably for air-conditioning units) by some agencies.
- More ambitious goals under the Singapore "GreenGov.SG" initiative for the public sector. We have no details on this yet.

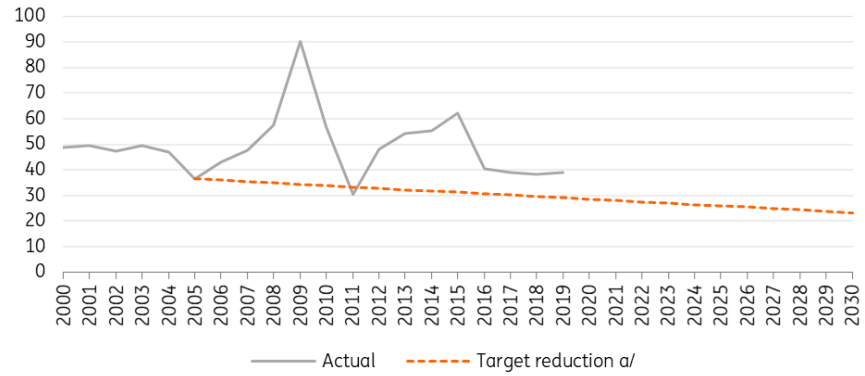
This section also noted the S$5 per tonne carbon tax introduced in the 2018 budget for the years

from 2019 to 2023 and introduced a review of its trajectory (due to be increased to between S$10 and S$15 by 2030). The review will be announced with the Budget 2022 and may or may not increases the tax trajectory from 2023.

The 2021 budget also announced the Enterprise Sustainability Programme – more details to be released by the Ministry of Trade and Industry.

That essentially wraps up the content of the "Green Plan 2030".

Singapore Annual CO2 Emission (million tonnes)



Source: Energy Country Profile, Our World in Data, ING Bank

a/ Reduction of CO2 emission by 36% from its 2005 level by 2030.

What more could have been done? Net zero?

The overwhelming consensus of opinion of scientists currently, as expressed by the intergovernmental panel on climate change (IPCC), is that net-zero carbon is the goal. This provides countries with a very clear destination. Where previously there was ambiguity about living with a low-carbon world, we now know that the target is a no-carbon world. And how long it takes to get to net zero, and how much CO2 we will pump into the atmosphere in the meantime will determine how much hotter the planet becomes.

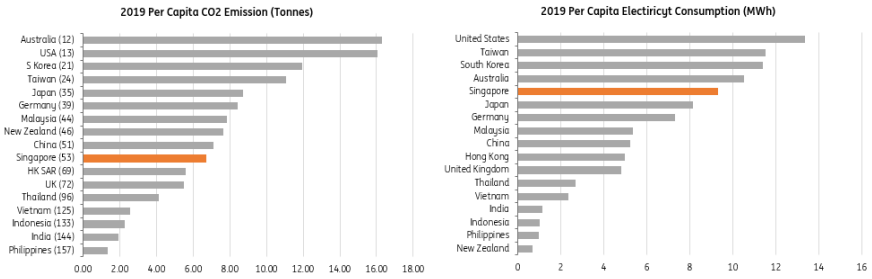
> *Not only is the destination clear, but the clock is also ticking.*

Consequently, the single biggest addition to this Green plan would have been a commitment to net carbon zero. And if not by 2050, as most other countries that have adopted such a policy have done (110 of them as of counting), then by 2060 in line with China. Singapore may be a small greenhouse gas emitter in absolute terms, but it is high when considered per capita. A bold target to net-zero by Singapore might also encourage neighbouring countries to follow suit – we consider the role of ASEAN later when discussing carbon taxes.

Net-zero is still Singapore's aspiration according to the latest budget. But without committing to a date, one could argue that some businesses will continue to drag their feet in moving to a more sustainable position.

External bodies such as Climate Action Tracker already indicate that if all government's Nationally Determined Contributions (NDCs) were in line with Singapore's, it would be insufficient to keep climate change under 2%, and certainly not consistent with the Paris Club's more ambitious 1.5% maximum goals. Accelerating policy action was undertaken at the last COP meeting, but more is certainly still possible. The arguments for doing more sooner remain strong from a climate, as well as from an economic standpoint. There does not have to be a trade-off between economic growth and sustainability.

