

Chile

Juan Francisco Mackenna and Sophia Bobadilla

Carey

1. What are the principal power sources in your jurisdiction?

According to the National Energy Commission (CNE), Chile's installed generation capacity as of April 2015 was 19,031MW: 14,926MW (78.5 per cent) corresponded to the SIC (Central Interconnected System), 3,943MW (20.7 per cent) to the Norte Grande Interconnected System (SING) and 162MW (0.8 per cent) was distributed among the Aysén and Magallanes electricity systems. According to the CNE, the principal power sources in the jurisdiction are thermoelectric generation (58 per cent) followed by conventional hydroelectric power (32 per cent) and Non Conventional Renewable Energies (NCRE) (9 per cent).

Next

Back to top

Back to question list

2. What are the current trends affecting the energy mix in your jurisdiction?

The main trends currently affecting the energy mix in Chile is the aim of incentivising competition and diversification in the energy market, whether through the incorporation of NCRE, or by allowing residential electricity clients to generate energy through facilities of ≤ 100KW installed capacity for their own consumption and inject the surplus into the electricity system.

Previous Next

Back to top

Back to question list

3. What are the current forecasts for electricity demand in your jurisdiction?

According to Chile's National Energy Strategy 2012–2030 electricity consumption growth rates between 2012 and 2020 will be about 6 per cent to 7 per cent, which means we will reach a total electricity demand in 2020 of almost 100,000GWh, needing an increase in supply of roughly 8,000MW. The "Analysis of electricity demand in the short, medium and long term", prepared by Mercados Energéticos Consultores for the CNE, calculated a 3 per cent, 2.4 per cent and 2.3 per cent rate of growth for the SIC, SING and Aysén and Magallanes electricity systems respectively, considering a 30-year time horizon.

Previous Next

Back to top

Back to question list

4. Is there an open electricity market in your jurisdiction? Are any activities in the electricity market reserved for the government only? Are private entities allowed to build and operate power plants and transmission and distribution lines?

Yes, there is an open electricity market in Chile. However, there are no activities in the electricity market

reserved for the government only, the market-oriented energy sector in Chile is regulated by a legislative framework where only a secondary role of the authority is both present and expected, since activities in all three segments: generation, transmission and distribution, are mainly developed by private companies. Therefore, Chile's electricity market is open, and private entities are allowed to build and operate power plants, transmission and distribution lines without restrictions.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

5. What is the role and function of the regulator? Would you describe the regulator as being independent?

There are several regulators involved in the Chilean energy market, the Ministry of Energy being the highest authority since its creation in 2009. The CNE is a technical-adviser state body, in charge of creating and coordinating the plans and policies for the proper operation and development of the industry. The Superintendency of Electricity and Combustibles (SEC) supervises the proper operation of the electric power, gas and fuel services, and the compliance of the legal, administrative and regulatory framework. Finally, even though not part of the regulator authority, there are the economic load dispatch centres (CDECs) and the Experts' Panel, a body created exclusively for the electric power industry to resolve controversies specifically listed in the Electric Power Services General Law (LGSE).

The Minister of Energy and the Superintendent of Electricity and Fuels are appointed by the president and stay in office as long as they have the president's trust; whereas the CNE is managed by an executive secretary appointed by the President of Chile through a high-ranking civil servants election process. Therefore none of the above may be characterised as totally independent from a political standpoint. Nonetheless, independence is safeguarded through the prohibition of these government officials to engage in private activities related to the energy sector in which they or any of their relatives may have an interest.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

6. Is there an open market for off-takers in your jurisdiction or are there restrictions on the sale of electricity?

In Chile, the energy purchase and sale market is structured as a mandatory pool-type market restricted to generators, not allowing brokers or energy traders (ie, power generated and injected to the system is exclusively withdrawn by generators, to be sold in the "spot market" to other generators; or in the "contracts market" to other generators, to distribution companies or to free end-consumers).

Therefore, Chile has an open market for both utilities and off-takers. Notwithstanding, the market is perceived as highly concentrated owing to the existence of its long-standing predominant players: according to the CNE's May 2015 statistics, E-CL, GasAtacama and Aes Gener represent 42.87 per cent 19.47 per cent respectively, and 18.96 per cent of SING's installed capacity, whereas Endesa, Colbun and Aes Gener represent respectively 34.90 per cent 21.18 per cent and 16.56 per cent of the SIC's installed capacity.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

7. If the sale of power is to a public utility as off-taker, are such entity's payment obligations backed-up or guaranteed by the government?

