

# Powering growth sustainably

## INTERVIEW WITH MÁXIMO PACHECO

MINISTER OF ENERGY, REPUBLIC OF CHILE



**MÁXIMO PACHECO** holds a degree in Business Administration and Economics from the University of Chile. He began his career as a personal banking manager at Banco Osorno, before joining Leasing Andino, where he was General Manager from 1983-90. He was subsequently appointed Executive Vice President of Operations at CODELCO (Chile's national copper company) before joining Carter Holt Harvey, as EVP for Latin America. Mr Pacheco was Senior Vice President of International Paper from 2005-13, and was appointed Minister of Energy the following year.

### What are the main tenets of energy policy in Chile?

I would like to begin by giving some background on our national context. In May 2014, the Chilean government developed a National Energy Agenda, which is a roadmap that identifies objectives and measures for the short, medium and long term, in order to revive and strengthen the energy industry in our country and jump-start a new development cycle. The objectives of the Energy Agenda include reducing marginal electricity costs during this four-year governmental period by 30 per cent in the Central Interconnected Grid; lifting the existing barriers for Non-Conventional Renewable Energy in the country, so that 45 per cent of the electric generation capacity to be installed in the country from 2014 through 2025 will come from this type of source; and fostering the efficient use of energy, establishing a 20 per cent savings goal by the year 2025.

I am pleased to say that we have achieved many of the ambitious goals that were established in the Agenda, and we are currently making significant progress towards others.

One of our main goals was to establish a long-term energy policy approved by the Citizens of Chile, and we achieved this goal in December 2015 with the launch of our energy policy, which is the fruit of an 18-month national participatory process. This policy is sustained by four pillars: Supply Security and Quality, Energy as a Driver of Development, Environmentally-friendly Energy, and Energy Efficiency and Energy Education, and it establishes a series of goals for the year 2050. These include ensuring that Chile is among the top three OECD countries with the lowest average residential and industrial electricity prices, and that at least 70 per cent of the electricity generated in Chile comes from renewable energy sources.

Measures and action plans will be developed on the basis of the four pillars between now and 2050.

### The issue of energy security and its impact on international relations is now top of the policy-making agenda. How do you view this issue?

In recent years, Chile has improved its energy security through diverse measures outlined in the Energy Agenda, with a vision for the future set forth in our Energy Policy.

Specifically, long-term energy supply security is

closely tied to a robust and resilient system that can provide energy in accordance with the country's needs. Therefore, Chilean energy policy includes a significant focus on risk and energy emergency management plans that ensure the resilience and reliability of the system.

In this sense, the role of international energy integration is fundamental because it allows greater flexibility and security to be provided to energy systems. Our long-term vision is for Chile to have energy interconnections with other countries in South America. In fact, the goal is for our country to be interconnected with all the other nations on the continent by the year 2035. At present, Chile has carried out natural gas and electricity exchanges with Argentina and is working on bilateral agreements with other countries.

### How should risk be shared in the development of energy infrastructure?

A fundamental pillar of our energy policy is that private-sector initiatives will drive energy development. However, the challenges in the coming decades require the State to coordinate stakeholders in order to build a shared long-term vision, which directs energy development and secures the wellbeing of all Chileans. The institutional framework that underpins this role of the State is focused on the Ministry of Energy, but involves a broad range of public services, which is crucial to give consistency and continuity to the policy.

In addition, Chile's energy policy seeks to "promote a cost-effective infrastructure for addressing critical situations arising as a result of force majeure," with the objective of ensuring that by 2035 the infrastructure for managing critical situations and the associated management models are developed, and by 2050 the energy system is robust and highly resilient to external shocks. In this context, the Energy Policy considers a number of actions, including the preparation of a register of energy and non-energy infrastructure, critical public buildings and natural disaster zones; defining critical infrastructure; identifying the events and contingencies that should be included within critical infrastructure requirements; systematically implementing the critical infrastructure and management models required; and developing financing mechanisms and incentives for the development and implementation of critical infrastructure.

