



PGI ISSUE 5 2022

## Projects Global Insight

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# Foreword



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Welcome to the new issue of the Project Global Insights 2022. In some areas of the globe we are now seeing a gradual loosening of restrictions triggered by the COVID-19 pandemic, and stakeholders and governments across the world continue to focus on transport, infrastructure and clean energy investments to boost economic activities.

Our Coronavirus Resource Center continues to provide advice on force majeure in supply chains, employment matters, and other coronavirus-related issues. For further insight on how infrastructure, transport and construction are adjusting to the changes brought about globally by the COVID-19 pandemic, subscribe to the DLA Piper Infrastructure [Podcast here](#). Additionally, the DLA Piper Project Simulator (DPS) is now being offered in-person again for those who are returning to the office and looking for valuable team-building activities as well as virtually. DPS enables participants to replicate real-life circumstances of risk and project distress management – which is highly relevant in the current global climate. If you are interested in scheduling a simulation session or would like to find out more, please contact [dps@dlapiper.com](mailto:dps@dlapiper.com).

With rising awareness around Sustainability and ESG, contributing to a sustainable future is more important than ever. DLA Piper has been actively working towards building its image as a legal firm at the forefront of sustainable strategy. Our big win for projects in the context of the ENR sector was being selected as legal services provider for the 26th UN Climate Change Conference of the Parties (COP26), which took place in Glasgow in November. On this page you will find links to COP26 related activity – events you can be part of, insights on the COP26 pillars, and details of what we were doing in Glasgow.

DLA Piper has signed a corporate power purchase agreement as part of DLA Piper's drive to reach its decarbonisation targets. We are the first law firm anywhere in the world to undertake a Corporate Power Purchase Agreement (PPA). The PPA is a major milestone in DLA Piper's journey to decarbonise and follows the firm's announcement committing to halve its greenhouse gas emissions in absolute terms by 2030.

In this issue of the PGI we will discuss several aspects of a sustainable future.

Our first insight takes us to the UK. We provide an in-depth analysis of the decarbonization of European transport, focusing on key features and challenges in three key transportation subsectors: aviation, rail and shipping. We explore how corporates and investors plan to cut emissions, their ambitions and investment plans, and the impact of government policy and new technologies. We also examine the steps they are considering as they look to optimize their investments and minimize risk.

We then review the new decommissioning liabilities for the oil and gas industry in Australia. In recent years the focus of the Australian government has turned to managing declining production and preparing to decommission offshore facilities, wells and pipelines. Recent events provide a case study of what can go wrong in decommissioning. However, the government's review also identified a number of areas for improvement.

We also explore the potential rise of SESG and key industry sectors in Latin America. In our article we discuss that business growth in Latin America will be led by digitally driven sectors, which will be the fastest growing segments over the next five years, followed closely by the infrastructure and construction, life sciences and healthcare, and cannabis sectors. Industry-wide SESG strategies are now a major topic of conversation.

Following that, we look at Green Hydrogen in Chile. The article presents new legislation framework adopting depolarization and transition to clean energy, explains where we stand globally regarding energy supply and discusses the importance of the National Green Hydrogen Strategy.

We then arrive at our final stop – the US, where we consider the opportunities and challenges that are likely to be thrown up by the Biden plan, the ambitious, long-awaited infrastructure plan presented by the Biden Administration in March 2021 known as the American Jobs Plan.

We hope you enjoy this edition of PGI and we welcome your comments and suggestions for future topics. Get in touch at [fp-enquiry@dlapiper.com](mailto:fp-enquiry@dlapiper.com).

# Driving change: The decarbonisation of European transport report 2021

We are delighted to announce the launch of our latest thought leadership report: *Driving change: the Decarbonisation of European Transport*.

Our new study, in association with Acuris Studios, surveyed 100 senior executives of organisations based in Europe that have invested in European decarbonisation projects and/or technologies related to aviation, rail or shipping in the past 24 months.

Decarbonisation is now a primary investment strategy driver for aviation, rail and shipping businesses. And as this study reveals, the pace of investment is accelerating. Over the next two years, more than a third of corporates and two-thirds of investors are looking to allocate EUR1 billion or more to decarbonisation efforts – proportions that are significantly higher compared with the past two years.

Transport is the bedrock of modern economies. It is also a major source of carbon dioxide emissions. To put this in context, nearly a quarter of Europe's CO<sub>2</sub> emissions – more than a billion tonnes a year – are generated by transport, according to European Union research. And transport emissions, unlike those from other sectors, are rising rather than falling.

Our report examines decarbonisation strategies in these three key transportation subsectors. We explore how both corporates and investors plan to cut emissions, their ambitions and investment plans, and the impact of government policy and new technologies. We also examine the steps they are considering as they look to optimise their investments and minimise risks

## Key findings

- **Decarbonisation high on the agenda:** 79% of respondents say that decarbonisation is a primary driver of their organisation's investment strategy
- **Capital allocation rises:** 34% of corporates and 66% of investors expect to devote at least EUR1 billion to decarbonisation projects and technologies over the next 24 months, versus 20% of corporates and 48% of investors over the past 24 months.
- **Investment increases:** The majority of respondents across all subsectors anticipate significant increases (between 50% and 200%) in their investment in decarbonisation over the next five years compared to the past five years.
- **Ambitious plans:** More than half of corporates (across all three subsectors) say that their organisation plans to cut net carbon emissions by at least 40% by 2030 compared with current levels.

We also held a panel discussion and live Q&A with senior representatives from the transport and investment industries on Tuesday 16 November, to assess the findings of this report.

## Breathe easy: the drivers and challenges of decarbonisation

"Cut emissions now" is the message from the EU. Our survey reveals that those in the sector are hearing this loud and clear, but there are still obstacles to overcome.

While there is a large – even bewildering – amount of guidance and legislation linked to decarbonisation, all of it is designed with a single purpose: to ensure the EU is climate neutral by 2050. Transportation is one of the biggest sources of CO2 emissions. Unlike other sectors of the economy, it has – so far – largely escaped regulatory measures to curb emissions. But that is about to change. Under its "Fit for 55" climate package, the EU is now targeting an emissions reduction of at least 55% by 2030 compared to 1990 levels.

Achieving the new target will mean a major revision of transport-related legislation. This will include an expansion of the EU's Emissions Trading System (EU ETS). The proposals are ambitious: these include bringing shipping into the EU ETS for the first time, along with an end to the tax exemption for aviation fuel.

*"The call to decarbonise the industry will doubtless come at some significant cost, with a diverse range of approaches to reaching that objective. The way in which*

*such significant capex is financed is clearly a topic in itself and the traditional asset ownership models may require evolution and adaptation."*

*David Manson, DLA Piper Partner, Manchester*

A large majority of respondents from aviation (82%), rail (79%) and shipping (85%) agree that decarbonisation is a primary driver of their organisation's investment strategy. Aviation – arguably the toughest subsector to decarbonise – stands out as having the highest proportion of respondents saying that they strongly agree that decarbonisation is a primary driver (59%), versus 49% each for rail and shipping.

