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A constitution for people, planet and prosperity

We cannot ignore the need to combat climate change and transition sensibly away from damaging fossil fuels. The world's scientists agree that we must act, and we must do it now.¹ The questions now are how to manage this transition and what the world will look like once it is achieved. For Chile, this is an exciting rather than daunting prospect for several key reasons: our mineral wealth, our beautiful geography, and pioneering technological innovations.

We Chileans are currently redesigning our constitution, which requires considering fundamental questions about our country and what we want our future to be. We must seize the opportunity to make sure that our new constitution supports the free market and enables Chile to produce the materials that the whole world needs for the energy transition.

The current constitution privatised most public services and limited state spending. In 2020, it was decided by a referendum that the constitution should be refreshed.² However, the constitutional convention issued a draft constitution which sounded more like a list of demands than a framework for a modern democracy. It threatened much higher taxes for companies mining natural resources (including our biggest exports of copper and aluminium), which would have reduced investment.

No wonder this version was widely rejected by the Chilean people. Now a new convention will try again; hopefully this time, it can avoid swapping one extreme for another. If we get the constitution right, we can support the energy transition and protect our natural environment, while at the same time fostering innovation and encouraging investment in Chile. If not, we risk damaging the industries crucial for a green transition.

One of our most important industries is copper, Chile's largest export and a key conductor in the digital age.³ Every year Chile smelts 1.4 million tonnes of copper anodes and processes approximately 40% of global copper concentrates.⁴ This is set to rise, particularly due to demand for low carbon technologies - for example, the sector accounting for the largest increase in demand for copper is predicted to be electric vehicles (EVs), which use 3 to 5 times more copper than the typical non electric vehicle.⁵

In theory, Chile can meet much of this demand and our economy will benefit from the increased appetite for copper. But in practice,

2022 saw a slump in copper production, partially because fears around high taxes and political unrest curtailed investment.⁶ There is a perception that Chile has ‘wasted’ the last three years, as foreign investors worried about what would come from the constitutional convention.⁷ My hope is that the rejection of this draft constitution has reminded investors that the majority of people in Chile are sensible and that Chile remains a safe place to invest. I also hope that following this rejection, the high taxes proposed for copper will be revised.⁸

To scale up our copper production, we will need to modernise our production. There are seven copper smelters in Chile: five are publicly owned and two are privately owned. The publicly owned smelters in Chile are among the ten most expensive to run in the world, while the privately owned companies are amongst the most economically competitive in Latin America.⁹ The current government of Chile would do well to take note of the fact that these privately owned smelters have managed to be more agile and more efficient than the state-run facilities.

Another mineral that will be critical to the energy transition is lithium, which is also used heavily in EV batteries. Once again, Chile is a key player in this market: estimates suggest that Chile has the second largest lithium reserves in the world, and it makes up one corner of the ‘lithium triangle’ (alongside Argentina and Bolivia), which contains half of the world’s lithium reserves.¹⁰ The demand for lithium is only going to increase as the Inflation Reduction Act (IRA) subsidises EVs in the US, boosting the demand for these vehicles and therefore the lithium that is crucial for making them. Also, from 2024, this lithium will have to be sourced from either the US or its free trade agreement partners, or else it will be ineligible for subsidies.¹¹ This will make China less competitive and provide Chile, with our free

trade agreement with the USA, an opportunity to get ahead in the global market.

As with copper, high taxes and strict regulations are the main reasons lithium production has not increased as fast as demand. Regulatory processes could be streamlined to encourage investment, for example by no longer requiring lithium companies to seek a licence from the nuclear energy commission.¹² This issue has also plagued battery companies who want to work in Chile and need a large supply of lithium. If EV batteries end up being produced in China instead then they will still become ineligible for the IRA subsidies.¹³ We need to simplify this process.

We also need to give investors confidence. Fundamentally, this means the government must be a reliable partner and not dramatically change the terms for companies that want to invest. I believe the President's recent decision to seize control of lithium projects is a mistake which will undermine investment and slow down production in this vital industry. We have already seen with the copper smelting sector how government control causes inefficiencies and stifles innovation. Without innovation we cannot hope to boost these key industries and decarbonise our transport.