In February of this year, an Energy Risk and Emergency Management Unit was created within the Ministry of Energy, with the objective of directing, guiding and coordinating risk management in the country's energy sector.

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**What is your position on the development of renewable energy resources?**

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The development of renewable energy resources is a priority for Chile. To begin, I would like to give you some numbers that represent what is currently occurring in our country. Over the past two years, there has been a significant increase in investments in the energy sector, especially in the area of renewable energy. For example, in 2014, there were 28 power plant projects from different sources of energy under construction totaling 1,950 MW. Today there are 54 projects under construction for 4,051 MW, and 66 per cent of these are based on renewable energy.

Furthermore, a new power supply auction was completed in October of 2015. Contracts were awarded for the supply of 1,200 gigawatt hours of energy. Thirty-one companies placed bids for the 20-year contracts, with wind and solar projects competing head-on with coal-fueled generation plants. The results showed that renewables outbid fossil fuels on price. Moreover, 100 per cent of the power contracted was awarded to wind and solar projects.

This is to show that solar and wind energy are cost-effective sources of renewable energy that will increase in the future. And, in this context, it is an objective of our Energy Policy to implement the measures needed to ensure that renewable energy constitutes 60 per cent of electricity generation in 2035, and at least 70 per cent by 2050.

Moreover, it is important to increase the use of hydroelectricity as baseload energy in order to enable a greater penetration of variable sources, therefore adding flexibility to the grid, and minimising emissions and costs. In a country with a good potential for storing energy in reservoirs, the possibilities of their use should be explored to the maximum extent possible, whilst safeguarding environmental sustainability, and also assessing the impact of climate change on future water availability.

The complement to this renewable energy mix should be using the existing generation infrastructure to contribute as much as possible to the efficient performance of the system. We must focus on new developments with technologies that are low in emissions and cost-effective, such as natural gas and biomass.

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**What do you see as the key challenges and opportunities facing the sector globally?**

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The international energy context has been influenced by various phenomena in recent years:

Firstly, we have witnessed a technological revolution in renewable energies and non-traditional fossil fuels, all of which are changing the historical composition of the energy mix for many countries.

Secondly, the exchange of energy in international markets and through regional energy integration has been growing.

At the same time, the use of electricity to drive new activities affects the electricity demand and highlights the potential of energy efficiency, while the Paris climate change accord, signed in December, highlights international concerns related to reducing reliance on fossil fuels in the worldwide energy mix, with the aim of sufficiently reducing GHG emissions.

In the past, energy consumers were traditionally passive recipients of energy generated far from their homes, industries or businesses. Now, they are becoming active producers, managers and consumers, who are concerned about the source of the energy they use. They are supported by intelligent networks that generate more and better information for the various stakeholders in the system, which makes the electrical systems more resilient, manageable and efficient.

As a result, citizens are now engaged in the decision-making process, in terms of energy infrastructure, the use of specific energy sources and the policies that control them.

These challenges and opportunities are of course keenly felt in Chile, and are taken into consideration as we develop our national energy policy.


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**How do you see the energy sector in Chile developing over the coming decade?**

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As I have mentioned, this government, through the Ministry of Energy, is developing policies and actions intended to achieve substantial progress over the next ten years in different areas of our energy transition.

As we initiate work towards the implementation of our energy policy, our vision is for Chile's energy sector to be reliable, inclusive, competitive and sustainable by the year 2050. This is part of a systemic approach in which the main goal is to achieve and maintain the reliability of the entire energy system, while meeting environmental and inclusion criteria and contributing to the competitiveness of the nation's economy. These attributes will allow us to move forward towards sustainable energy in all of its dimensions.

We share our efforts in policy development, implementation of initiatives and progress towards the goals that we have set at the Ministry of Energy's website: [www.energia.gob.cl](http://www.energia.gob.cl), although this is mainly in Spanish. In addition, updated statistical information on Chile's energy sector can be found at the bilingual website: [energiaabierta.cne.cl](http://energiaabierta.cne.cl). 

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