Respondents are backing up their words with capital. Our survey shows that many have already made significant investments in decarbonisation. To put this in context, 20% of corporates and 48% of investors have allocated EUR1 billion or more to decarbonisation projects and technologies over the past 24 months.

Looking ahead, large-scale investment is set to grow even further: 34% of corporates and 66% of investors are looking to allocate at least EUR1 billion to decarbonisation over the next 24 months. And there is a broad range of investors who see transport as an attractive asset, particularly in a world transformed by COVID-19.

*"Private capital funds (infrastructure funds) and institutional investors (pension funds and insurance companies) have been, and are likely to continue to be, the types of investors with appetite for transport assets."*

*Mafalda Ferreira, DLA Piper Partner, Lisbon*

## Decarbonisation dilemmas

All long-term investments come with an element of risk. But decarbonisation-related investments in the transport sector present particular challenges. History shows that decarbonisation targets are apt to be revised. What would happen to the value of your investment (and to your competitive position) if the emissions target you are working to is subsequently increased or brought forward – or even shelved?

In the rail industry, for example, while the use of overhead electrification brings benefits beyond simply meeting emissions targets, there are other aspects which may cause more issues.



*“There is potentially more complexity in decarbonising other assets including replacing diesel trains on branch lines and de-carbonising the construction processes for rail systems. Changes in targets here may add unnecessary cost into processes which already take a number of years to complete.”*

*Robert Smith, DLA Piper Partner, Leeds*

The longevity of transport assets amplifies these risks. Aircraft have a lifespan of around 20 years, while ships typically last from 25 to 30 years. Meanwhile, a train built today could still be in service in 2061.

In short, transport assets have a lifespan that typically extends far beyond the range of current policy horizons. Managing this situation is complex, given that an investment decision made today is likely to lock in a predetermined level of emissions for decades.

Getting investment decisions wrong is an area of real concern for respondents. Indeed, our survey shows that a surprisingly high proportion says that their businesses have already suffered due to poor decarbonisation investments. Half of aviation respondents and a third of rail and shipping respondents say their organisation suffered financially from a decarbonisation-related investment that later proved to be ill-judged.

Significantly, a majority of executives say that mistakes made by their organisation were avoidable. Sixty percent of the respondents that suffered financially believe that with better preparation, the error could have been avoided.

*“We could have used external help in answering some of the critical questions. These were related to the decarbonisation strategy and the scientific findings. We should have involved more experts.”*

*Head of Finance of a Spain-based aviation corporate*

## **Sector Watch**

Aviation, rail and shipping respondents are united in their ambition to decarbonise their industries. But the way in which each sector is looking to deliver decarbonisation is different. One reason for this is that each subsector faces radically different technical challenges. Another is that regulatory requirements differ between subsectors.

A key factor here is the proposed expansion of the EU's Emissions Trading System (EU ETS). This will expose aviation and shipping to carbon pricing for the first time. By contrast, rail (a low emitter) will remain outside the EU ETS.

The prospect of tighter regulation is having an impact on investment plans – particularly those of aviation and shipping corporates, who expect to substantially increase their investment in decarbonisation projects in the next five years.

Regulatory pressures are not the only investment driver. There are market forces in play as well – notably carbon prices. These have risen sharply in the past year. To put this in context, the EU ETS carbon price reached EUR60/tonne for the first time in August 2021 – a near doubling since January – while the UK Emissions Trading Scheme carbon price climbed to its highest ever level (GBP64.75/tonne) in September 2021.

Critically, our survey reveals that most respondents are sensitive to a carbon price that is considerably lower than this. Indeed, a majority of respondents (across all three sectors) say they require a minimum price of EUR50/tonne or less to impact on their investment strategies. This threshold has now been decisively exceeded – suggesting that for more than 75% of respondents (were they to be within the EU ETS), it would now be cheaper to invest in decarbonisation than to purchase emissions allowances.

*“Aviation is a highly regulated sector and change does not always happen quickly. The proposed technical advancements necessary for decarbonisation (sustainable aviation fuel, electrification, modernisation of airspace management) will require significant regulatory development. Accordingly, a roadmap must build in adequate time for ongoing engagement with key regulators around the world.”*

*Tony Payne, DLA Piper Partner, London*

## **Conclusion: For a cleaner future**

*“Smaller companies do not have the internal expertise to guide their efforts. There is a vague idea about the climate and energy framework and most of the objectives are not widely understood.”*

*Head of Finance of a German-based corporate*

Decarbonisation is now a primary investment strategy driver for aviation, rail and shipping businesses. And as this study reveals, the pace of investment is accelerating. Over the next two years, more than a third of corporates and two-thirds of investors are looking to allocate EUR1 billion or more to decarbonisation efforts – proportions that are significantly higher compared with the past two years.

The benefits of decarbonisation – lower emissions, regulatory compliance and potentially lower operating costs – are clear. But there are risks too. Tighter regulatory deadlines mean that both corporates and investors are under pressure to make investment decisions more quickly. There are also questions around the maturity of the technology and how easily it can be deployed. Overarching all of this are concerns about the complexity of the regulatory environment.

Read the report to learn steps that both corporates and investors can take to optimise their investments and minimise risk.

*“We have a target year for decarbonising different processes within the organisation – we have to meet these targets to achieve our 2050 goals.”*

CEO of a Denmark-based corporate

## Webinar

We recently organised a live webinar for clients, to assess the findings of the research. Our partners, Tony Payne and Robert Smith, were joined by senior figures from Arup, APM Terminals, the FT, Manchester Airports Group (MAG), the DfT and Netjets Europe. The speakers and their different perspectives provided a stimulating and thought-provoking discussion of the issues, offering real substance and valuable insights into this crucial and timely topic.

Discussion points included:

- Should investors/corporates hold back on major decarbonisation investments until new rules are finalised?

- What are the main mistakes corporates and investors make with decarbonisation investments – and how can these be avoided?
- Which decarbonisation technologies/trends are generating the most interest?
- Are there enough incentives to encourage investment into decarbonisation in the transport industry?
- What should the roadmap to net zero by 2050 look like, to avoid a stampede to the finish and to provide a timetable for action?
- How do you decarbonise the logistics chain without offsetting carbon emissions?
- How important is government policy in driving decisions made by the private sector and by investors to prepare for net zero?

The full findings of the research are available in our report, which can be accessed below, as well as a recording of the webinar.

We hope you enjoy the Report.



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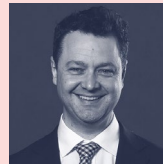
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# ‘Boomerang’ decommissioning liabilities for the oil & gas industry in Australia

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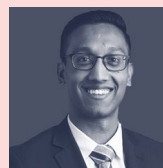
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Since ExxonMobil drilled Australia's first offshore well in 1965, Australia's oil & gas industry has developed, grown and matured, supporting Australia's energy security and generating significant economic growth.

In recent years, as offshore fields located to the north-west and south-east of the country have reached mid-to-late life, the focus of the Australian government has turned to managing declining production and preparing to decommission offshore facilities, wells and pipelines.