In Chile, the public utility off-taker is regarded as a public service, and consequently the distribution sector relies exclusively on a concession system and regulated distribution tariffs to provide such service. However, payment obligations are not backed up or guaranteed by the government. Notwithstanding, through Law 20,220/2007, amended by Law 20,720/2014, several articles were introduced into the LGSE to prevent jeopardising the power systems adequacy, security of supply or economic operation in the case of a bankruptcy of either generation, transmission or distribution companies. If the above-mentioned aspects are compromised, according to the SEC and the CNE, the SEC shall appoint a provisional administrator to continue the business purpose of the bankrupted company. Additionally, this law introduced two relevant transitory amendments implementing mitigation measures if supply to regulated customers is endangered.

[Previous](#) | [Next](#)

[Back to top](#) | [Back to question list](#)

8. Does the market have an independent system operator? If so, what are the ISO

In Chile, the system and market operators are the CDECs. As each large size interconnected system has its own CDEC, there are, respectively, the CDEC-SIC and CDEC-SING. CDECs comprise all companies with generation capacity, STT, STx and STA (see question 9), and all customers directly connected to transmission facilities. The CDEC's task and duties are mainly to: coordinate operations; maintain the global safety of the system; guarantee the most economic operation, through the coordination of a centralised dispatch system by merit order according to the variable operation costs of the generation unit; assure open access to the transmission systems and determine the marginal costs of electricity and the economic transfers between members of the CDEC.

[Previous](#) | [Next](#)

[Back to top](#) | [Back to question list](#)

9. How are electricity rates set and what cost components affect such rates?

There are two distinct segments:

Generation

- spot market – a wholesale market in which the rates are determined in accordance to short-term marginal costs resulting from the instantaneous balance between supply and demand, and the capacity price (determined by the authority every six months as the cost of development of the cheapest technology to supply electricity during peak hours of demand), and where generators are able to sell their energy output if they have not been able to secure direct sale to free customers or to distribution companies; and
- contracts market – where you find fixed tariffs or freely negotiated prices. Currently, regulated customers are basically those customers that, by virtue of their low consumption $\leq 2\text{MW}$ and even lower negotiating power, are supplied exclusively by the distribution company with a distribution concession in its area at a rate obtained after a public bid by the CNE; whereas free customers are those that, by virtue of their high consumption $\geq 2\text{MW}$ (optionally, when they exceed 0.5MW) and negotiating power, are not subject to price regulation.

Transmission

- tariffs are set by the Ministry of Energy every four years through tariff decrees.

To use and transport electricity through distribution facilities the user must pay the electricity distribution concessionaire a fee equal to the distribution aggregated value (VAD).

For the use and transportation of electric power through trunk transmission facilities (STT) the user must pay the annual value of transmission per section (VATT) minus the expected revenue by segment. The VATT is made up of the annuity of the investment value of the relevant section, plus the annual costs of operation, maintenance and management of such section. The expected revenue by segment is the difference resulting from applying the marginal costs of the expected operation of the system, to the injections and withdrawals in such segment. Lastly, final users are subject to a “unique charge”, corresponding to a connected capacity under 2MW, not to the unitary withdrawing toll but to a weighted average of the unitary tolls per bar. In the case of users with a connected capacity over 2MW a unique charge is also applicable, but tailored to the amount of consumed energy.

For the use and transportation of electrical power through sub-transmission facilities (STx) the user must pay the annual value of sub-transmission, a value based on facilities economically adapted to a four to 10-year period of forecast demand, which minimises the present value of investments, operation and power failures and is efficiently operated.

Regarding additional transmission (STA), even though the terms and conditions of such service are agreed freely between the parties, the determination of the tariff shall be calculated on the basis of an annual transmission value, equivalent to the present value of the investments minus the residual value, plus the projected operation, maintenance and administration costs; all prorated among the users and technically and economically supported by the owner and available for review by all interested parties.

Distribution tariffs consider node prices at the interconnection point with the distribution facilities, and the VAD, value based in a model/theoretical distribution company and considers, among others, the fixed costs per user (administration, invoicing and customer service), average losses of energy and capacity, standard costs of investment, maintenance and operation associated to distribution per unit of power supplied and the unique charge referred to above. The annual investment costs are calculated considering the new replacement value, the life span of the facilities and a discount rate of 10 per cent annually.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

10. What approvals are required to build and operate a power project? Are these easy to obtain? Please describe the salient features of the relevant licence conditions and the grounds for revocation. What levels of fines can be imposed for failure to comply?