Per Capita Electricity Consumption and CO2 Emission



Source: Energy Country Profile, Our World in Data, ING Bank

Electric Vehicles (EVs)

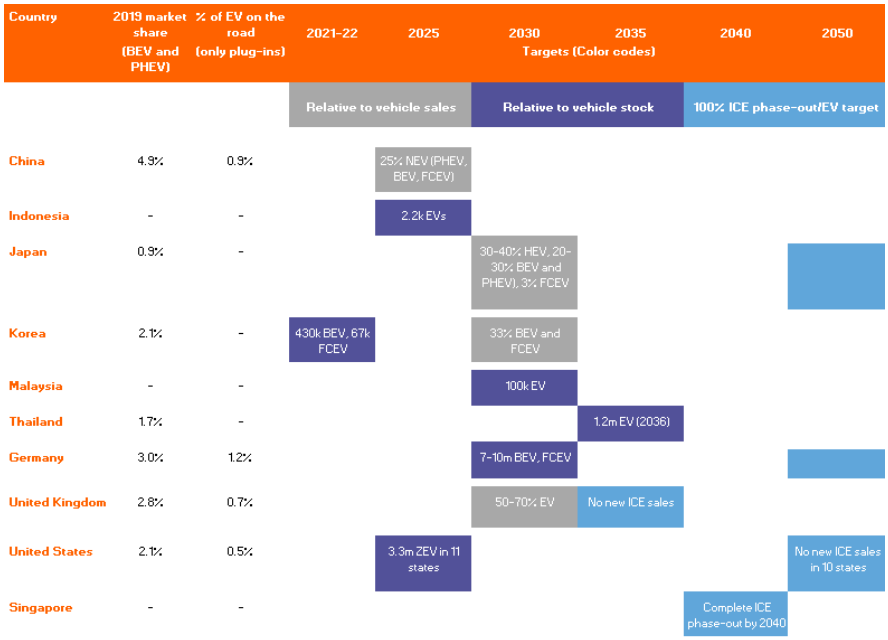
The EV push in Singapore is welcome, though it is starting a little later than in some economies, and one could argue that it consequently needs a slightly stronger push than has been given here. Though it is always easy to argue that more should be done, and we concede that this could be argued by environmentalists whatever had been done.

That said, the actions to bring road tax for EVs into line with ICE vehicles does look as if it could have gone further, and perhaps been met with an increase in road tax for internal combustion engines, making it revenue neutral. There is, it seems to us, an argument not to level the playing field with respect to ICE vehicles, but to skew it in favour of EVs. That said, these moves could be viewed as a first step in that direction.

> *There could also be preferential treatment for EVs.*

Countries like Norway show how successful tax incentive schemes can be to help speed the adoption of EV uptake. There could also be preferential treatment for EVs with respect to the Electronic Road Pricing traffic system during the transition too, and dedicated lanes to ease congestion for EVs. In short, this is a great initiative, and it would be a shame if it did not progress rapidly simply for lack of a big enough initial nudge.

Complete phasing out of ICE vehicles



Source: IEA Global EV Outlook 2020

BEV-Battery Electric Vehicle, PHEV- Plug-in Hybrid Electric Vehicle, NEV-Neighbourhood Vehicle, FCEV-Full Cell Electric Vehicle, HEV-Hybrid Electric Vehicle, ZEV-Zero Emission Electric Vehicle, ICE- Internal Combustion Engine

Solar missing

In a video on the Green Plan from the Ministry of Sustainability and the Environment, there was talk of fitting public housing, managed by the Housing & Development Board, with solar panels. This is an idea that is particularly compelling, as not only does it begin to address Singapore's relatively low solar photovoltaic (PV) electricity generation, such retro-fitting for environmental projects are highlighted as some of the most positive public policy actions that can be taken in terms of job creation and GDP multipliers, according to many academic studies. There is no reference to this in the budget speech, so we are not yet clear if this is part of the Green Plan or not. If not, that would be a pity. And if it is, we would suggest not limiting this to HDBs.

> *Singapore is indeed hindered from greater take up of some renewable energy sources.*

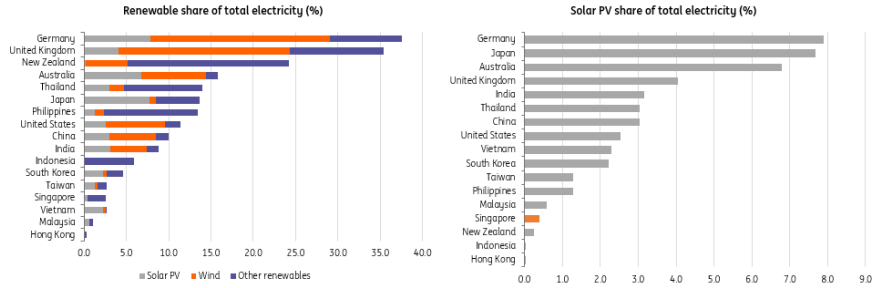
Singapore is indeed hindered from the greater take-up of some renewable energy sources. Sitting just above the equator, there isn't much wind, and there isn't much tidal action to harness either. Biomass is also not something that will ever be readily available to Singapore. For solar, the argument is generally made that there is insufficient landmass to make this work. However, the HDB suggestion shows that this is possible, and with a little imagination, it is not too big a stretch to see how this could be rolled out to other types of construction.