The Australian government, its regulators and industry have a big job on their hands. A credible estimate cited by government has put the total cost of decommissioning offshore infrastructure at approximately AUD60 billion over the next 30 years (cost estimate based on the regulatory base case for decommissioning, which is full removal of infrastructure and restoration of the seabed).

Infrastructure to be decommissioned includes 57 platforms with a total weight of 755,000 tonnes, equivalent to the steel in 14 Sydney Harbour bridges. There are also 11 floating facilities, 6700 kilometres of pipelines, 1500 kilometres of umbilicals and more than 500 subsea structures. There are also approximately 1000 wells to be plugged and abandoned.

## The NOGA administration

Recent events provide a case study of what can go wrong in decommissioning.

Government and industry have recently come under intense scrutiny in relation to the voluntary administration in 2019, and subsequent liquidation in early 2020, of the Northern Oil and Gas Australia (NOGA) group of companies, which in 2016 acquired the Northern Endeavour FPSO and Laminaria-Corallina fields in the Timor Sea to the north of the country.

The administration and liquidation of NOGA has meant that the Australian government has assumed liability for the decommissioning of the Northern Endeavour and Laminaria-Corallina fields. Recently, it has been proposed that this liability be passed-through to industry by way of an unprecedented 'special levy' (more on this below).

## Regulations reviewed

Partly as a result of the NOGA administration and liquidation, in 2020 the Australian government fast-tracked a review of the decommissioning provisions in Australia's key offshore oil & gas law, the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (the **Act**).

The government's review found that, in general, the Act is sufficient to regulate a maturing industry with a number of current provisions for decommissioning, such as:

- arrangements for property and equipment, plugging and abandonment of wells and remediation activities prior to title surrender, contained in section 270 of the Act;
- financial assurance, to meet costs, expenses and liabilities relating to petroleum activities (e.g. remediation of damage to seabed or sub soil) contained in section 571 of the Act;
- maintenance and removal of property, contained in section 572 of the Act;
- directions relating to the restoration of the environment, from NOPSEMA to current or former title holders contained in part 6.4 of the Act; and
- a regulatory process for the plugging and abandonment of wells, contained in part 5 of the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011.

However, the government's review also identified a number of areas for improvement. As a result, in December 2020, the government announced changes to the Act, which it stated were aimed at strengthening and clarifying the regulatory framework in relation to decommissioning.

The changes to the Act, which were recently passed, receiving royal assent in September 2021, include:

- **Changes in company control:** expanding the types of transactions requiring government assessment and approval to include changes in ownership or control of a titleholder entity, such as through a corporate merger, acquisition or takeover (previously, only direct asset/title transfers required government assessment and approval).
- **Trailing liability:** expanding the circumstances where a previous titleholder can be 'called back' to remediate the title areas or conduct other activities where the current titleholder is unable to do so, and also introducing the concept of a 'related person' (i.e. a person who can be called back where they are a related body corporate, or a determination is made that the person was capable of benefiting, or has significantly benefited, financially from the operations, has been in a position to influence compliance and/or acts or has acted jointly with the titleholder).
- **Suitability:** including revised decision-making criteria within the Act to assess competency and suitability of entities applying to operate under the regime. These assessments at key decision points include financial capacity, technical capability, history of compliance and corporate governance arrangements.

The majority of the changes to the Act took effect from 2 March 2022. Trailing liability will apply retrospectively to permits, leases, licenses or authorities that were cancelled or otherwise ceased to be held on or after 1 January 2021.

Key provisions in the Act are supported by subsidiary legislation, guidelines and policy that in some cases are yet to be released. The Australian government recently released guidelines that provide further information about how NOPSEMA and the Minister will utilise the expanded trailing liability provisions. Areas where more detail is awaited include in relation to decommissioning planning, taxation treatment of decommissioning liability and possible models of financial assurance.



## Ramifications for industry

The changes to the Act have been accompanied by a distinct ramp-up in oversight and enforcement by the government in relation to decommissioning, with real ramifications for industry.

The announcement of increased scrutiny on asset buyers and the potential for trailing liabilities for past asset owners (together with, in one instance, a strongly worded letter from an Australian government Minister) discouraged two IOCs from proceeding with planned USD multi-billion asset sales in late 2020 and early 2021.

Since then, the Australian government has also:

- issued directions to an IOC to decommission two fields off Western Australia and the Northern Territory, in particular requiring plugging and abandonment of six wells and removal of all subsea equipment including pipelines, umbilicals, mooring systems and manifolds at one field before the end of 2021;
- ordered complete decommissioning by a major Australian oil & gas player of an oil field off Western Australia, comprising plugging and abandonment of 18 wells by mid-2024, removal of all other equipment by the end of 2024, and restoration of the seabed environment by the end of 2025; and
- imposed deadlines for decommissioning in respect of an IOC's 10 platform and approximately 200 well portfolio in the Gibbsland Basin off Victoria in southern Australia.

A special 48 cents per barrel levy, to run indefinitely, is also proposed to be imposed across all Australian offshore petroleum producers, effective retrospectively to 1 July 2021, to fund the government's costs with respect to the decommissioning of the former NOGA assets, which it is speculated could be up to AUD1 billion.

## Risks and liabilities grow

Even if a special levy was to 'pass through' its liabilities in relation to the former NOGA assets, the decommissioning of offshore oil & gas assets remains a significant fiscal issue for the Australian government. Tax deductibility of decommissioning costs may mean that a significant portion of upcoming decommissioning costs ultimately fall to the government (and thereby the Australian taxpayer).

If this occurs, the oil & gas industry should brace for decommissioning liabilities to become more of an issue in the community, and for some backlash – which in turn will spur on government to take even more stringent oversight and enforcement action in relation to decommissioning.

In such a context, it would not be surprising to see the trailing liability provisions recently introduced by government 'boomeranging' decommissioning liabilities back to industry, and being used by the government to pursue parent companies, joint venture partners and former asset owners in relation to decommissioning liabilities, where those liabilities cannot be met by the existing asset owner. In the worst cases, trailing liability may even be applied again across every operator in a basin or jurisdiction (as with the special levy proposed to be introduced in relation to the former NOGA assets).

In these circumstances, Australian oil & gas operators need to shift from solely focusing on improving their own decommissioning practices, at the technical level to also closely scrutinising the decommissioning capabilities of their joint venture partners and those who acquire assets from them (whether by asset transfer or at the corporate level) – and those who have acquired assets from them in the past. The financial and technical capabilities of these persons will from now on require substantial and ongoing due diligence. Asset and share sale transaction documentation will also need to be structured so as to appropriately manage ongoing decommissioning liabilities.