In general terms, to construct and operate a power project in Chile no general electricity or specific governmental authorisations are required (ie, concessions to operate, except for the concession system for public distribution services). For example, electricity concessions are offered by the electricity framework as a tool for imposing rights-of-way on land owners unwilling to grant rights-of-way through regular voluntary agreements. These electric concessions, however, are only available for the construction and development of hydro power plants, substations and transmission lines. The procedure is highly technical and rigorous, and can take at least 275 working days to be completed.

Nevertheless, other sector-specific regulations may oblige the developer to request and obtain the following

authorisations: the awarding of an environmental approval resolution (RCA); obtaining a favourable report for construction from the regional office of the Agricultural and Livestock Service; and obtaining a construction permit from the relevant municipal works department. All these approvals are considered easy obtainable if the regulatory requirements of the submission and the procedure are met.

Owing to the infringement of obligations established in the RCAs the following sanctions may be imposed by the Environmental Superintendency: verbal admonishment, fines of up to US\$10 million, revocation of the approval and even the closure of facilities. SEC, on the other hand, supervises the proper operation of the electric market, therefore it is able to commence investigation processes and eventually sanction those who breach legal, technical and administrative regulations, through the disconnection of the infringer's facility, revocation of the electric concession and fines of US\$35,000 to US\$8 million.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

11. How is the sale of excess energy regulated?

For a generator there is no obligation to execute a power purchase agreement (PPA) to inject or sell energy, to have a minimum or maximum production level or to comply with a ratio between its installed capacity and its contractual supply commitments. Therefore generators may withdraw electricity from the system to serve their contractual necessities regardless of whether the electricity withdrawn was partially or totally not produced by them. This said, an excess of energy builds up in the spot market when companies capable of generating and injecting more than their contractual undertakings (surplus companies), sell to those companies with a generation capacity or injections below their contractual undertakings (shortfall companies). The physical and economic transfers of energy arise from the balance between "surplus-shortfall", valued – in the case of energy – at instantaneous marginal cost, defined as the average cost incurred by the electric power system during one hour of supplying an additional energy unit; and – in case of capacity – at nodal price.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

12. What percentage of the country's power output comes from renewable power sources and does your jurisdiction have any specific targets or milestones for renewable energy projects?

Nine per cent of Chile's power output comes from NCRE. There is a specific target or NCRE obligation of 20 per cent by 2025.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

13. Is there a different regulatory regime for renewable energy projects? Are there any government programmes that foster the development of these projects?

No, there is no different comprehensive regulatory regime for NCRE projects. Nonetheless, Chile's electric framework does incentivise the development of such projects through the toll exemption explained in question 22, and mainly, thanks to the NCRE Law (Law No. 20,257/2008, amended by Law No. 20,698/2013): in the eventuality, the generation unit subscribes a PPA, it shall comply with the NCRE Law: each generation

company withdrawing energy from a system with an installed capacity exceeding 200MW (ie, the SIC and the SING) to sell it to distribution companies or customers is obligated to prove that an amount of energy equivalent to 10 per cent (for contracts executed after 31 August 2007 and before 1 July 2013) and 20 per cent (for contracts executed after 1 July 2013) of their withdrawals of each calendar year, is injected by means of its own or hired NCRE generation plants. The NCRE Law in its interim articles explains how this figure escalates from an initial 5 per cent in 2013 to 20 per cent in 2025.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

14. Are there any tax incentives for power projects and, in particular, for renewable power projects?

No, general tax regime applies to all NCRE power projects.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

15. Are there any investment vehicles or structures that permit the maximisation of investment in a power company, such as tax equity, master limited partnerships, real estate investment trusts (REITs) or yield cos?

Although there are no specific entities such as yield cos, setting up a structure such as a Chilean holding company is advisable as an investment vehicle for a local business. Such holding would allow deferral of the withholding tax applicable to profit distributions abroad, given that distributions between local resident companies are not subject to taxation. In addition to the deferral of taxes, a holding company in Chile would be advisable if the project contemplates the purchase and sale of target companies; since the operations could be financed from abroad, this creates deductible interest in Chilean companies and the possibility of repatriating profits at a very low withholding tax rate. Nonetheless, owing to the recently approved tax reform in Chile, the above structure may vary depending on how certain aspects of such reform are implemented by the tax authority.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

16. Are there any governmental subsidies, benefits (other than tax-related) or incentives for investment in power projects and, in particular, renewable power projects?

In the past the Chilean Economic Development Agency (CORFO) offered different financing alternatives focused on NCRE: the NCRE Credit, the NCRE Pre-investment Programme and the Environmental CORFO Credit. On the other hand, last year the Ministry of Energy awarded US\$1 million to co-finance the feasibility and pre-operation studies of 51 NCRE projects, being so far the third request for proposals carried out by the Ministry of Energy and CORFO to finance NCRE projects.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

17. Are there any capital controls or other regulations in your jurisdiction that prevent investors from repatriating investments in a power project?