There are, for example, more than 200km of covered walkways in Singapore, protecting residents

from the extremes of sun and rain. These are at least 1.5M wide and sometimes wider, so represent an area of no less than 300,000m2. That is the equivalent of 42 soccer pitches and provides enough unused space for about 300MW of solar PV power generation. And it all sits neatly by the roadside with good access to the grid. Throw in all the MRT stations and encourage private housing to do likewise with subsidies, and you could multiply this many times.

This still won't solve all of Singapore's renewable or even solar energy needs. The plan to import up to 10GW of (solar) energy from Australia's Northern Territory will undoubtedly also be required. But until that gets off the ground, this would help raise Singapore off the floor with respect to solar power. For comparison, cloud-covered nations like the UK generate proportionately (relative to total generation) eight times more electricity from solar energy than (usually) sunny Singapore, even though they also have other more readily available alternative sources of renewable energy, such as wind, wave, hydro and biomass as well.

Singapore's relatively low renewable share in total electricity generation



Source: Energy Country Profile, Our World in Data, ING Bank

Green finance

We are very encouraged by the government's goals on green bonds, though there are also other forms of green finance that it could also usefully promote and we would not limit this to the green bond market.

What would surely catalyse the uptake of green finance in Singapore, would be greater clarity on the timeline of decarbonisation. Access to a deep and liquid green finance market is, without doubt, a helpful addition to the overall decarbonisation objective. But legislation including the tax structure will also arguably be a necessary condition. This takes us neatly to the next potential addition to the Green Plan – carbon taxes...

Carbon tax

Singapore is one of only a few countries in Asia with a carbon tax, which is to be applauded. But at only S$5 per tonne of CO2 Singapore's carbon tax, this is at the low end of the scale globally. Japan also has a carbon tax, but it is probably too low to make a difference to their own sustainability goals.

Singapore's carbon tax is at the low end of the scale globally.

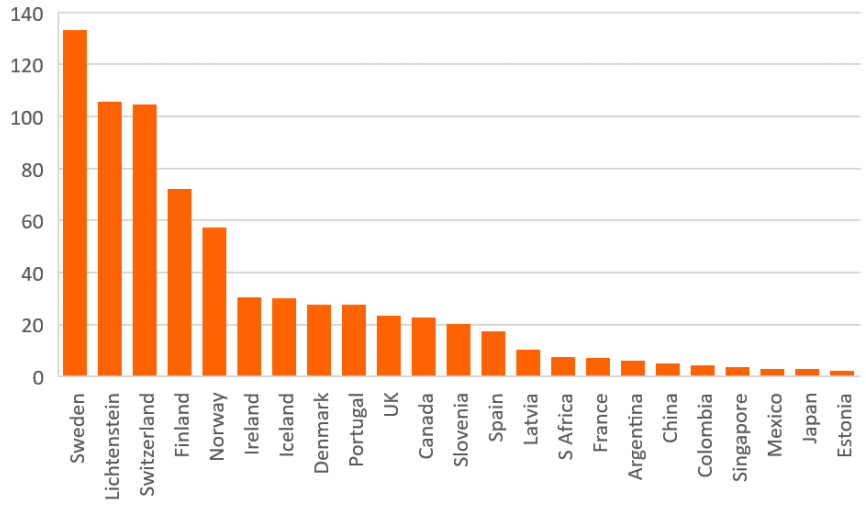
The review of the carbon tax rate is a positive development but potentially, could have been fast-tracked further to provide a greater push to some of the other complementary policy initiatives such as Green finance.

Given that such taxes could potentially encourage neighbouring economies to free-ride and poach market share, this would seem like a perfect policy to promote at a regional level. For example, through the ASEAN.

ASEAN's climate change credentials are not currently particularly impressive. Most other ASEAN members score no better than Singapore according to the Climate Action Tracker (with the exception of the Philippines), and many of them (like Vietnam) considerably worse. The ASEAN statement at the COP25 meeting was very light on commitment, and fairly heavy on requests for money from developed nations.

Invigorating an ASEAN rethink on sustainability through a regional carbon tax seems to us to be a very good way to both promote sustainability locally, as well as regionally, without losing competitiveness to neighbouring economies.

Carbon tax rate USD / tonne



Source: Carbon Pricing Dashboard, World Bank Group

Conclusion

With the "Singapore Green Plan 2030", Singapore has joined the ranks of countries making solid pledges in the direction of sustainable development. It is early days, and there is without a doubt, a very long way to go with a number of other countries globally, as well as in Asia, further advanced in pursuit of this goal.

However, we believe that with a little imagination, and more plans like this one in subsequent budgets, Singapore can also move towards a net-zero carbon future, if not as early as 2050, then soon after. The Green plan 2030 is clearly not the ultimate destination for sustainability in Singapore, but it is an important first step on that journey (see "Building A Sustainable Home For All").

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