## How to ensure future investment

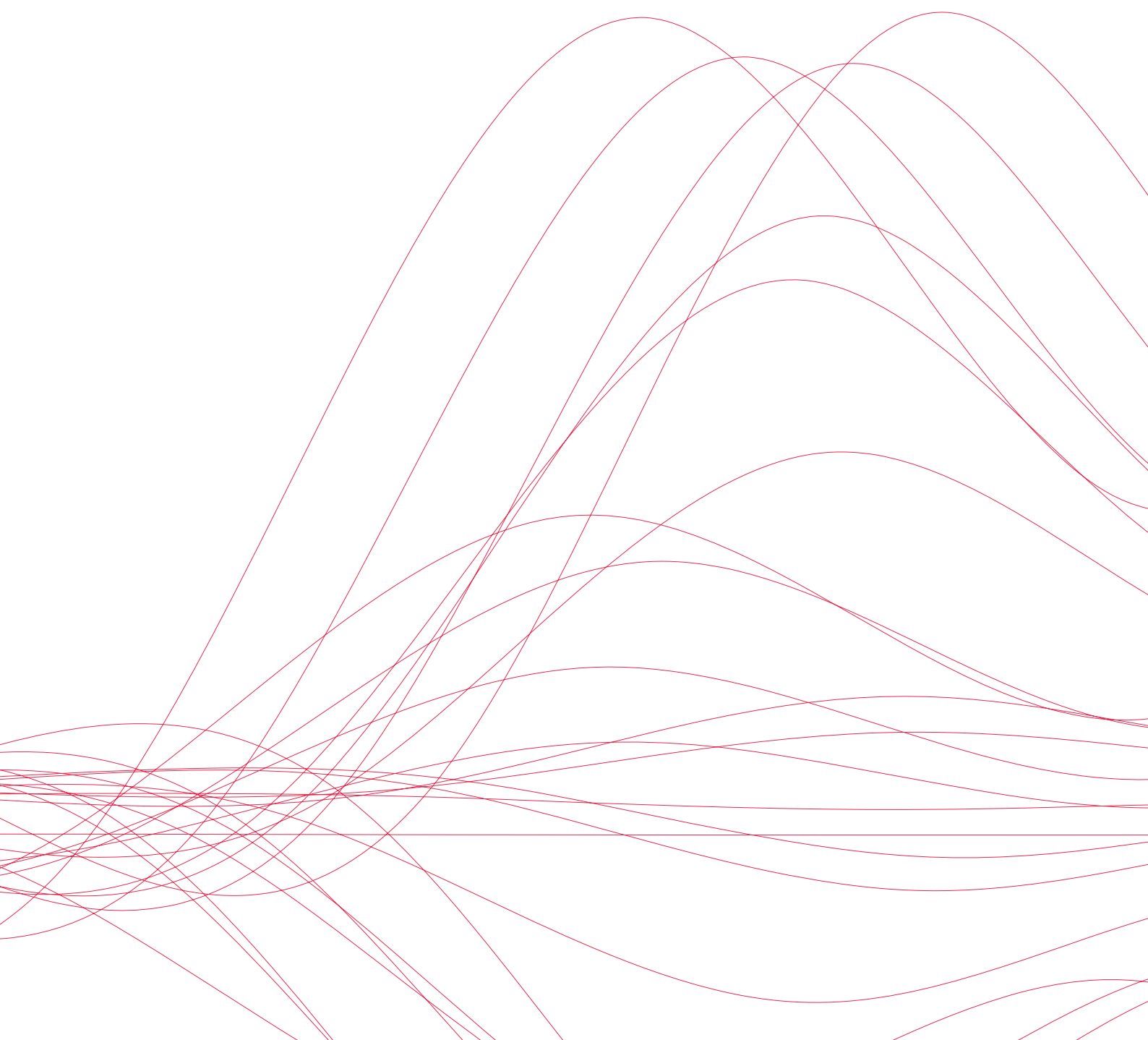
There are opportunities for government and industry in decommissioning.

The chief opportunity for government is to ensure future investment in the industry – which will continue to be essential in the Asia-Pacific region for many years to come – by providing clear and detailed decommissioning regulations, that align the interests of all stakeholders.

One way that government and industry can become more aligned is to agree on better structures around decommissioning funding and security, also known as financial assurance. Often in the past, financial assurance in respect of decommissioning has been supported by large IOC balance sheets and captive insurance arrangements. However, governments are increasingly looking to bonds and other sureties, as well as innovative decommissioning fund models (already popular in production sharing contract jurisdictions). In Australia, there are some collective decommissioning fund models already in use in respect of onshore mining in Western Australia, and onshore petroleum and mining in Queensland, which might be considered for use in offshore petroleum. There is also the potential for innovative new financing solutions to provide financial assurance for decommissioning. The development of new models and solutions for financial assurance can be supported by clear and detailed regulations.

A major opportunity for industry also exists to demonstrate genuine alternatives to the regulatory base case for decommissioning, which is full removal of infrastructure. Alternatives to full removal can save enormously on cost, and when done properly can lead to genuinely positive environmental outcomes – for example, infrastructure left in-situ can continue supporting biodiversity (see the ‘rigs to reefs’ initiatives, for example in the Gulf of Mexico – a scenario which is well-suited for use in offshore Australia, if environmental criteria are met). Infrastructure left in-situ might also be re-purposed for use in carbon storage and other net-zero projects – earlier this year, a major Australian oil & gas player and an IOC announced that they are collaborating on opportunities in this space in the Timor Sea.

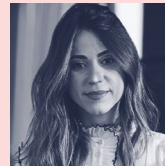
Finally, there are also opportunities for the private sector in creating new types of industry business model, such as the “supply chain-led delivery model” used in the North Sea region. There and elsewhere globally, this model sees large operators relinquishing late life assets in a planned manner to smaller, focussed operators who can lower costs, eke out the final barrels of production and then bring closure to the asset using specialist decommissioning skill sets. This ‘right assets right hands’ approach requires an active regulator to ensure that the ‘right assets’ do indeed get into the ‘right hands’, but if that can be achieved, genuine benefits arise for governments and industry alike.





# Economic drivers in Latin America: Key industry sectors and the rise of ESG

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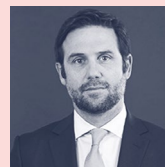
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Overshadowed by the pandemic, Latin America's GDP growth results closed 2020 at nearly - 8%, while global GDP growth results closed at - 5%. The growth forecast for 2021 is at 4.1%, relying on the vaccination efforts across Latin America countries to combat COVID-19, as well as the many relief packages launched by the world's biggest economies to help emerging economies.

Looking ahead to 2030, the size of Latin American economies is expected to be at USD9.2 trillion, and these economies are forecast to take a more prominent position in the world from a geopolitical point of view, particularly if they can enact necessary economic reforms.

Much of the Latin American economy has been tethered to the global commodity cycle for many decades, and we must recognize that this will persist if Latin American countries can competitively maintain the same pace - or even overperform - Asia Pacific countries.

We are of the view, however, that business growth in Latin America will be led by digitally driven sectors, which will be the fastest growing segments over the next five years, followed closely by the infrastructure and construction, life sciences and healthcare, and cannabis sectors.



Not surprisingly, US-listed Special-Purpose Acquisition Company (SPACs) packages that were launched this year in relation to Latin America primarily invest in disruptive technologies, including artificial intelligence, IoT, robotics, cloud technologies, mobile communications, and similar technology-based companies. In 2021, the total amount of SPACs for this purpose has already reached nearly USD1 billion (a figure which would have been utterly inconceivable just a year ago).