Transport is responsible for 30.9% of Chile's greenhouse gas emissions, second only to the energy sector.¹⁴ The uptake of electric vehicles will be key to decarbonisation. Our target is for 40% of private vehicles and 100% of publicly owned vehicles to be electric by 2050. Chile has already made a start with electrifying our public vehicles, particularly buses, and can now proudly boast the largest fleet of electric buses in the world outside of China.¹⁵ Since 2020, we have 776 electric buses operating in Santiago and an open tender for over 2000 more. Until Chile is ready for a wholesale rollout of private electric vehicles, we should encourage the use of these electric buses

and continue to build on our strict emissions standards to create incentives for less polluting vehicles.

Understandably, outside of our major population centres, there is still a worry about electric vehicles given the famously beautiful but rugged landscapes that define our country, where it will be more difficult to install charging points. But given 40% of our population lives within the Santiago metropolitan area, that shouldn't stop us from starting this transition.

When people think of Chile, they often think of our breathtaking landscapes. Whether it's the long coastlines, the Andes mountain range, or the Atacama Desert: they are all celebrated for their beauty. However, they also present logistical challenges when it comes to providing a reliable electricity grid. We have a divided national grid with almost isolated subsystems due to our topography.¹⁶ Little wonder then that Chile relies heavily on imported fossil fuels to supply us with electricity. This obviously presents its own challenge as we are at risk of external price shocks. Our electricity prices have never fully recovered from Argentina's restricting its exports of natural gas from 2004.¹⁷

I appreciate our high altitudes may make it difficult to build a robust electricity infrastructure but isn't it time to consider the opportunities our landscape also possesses? The Atacama Desert has the best solar power potential in the world, and we have the world's longest mountain range and a shoreline running in parallel, with the potential to host wind, hydropower and geothermal energy.¹⁸ This could be scaled up dramatically to increase the proportion of electricity we get from domestic renewable sources from the 30% average that we have managed over the past decade and reduce our reliance on imported oil and gas.¹⁹

Of course, the most exciting aspect of the green transition being talked about with regards to Chile is the possibility of producing green hydrogen. Models have shown that the Atacama Desert can harness enough solar energy to produce a reliable and constant supply of electricity with solar PV and battery systems alone, so we could utilise the excess energy in sunny periods for the creation of green hydrogen. The Atacama Desert not only has the country's greatest solar potential but also the majority of its copper production. We could use hydrogen derived methane in producing copper. Studies have shown that methane could be used in the reducing process during the smelting of copper and that this could be more efficient than current smelting methods.²⁰

Green hydrogen's potential goes far beyond these industrial uses. Chile's green hydrogen may hold one of the keys to energy storage and fixing the problem of the intermittency of renewable energy.²¹ Or we might be able to provide the fuel for low carbon heavy industry or fight the current global fertiliser shortage.²² At the moment, this development is still in its infancy, but Chile is one of the global frontrunners for producing this emission-free hydrogen. Our new constitution should consider this potential and help provide a good environment to invest in this potentially transformative energy. I fear that the left's current thinking will lead to quite the opposite.

Green hydrogen production will also need water. The draft text of the constitution that was rightly rejected would have introduced revocable permits and forbidden the trading of water.²³ This means that a misallocation of permits would not be able to be fixed by the market but would have to be changed laboriously by the state and, even then, only if the government agreed. Like with the proposed changes to copper and lithium, this would have undermined our competitiveness in these markets and spooked investors. We cannot let similar wording pass in the next draft presented to us.

Chile is a country at a crossroads. We have a public which is deeply engaged with asking questions about what sort of country we are and where we should be going. One option is to place restrictions and high royalties on our key industries, stifling growth and efficiency, and falling behind other countries who are committed to a clean energy transition. The other is to embrace all the possibilities that clean energy, our mineral wealth and new technology can offer us. This would put us at the forefront of this new industrial revolution. I know which one I'd prefer and, judging by the last vote, so do the people of Chile.

ENDNOTES

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