No. Direct foreign investment and repatriation of capital and profits are essentially regulated by the Foreign Exchange Regulations of the Central Bank of Chile (Chapter XIV). In general terms, there are no currency controls restricting the repatriation of capital, the repayment of debt, or the making of profit distributions or other payments to a non-Chilean shareholder, member or partner of a local joint venture.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

18. Is there a market for emission reduction certificates or clean energy certificates in your jurisdiction?

Yes, Chile signed the Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and participates in the carbon market, developed precisely to comply with the Protocol. Once emission reductions certificates (CERs) are issued by the Clean Development Mechanism Executive Board, with regards to emission reductions achieved by a CDM project, they may be traded as credits in the market. To be registered as a CDM project a project has to pass through a rigorous and public registration and issuance process overseen by the CDM executive board. Initial national approval is given by the Designated National Authority (in the case of Chile the Ministry of the Environment). From 2006 to date, 1,542,018,787 CERs have been issued, of which Chile has issued approximately 2 per cent. However, since 2012, the price of carbon credits has fallen to less than €5 (the average price between 2009 and 2011 was €13). Despite the low prices, the Chilean government promotes the carbon market, owing to the voluntary commitment under the UNFCCC of a 20 per cent reduction of GHG emissions by 2020. Notwithstanding the above, CERs are not counted among the successful mechanisms of fostering renewable power projects in Chile.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

19. Which renewable power sources have been most successful in your jurisdiction and what is the medium to long-term outlook for them?

According to the Centre for Innovation and Promotion of Sustainable Energy's May Report, NCRE represent 11.4 per cent of Chile's installed electricity generation capacity, to date the most successful NCRE sources being wind (with 40 per cent), solar PV (24 per cent), biomass (21 per cent) and mini-hydro (15 per cent). The medium to long-term outlook in Chile is promising partly because of the following statistics: in March 2015 2,031MW of NCRE projects were under construction, 15,682MW were environmentally approved and 7,382MW were currently under environmental assessment. In addition, the development costs of these projects have dropped dramatically in the past couple of years and green energy has become a key element of the political agenda, independently of the government in office.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

20. Are there any non-regulatory factors that affect the development and financing of power projects in your jurisdiction, such as social, environmental, political or security concerns or rights of third parties?

Yes. In recent years large investment-power projects have been publicly condemned by nearby communities, environmental organisations and at country level. The discontent has been manifested from noticeable protests to an emerging litigation culture in an increasingly sophisticated country, reminiscent of the developed countries that normally face this kind of issue in every relevant industrial project. Emblematic cases range from big thermoelectric projects such as: Bocamina, Campiche and Castilla, to large conventional hydroelectric projects such as Alto Maipo and HidroAysen. NCRE projects, although undoubtedly less so than their conventional fossil fuel-fired and big hydro dam counterparts, are likely to be put on trial and encounter resistance from local communities. Notable examples are the cessation of the Geothermal Tatio Project, the opposition to mini-hydro projects in the Araucania and the publicly expressed hostility of Calama's alcalde to several wind and solar projects, mostly owing to concerns about the development of these projects near to areas with a high tourist or natural value. Finally, the "indigenous" factor, although addressed at length by Indigenous Law No. 19,253/1993 and the Indigenous Consultation Regulation, may still affect the development of these and any kind of power projects if they do not include the natives in the decision-making process.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

21. Are subsurface rights separate from land rights? If so, what factors must a project take into consideration in determining whether an owner of subsurface rights could create issues for a project?

Yes, subsurface rights (mining concessions) are regarded as immovable property, different from the property of the holder of the surface land, and therefore a conflictive scenario may arise, as the developer does not require any previous permission from the mining concessionaire unless the latter had previously obtained an easement over the surface land, which would entitle him to paralyse, through the filing of a judicial possessory action called denuncia de obra nueva, the works initiated over the area covered by the mining concession. Once filed, the judge must immediately order the cessation of such works until the final ruling. Unfortunately, this action is used by false miners to extort developers even if the mining concessionaire does not have the relevant title (easement) to use the surface land, as such requisite is only analysed by the court after the stoppage order has been declared. To avoid the filing of a potential denuncia de obra nueva, the developer should reach an agreement in advance with the mining concessionaire, its successors or assignees, where the latter usually grants a negative easement, or waives its rights to claim a denuncia de obra nueva action, or an easement over the area covered by the mining concessions or to perform mining exploration and exploitation activities, etc.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

22. How are wheeling tariffs set and are there any differences based on the power source and technology used? Is there a postage-stamp wheeling tariff in your jurisdiction?