## Potential areas of growth in Latin America

Media, sports and entertainment is an example of a digitally driven industry that will grow exponentially across Latin America in the near term. Unique challenges or advantages for media, sports and entertainment companies arise from the fact, for example, that consumers now tend to devote their entertainment time to video gaming and livestreaming services – virtualized sporting events and livestreaming will not become an artifact of the pandemic only. Also, demand will rise for content that is more social and has more potential to augment – or at least compete with – traditional video content. One ramification of this trend is that studio productions and live entertainment will need to reboot and return to business differently than “doing business as usual.”

Another aspect of business expansion across Latin America may be seen in the global cannabis market, which today is valued at USD150 billion and is forecast to grow rapidly, reaching a value of USD272 billion by 2028. The Brazilian cannabis sector is projected to exceed the global growth rate over the ten years to 2030, being valued at USD45 billion. The same trend also applies to Colombia and Uruguay, which are already among the most prominent countries for Latin American businesses operating in the cannabis sector.

The infrastructure and construction sector is also fertile ground for Latin American countries to strengthen after GDP growth gains over the ten years to 2030 – and here we are not simply referring to basic infrastructure projects (eg sanitation) but to infrastructure projects aiming to strengthen transboundary linkages throughout the region, improving and extending vital services like road and railroad networks and developing clean and renewable energy. To illustrate, the Investment Partnerships Program in Brazil is projecting from a strategic point of view to expand infrastructure projects relating to the transportation chain and growing urbanization in the next two years. This trend has also been supported by the Brazilian Development Bank, which has been repositioning

itself with business-oriented strategies aiming to increase the range of institutional investors both nationally and internationally in the long-term financing of infrastructure projects to help foster the Brazilian economy.

It is understood that pandemics are now a constant threat to humanity due to globalization. The life sciences and healthcare industry will play an increasingly important role in the global economy, now alongside technology, based on a philosophy of patient access and (as seen in the current developments around COVID-19 vaccines) readiness to collaborate with business competitors in service of the greater good (eg digital health IPOs and SPAC deals for health innovation already raised USD8.5 billion only in Q1 2021). This trend encompasses a broad range of issues, such as transparency in access to clinical trials, the ethical use of data, and affordability of access.

## SESG strategy

Latin American companies need to work through difficult questions about the course of the pandemic, the time and money available to consumers and B2B partners, and the growing array of options competing for their attention. The lifecycle of products, and the challenges to “business as usual” by Sustainability, Environmental, Social, and Governance (SESG) strategies, all while taking into account the use of AI (eg machine learning, deep learning), automation, robotics, and other disruptive technologies will all play an important role in the near future.

Industry-wide SESG strategies are now a major topic of conversation. The number of investment funds and entities taking SESG into account has grown rapidly across Latin America since the beginning of this decade and is expected to continue rising in the years to come. Businesses increasingly incorporate SESG into their missions and operations to ensure business continuity in uncertain times. A mounting body of evidence suggests that investments in companies with strong SESG performance outpace investments into businesses that do not address their material SESG impacts. These companies also tend to have lower capital costs and enjoy an advantage in attracting and retaining top talent.

Regulators around the globe are also turning their focus to SESG (eg the PRI (Principles for Responsible Investment) launched at the New York Stock Exchange in 2005 with 100 signatories, today it has more than 7,000).



And this trend is no different for Latin America countries, where ESG initiatives have been at the forefront of the regulatory and legislative push toward ESG, especially when it comes to climate change and net-zero emissions – for example, we may point to the global relevance of Brazil's environmental policies related to the preservation of Amazônia.

Still, using Brazil as an example of focus on ESG initiatives, boards of life sciences and healthcare companies are already aware of the impact of their manufacturing, production and supply chain processes, which includes considerations of global sourcing schemes; how raw materials are sourced; how products are designed, manufactured, packaged, sold, reused or recycled, either under a wholesale or retail regime; how waste and hazardous materials are treated; and how to manage wider environmental and social impacts – putting all this in the context of an evolving regulatory landscape and a growing need to translate ESG authenticity in the industry.

Of course, the myriad of legal issues that ESG faces in the region is wide ranging but the process of incorporating ESG into business practices is still in its early days. We believe much more development is to come, but even today the implementation of ESG strategies shows how the strongest players operating across Latin America are addressing ESG risks and distinguishing themselves from the less agile pack.

Early indications already suggest that several key regulatory and legislative changes, as well as industry-level initiatives on ESG, will emerge even more strongly across the Latin America region in the near future – as soon as the next three years.

Prudent businesses must understand it as fast as they can to be well prepared for these rapidly coming changes – and, definitely, the less agile pack will end up challenged when ESG becomes a sound reality.

#### INFO CMA

This article describes the current thinking at Campos Mello Advogados on these topics and should not be viewed as a legal opinion.

Campos Mello Advogados is a Brazilian law firm which has worked in cooperation with DLA Piper LLP across the globe since 2010.

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# Green Hydrogen in Chile: A Contribution to the Global Energy Transition

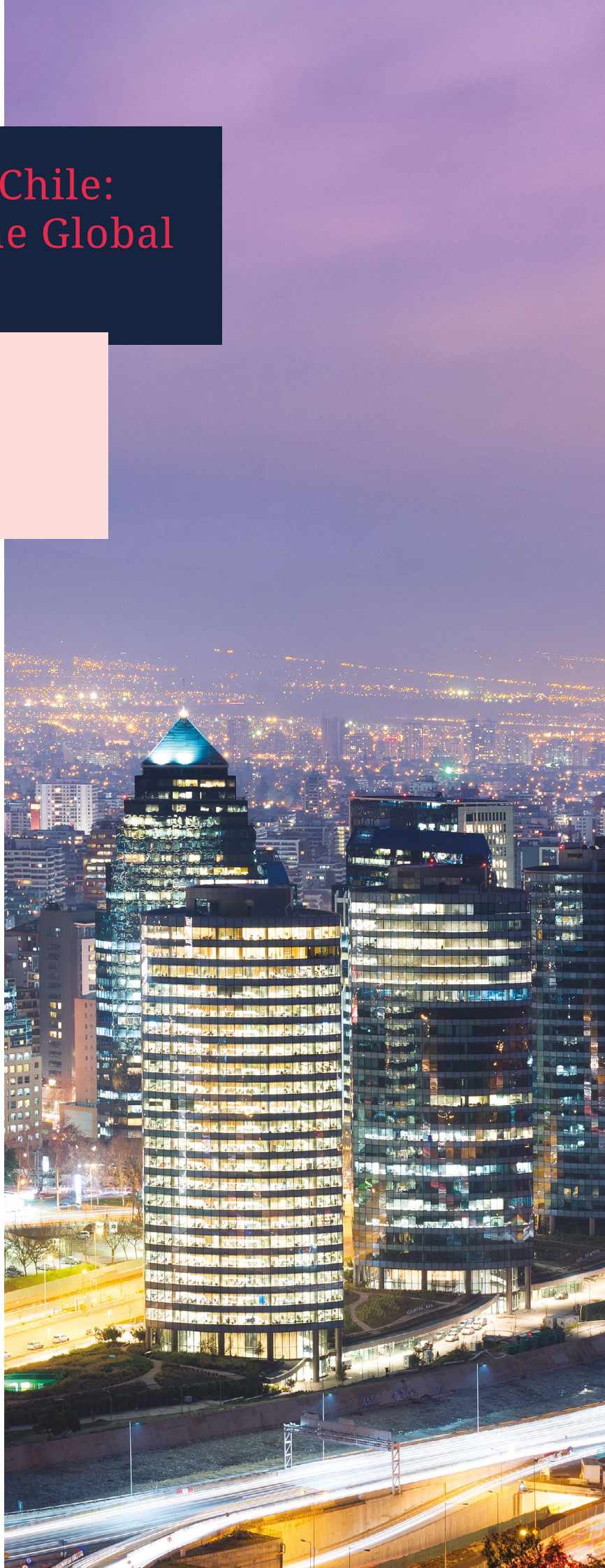
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Nowadays we see governments around the world adopting decarbonization policies to transition their economies away from high-emission electricity generation and polluting manufacturing/production of goods and services. The main approach has been through fostering renewable energy (mainly solar and wind) and different energy efficiency policies. The results have been reasonably successful so far regarding energy-related CO<sub>2</sub> emissions in the energy generation sector. There has also been recent consensus about the important role Hydrogen, and especially Green Hydrogen, can play in the future energy system and its contribution to a more sustainable full production cycle for goods and services.

Having in mind the above, the ongoing targets on decarbonization mainly focus on adopting standards to achieve net-zero carbon emissions by the year 2050. Seemingly there is now enough scientific evidence from the Intergovernmental Panel on Climate Change (IPCC) indicating that human-caused emissions of CO<sub>2</sub> need to fall to net-zero by around the year 2050. This is aligned with the goal of the Paris Agreement and therefore we are currently facing a near global consensus on climate-related policy action. For instance, the UK and France started in 2019 with targets to achieve net-zero by 2050. But perhaps the most significant development came in 2020 when China pledged to achieve net-zero by 2060. Chile also made a pledge in 2019 to achieve net-zero by 2050.





## Where do we stand globally regarding energy supply?

- Electricity production is the largest single source of CO<sub>2</sub> emissions, and emissions reduction in the last ten years has essentially been achieved by the replacement of fossil fuels with renewables sources in electricity (mainly solar and wind). Countries, including Chile, are moving towards renewable-based electrification of entire economic sectors (also called decarbonization by electrons).
- There is strong evidence that renewable-based electrification may not be possible, for technical and/or economic reasons, in hard-to-abate sectors. These include heavy industries that require high-temperature heat and have significant process emissions (i.e. iron, steel, chemicals and cement production). Therefore there is a chance that some sectors that may be left un-decarbonized and behind the energy transition.
- There are high hopes for other decarbonization methods that may be used to bring industry emissions close to net-zero (also called decarbonization by molecules); for example, through the extended use of Hydrogen and particularly Green Hydrogen, and carbon capture and storage (CCS).

## Alternatives ways to increase decarbonization to meet net-zero carbon targets

First, the traditional concept of a Circular Economy, used in the economics of production and the management of resources in general, can be seen as an additional way of increasing decarbonization through non-energy means. In a Circular Economy, materials and products are kept in the loop for as long as possible, with minimum loss, thereby offering a way to deal with partial decarbonization.

Second, as indicated before, Hydrogen as a decarbonization method has several attractive features, beyond the obvious of being a clean-burning and common element (though often tied up with other elements such as oxygen or carbon). It is relatively transportable and can be stored for a long term. In fact, Hydrogen has several benefits as a component of the global energy transition. It can be used to decarbonize hard-to-abate activities in sectors such as heavy industry and transport that could be at risk to be left un-decarbonized. The Hydrogen's store feature is also compatible with existing natural gas infrastructure that may be used for that purpose in the near future. In summary, Hydrogen can potentially

replace hydrocarbons in aviation, shipping and heavy road transport, and those in the chemical, iron, steel and also cement industries. A relevant question is where the Hydrogen to serve these future energy needs might come from, and a colorful group of terms has emerged to describe the technology options, based on which form of primary energy they are derived from – black for coal, grey for gas, blue for gas with CCS, and green for renewable electricity via electrolysis.

The business interests behind Hydrogen are important to understand and from that perspective the renewable electricity suppliers, gas companies and governments should be, in principle, supporting the Hydrogen transition. Just as an example, for natural gas companies, support for Hydrogen would be driven by concerns about the long-term decline in the demand for natural gas and increasingly regulated emissions. In this scenario, Hydrogen offers an alternative that combines the possibility to retain gas infrastructure as an asset, making Hydrogen a strategic business opportunity for these companies.

## Hydrogen Policy Drivers in Chile

In November 2020 Chile published an important document setting out what was called the [National Green Hydrogen Strategy](#).

It is clear from the strategy that Chile views a significant long-term role for Green Hydrogen, made via electrolysis using renewable electricity. It is not clear at this point if there is room for Blue Hydrogen, using natural gas as a feedstock with CCS probably in the Magallanes area.

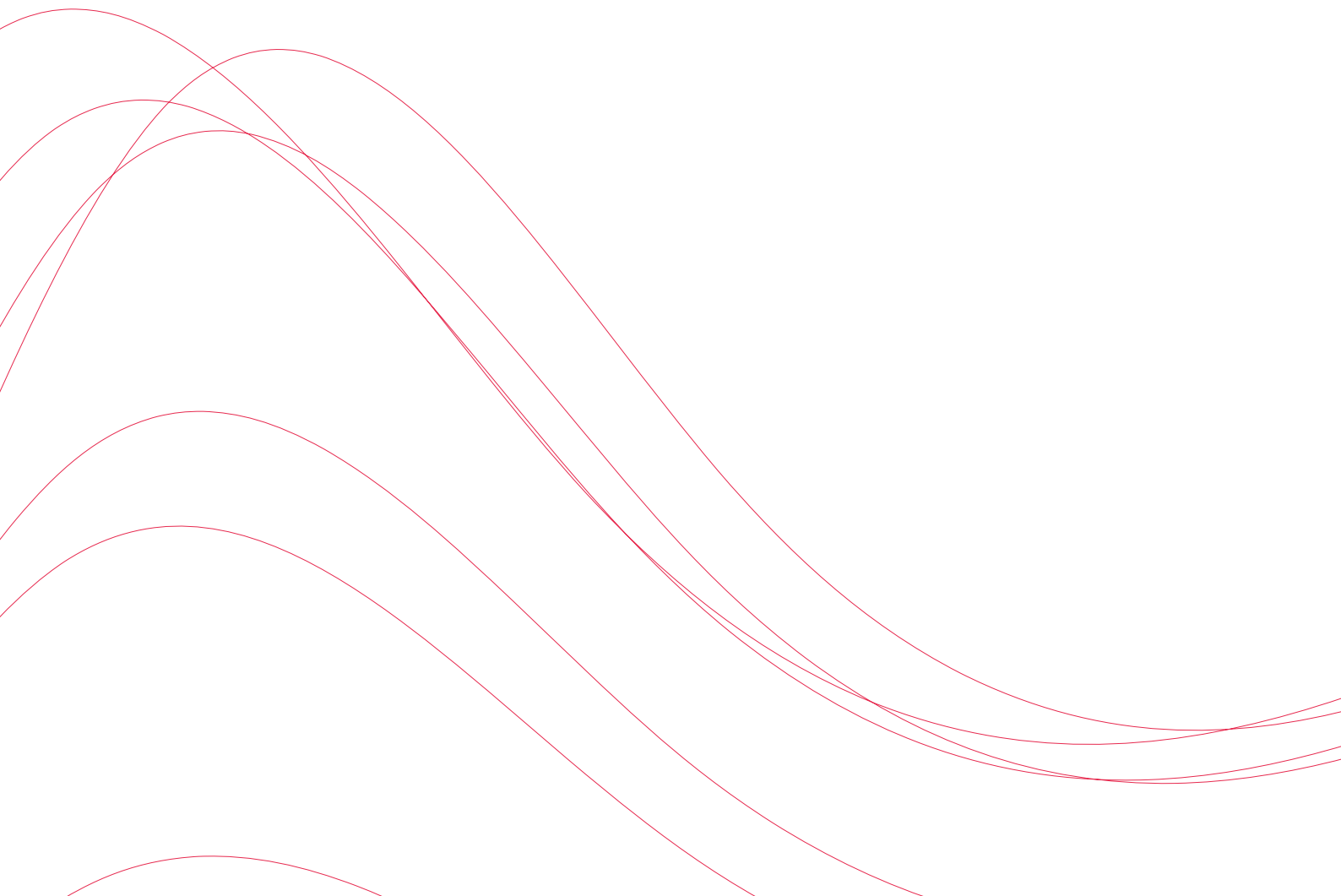
Today, Hydrogen is predominantly produced from fossil fuels, accompanied by the generation of large amounts of CO<sub>2</sub> emissions and since it is produced close to consumption, there is no need for large-scale transportation. However, there are several options to replace this carbon-intensive Hydrogen and expand production to make Green or Blue Hydrogen. The leading low-carbon technology is electrolysis of water using renewable energy or perhaps natural gas. Currently, Hydrogen derived from water electrolysis is not relevant in terms of production in Chile. However, due to decarbonization ambitions and the important expansion of renewable energy, the future production potential is very high. In addition, two electricity sourcing options can be distinguished: off-grid electricity supply from dedicated plants (i.e. offshore wind or a dedicated solar plants) and electricity supply from the grid. The main advantage of electricity supply from dedicated plants is that no electricity grid connection is necessary, and it could be a viable alternative for the future plants in Chile in extreme zones of the country.

The Strategy is based on experts reports show that Chile has competitive advantages in the production of Green Hydrogen and could potentially become a major worldwide exporter. However, several challenges are also looming that will be fundamental in achieving the goals proposed by the strategy:

- **Production:** Near 60-80% of the cost of Green Hydrogen is the electricity supply. This is the area where Chile has important comparative advantages by having a low production cost of renewable energy – solar in the north and wind in the Magallanes area. The existing cost of Green Hydrogen production is in the range of USD5 per kg, but to be competitive worldwide that needs to drop to USD1.5 or less per kg. To achieve that, very low generation costs are required, as well as efficient transportation logistics.
- **Regulation:** A comprehensive regulation for Green Hydrogen production, storage and transportation is needed to reduce market uncertainty, providing clear and transparent signals, and minimizing bureaucracy for the development of new projects.
- **Desalination:** The need for fresh water to make Green Hydrogen is a challenge in terms of cost, particularly in areas where desalination may increase the burden of costs.

- **Human resources:** To develop this industry on the scale that the strategy expects, Chile will need a large contingent of specialized human capital.
- **Storage and Transportation:** The potential need to apply an additional process that allows Green Hydrogen to be compressed (liquefied) may require high energy expenditure. On the transportation side, there are serious challenges for the initial development of a local market. The export will be done by, as far as is known today, transforming the Green Hydrogen into ammonia to be transported by large ships. But the scale of production must be big enough and the transportation logistics (including ports) efficient enough to be competitive with other countries.

As experience in other industries show, while publishing a document setting out a strategy is a simple first step, it is likely to be significantly more challenging to put in place the required incentives and regulatory structures to enable the required investments to proceed within the timetables. The good news is that Chile is taking the right steps to develop its Green Hydrogen industry and to position the country as a center of excellence with a view to becoming a global exporter, making an important contribution to the global energy transition.





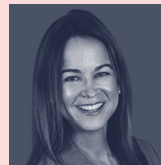
# The Biden Plan: The most awaited infrastructure plan for the US

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The need for an adequate infrastructure program for the US is well known. This program has taken several presidencies to see the light of day, but it finally took the form of a concrete and ambitious plan presented by the Biden Administration in March 2021 known as the American Jobs Plan. The reaction to this plan by companies with important interests in the energy and infrastructure sectors in the US was somewhat euphoric at the time. We can say that, after having passed the **Infrastructure Investment and Jobs Act**, Public Law No: 117-58 (the Act), despite the significant departure from the original infrastructure plan, the final result calls for great optimism in the expansion of the US infrastructure sector.

## The original plan

The originally proposed infrastructure plan represented the most significant public domestic investment in the US since the 1960s, reaching an overall amount of USD2 trillion. It covered a repertoire of investment initiatives, including transportation infrastructure, renewable energy, water distribution, electricity transmission lines, digital connectivity, housing and social infrastructure, and R&D. In the area of renewables, in general, investment tax credits (ITC) for solar projects and production tax credits (PTC) for wind projects were proposed to be extended over the next ten years.

The objective of this plan was (and still is) to increase the country's productivity, competitiveness and long-term growth, redesigning and rebuilding the US economy for the 21st century, introducing sustainability criteria throughout the value chain and correcting historical social injustices. The infrastructure plan was presented in conjunction with the Made in America Tax Plan, so the bill would be paid over 15 years with revenues derived from the tax reform, thus avoiding increasing the country's debt. Republicans (who control 50% of the Senate) announced their rejection to the then presented plan as they considered that it went far beyond what is traditionally implied in an infrastructure program, but most importantly, because of the tax increase proposal to pay for it. Similarly, the initial infrastructure plan also met with the frontal rejection of powerful lobbying groups such as the US Chamber of Commerce.

### Reaching consensus in the Senate

Biden's wish has always been that his infrastructure plan achieves the support of both the Republican and Democratic parties, which is understandable and desirable given its magnitude and economic cost for the country. For that, he initiated negotiations with a small group of Republicans and Democratic senators to find points of agreement.

Negotiations were not easy, and both parties had to compromise. As a result, the revised original plan was trimmed down to USD1.2 trillion and the Act has passed with bi-partisan support. It has also been stripped of the "human infrastructure" component (known as the American Families Plan), the ambitious green energy and climate change initiatives that permeated the proposal, and the substantial tax reform, which are mostly now included in the Build Back Better bill. Democrats were determined to approve this new bill through a reconciliation budget process before the self-imposed deadline of 2021 year-end but such target date was not achieved. At this point in time, the Build Back Better bill is considered "dead" by many, at least as we currently know it.

The Act looks more like a conventional infrastructure plan with new investments in roads, rail, bridges, broadband internet, water and sewer pipes and electric vehicles. The group of senators also reached a compromise about the sources for this massive spending, and tax increases (with some exceptions) will not be one of them. Instead, legislators have agreed to more than a dozen different funding sources, including

strengthening the Internal Revenue Service (IRS) to enforce tax collection and redirecting emergency relief funds, including unused unemployment benefits.

### The Infrastructure Investment and Jobs Act

The Act affects every sector of infrastructure in the US, although priority has been given to transportation. It is not a new stimulus endeavor with short-term impact. It defines what type of projects and how these projects will be done, with a consequent impact on the US economy for the years to come.

Funding will be allocated to a variety of assets, or issues of concern, such as roads and bridges; ports, airports; waterways; passenger and freight rail; public transit; electric vehicles; safety; and reconnecting communities. In total, the Act assigns approximately USD1.2 trillion in funding over ten years, including approximately USD550 billion in new (or enhancement) spending during the next five. Of this new spending, nearly USD300 billion will be for improving the surface-transportation network (most funding reserved for highways, roads and bridges) and another USD266 billion will be for improving society's core infrastructure, such as water, broadband, energy and power, environmental resiliency (coastal protection, flood mitigation), and environmental remediation. The remaining funding, will go to supporting existing programs until 2026.

A New Deal era starts for America. In fact, the amount allocated to this spending is even larger than during the New Deal. But even if these figures are extraordinary, the current state of the infrastructure in the US will require a combination of federal, states, cities, counties, and private investment finance. One of the expected effects of the Act would be attracting different sources of funding to complement the federal financing. To this effect, several programs require additional use of funds other than federal funds. Equally, certain evaluation criteria has been included in certain programs for competitive grants to promote projects with private investment and/or other type of non-federal funds.

Many of the existing programs funded by the Act have been around for some time but also new programs have been created to deal with relevant current infrastructure issues such as resilience or to address carbon reduction. Coastal resilience, cybersecurity, waste management, flood mitigation, ecosystem restoration, energy efficient vehicles, bicycle and pedestrian trails, electric buses and electric vehicle charges are some examples to which funds have been allocated in these new programs.



Funding to enhance broadband for all Americans, climate-focused environmental monitoring and R&D are among other areas covered by the Act.

The Act's investments will be largely directed, and programs will have to be designed by the Department of Transportation, but other federal agencies will also play an important role, including the Department of Energy, the Environmental Protection Agency, the Department of Commerce, the Department of the Interior, Department of Agriculture and the Department of Homeland Security.

A good amount of the funds provided for in the Act (around USD300 billion) will be distributed based in formula grants, mostly for roads and bridges. These formula grants established by Congress offer predetermined funding to states based on different factors, which are aimed at making an equitable distribution of such federal funds.

Pursuant to the discretionary grant programs, States and local governments will be competing for these funds. Applications will be evaluated by federal agencies through certain criteria that will target national priorities. These criteria are already included in the Act or will be identified by the different federal agencies at the time.

In addition to the grants mentioned above, investments under the Act will also be allocated to agency programs and operations, loans, and the Highway Trust Fund. In particular, the transportation Infrastructure Finance and Innovation Act (TIFIA) program, the Water Infrastructure Finance and Innovation Act (WIFIA) program and the Railroad Rehabilitation and Improvement (RRIF) program will continue to be supported by federal investments, providing sources of low-cost funding for infrastructure projects.

The Act does not contain any of the tax increases previously proposed by the original infrastructure plan but in order to fund the bill there are some tax-related changes:

- increased required reporting to the IRS by individual and firms acting as digital assets brokers of these type of transactions;
- reinstatement of excise taxes on certain chemicals;
- highway-related taxes to help finance the Highway Trust Fund (extended until 2028); and

- a three-month early end to employee retention credits for certain employers which was in place to help offset employees costs during the pandemic.

In addition, current available tax exemption instruments are also enhanced and increased, such as the Private Activity Bonds (PABs), which cap has been doubled (from USD15 billion to USD30 billion for qualified highway or surface freight transfer facilities). With this increase in the current PABs program and its addition of two new categories of exempt facilities for private activity bonds (qualified broadband projects and carbon dioxide capture facilities), new opportunities arise for the private sector to take advantage of tax benefits that traditionally are available only to the public sector.

## The Challenges

The arrival of such vast piece of legislation, naturally raises particular challenges or questions about its practical and immediate applicability. As the legislation unfolds and the different participants start interacting, there may be some tension balancing an efficiency in funds allocation; preserving the equity in the distribution of such funds; keeping national priorities at center stage; integrating the private sector; assigning resources of governmental agencies, and including sustainability principles into the mix.

Predetermined grant programs may be easier and quicker to deploy than discretionary ones, for which regulation will have to be put in place. In any of these cases, both federal granting agencies, and local and state governments receiving grants and other benefits, will need to boost their own resources to face the increasing number of projects, applications and opportunities. To implement, or take advantage of, the prospects granted by the Act, these stakeholders will have to enhance their capabilities and operations by hiring new employees and external resources, educating their employees in the new law and funding supply, fostering new skills, and learn how to re-mobilize their own assets and resources. By the scale of the programs and the number of stakeholders involved, in the near term, while public administrations and the private sector catch up with new demand, we may see a lack of skilled workers and professionals in the infrastructure sector that can hit the ground running. We anticipate a lagging reaction and mobilization in projects procurements and deployment.



The increase in infrastructure projects and funding also means that there will be a greater demand for raw materials, construction equipment, and redeployment of current assets which may create competition, globally, for the same goods. As the global supply chain is still backed up from the COVID-19 pandemic disruptions and its impact on labor supply, unprecedented logistical challenges, and material shortages, a sudden increase in demand for infrastructure materials, equipment and workers will likely add to the global stress, bringing construction costs even higher.

### **Good news for the private sector**

Despite some uncertainties and challenges in connection with its initial implementation, it is clear now that a comprehensive infrastructure plan for the US is finally a reality. A USD1.2 trillion plan (including a good part of it in direct spending) is very good news for the US and for private companies in the infrastructure, energy and new technologies sectors.

As to whether the private sector will play a key role in the next phase of infrastructure development in the US, our conclusion is that it can and it should. There will be extended opportunities for businesses already established (with the possibility of increasing their

current market share) and for emerging ones eager to join as new players and contribute with their knowledge, technology, innovation and experienced human resources. Furthermore, unexpectedly, the current supply chain issues may also help develop additional opportunities of commerce from neighboring (or relatively closer) countries to the US. The opportunities will be there for those who want to take them.

Specifically, the Act recognized a confirmation for public-private partnerships. As mentioned above, in some cases the Act requires or encourages diversified sources of funds for projects, including private sector funds. We hope to see an increase in these funding, participation and initiatives from the private sector coming into the system.

The next steps towards a comprehensive framework in the US for a new and competitive economy for the next decades to come, would be complementing this wide-ranging infrastructure plan with climate-related policies, including incentives and tax credits for a transition to clean energy.