Tariff differences arise between the segment used for the transportation of electric power and the power source or the technology used, except for the toll exemption originally applied to all generators and restricted to NCRE generation facilities and efficient cogeneration facilities through Law No. 20.257/2008 and Decree 244/2006. Owners of such facilities with surpluses of <9MW supplied power to the system are totally exempt; and those of >9MW to <20MW must pay a toll for the power exceeding 9MW. When the total capacity exempted exceeds 5 per cent of the total installed capacity of the system, the owners shall pay a proportion of the amount in excess.

There are no postage-stamp wheeling tariffs in Chile; currently the nearest comparable example would be the "unique charge" explained in question 9. Article 78, LGSE provides a rule called the "presumption of use", which

considers that every electric company that injects energy and power to the grid from power plants, either of its own or hired or withdraws energy and power from the grid to sell them on to distributors or general customers, is understood to be using the transmission facilities and, therefore, is obligated to pay for the relevant transmission costs. Transmission costs are allocated in Chile through the following mechanisms:

- allocation between generation and demand: for sections within the common influence area (AIC), payment of the total toll per section is distributed in a ratio of 80 per cent (owners of generation plants) and 20 per cent (companies which withdraw energy); and
- allocation on the basis of power flow direction simulation (outside the AIC, including sub-transmission): in sections in which energy flows towards the AIC, payment of the total toll is allocated to the owners of power plants located upstream, while in sections in which energy does not flow towards the AIC, payment of the total toll will be allocated to companies which make withdrawals downstream of the flow, both on a pro rata basis.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

23. Are there any open access rules for transmission? If so, how is access determined? Are there private transmission lines to which open-access rules don't apply?

Yes, according to Chilean law, STT and STx are invariably subject to an open access regime, whereas STAs are subject to an open access regime only if an electric concession has been granted in favor of such transmission facilities and they use the legal easements arising from such electric concession or such transmission facilities use any national public asset in their path. The legal effect of being subject to the open access regime is that if there is technical transmission capacity available according to the relevant CDEC, the owner of such facility may not refuse or deny the interconnection and the resulting transmission service to any third party under non-discriminatory technical and economic rules.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

24. Are cross-border power exchanges regulated?

Power exchanges and interconnection between Chilean independent electrical systems, are regulated under LGSE. However, cross-border power exchanges or interconnection are not regulated in Chile, except for the rule included in article 220, LGSE, according to which energy produced in facilities granted according to LGSE may not be exported without previous authorisation granted by a supreme decree of the Ministry of Energy, with a prior report from the SEC. Recently, AES Gener asked the Ministry of Energy for authorisation to export energy through the Andes-Salta 345kV transmission line (owned by the latter) up to the Argentinean Salta Substation; authorisation that was granted by the Ministry through Decree No 7, published in the Official Gazzete on 19 June 2015.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

25. Are merchant power projects financeable in your jurisdiction?

Yes, several uncontracted merchant projects were financed in the past owing to a particularly strong spot

price (according to Chile's Generators Association's Report of March 2013. In this month the average marginal cost in SIC was 172.8 US\$/MWh). Notwithstanding because of the current spot price decline, this is a decreasing trend. Given the characteristics of power generation projects, the financing alternatives are dominated by the project finance scheme, governed by the idea that payments associated with the loan are substantiated exclusively on the project-flow generation capacity and therefore flow predictability is a key element in the granting of the credit; an element jeopardised by the instability of the spot market price, whose average in the SING during May 2015 was 49.3 US\$/MWh, compared with 86.634 US\$/MWh in June 2014 (according to Chile's Generators Association's Monthly Reports).

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

26. What are the biggest obstacles in obtaining debt financing for renewable power projects?

The biggest obstacle currently in obtaining debt financing for renewable power projects in Chile is securing a long-term PPA with a creditworthy counterpart; counterparts are becoming increasingly sophisticated in the negotiation of energy supply. This trend has somehow been reversed by the changes introduced to public tender processes to secure energy supply for distributions companies. Additionally, securing all the necessary surface land rights and mining rights over the project development area may be substantially complicated in certain areas of the country; and the presence of indigenous communities or other conflictive communities may delay the development of projects until such communities are satisfied with their level of involvement and compensation.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

27. What are currently the most significant obstacles to the growth of the electricity market in your jurisdiction?

The limited technical capacity available of the existing transmission facilities, combined with the slow pace of development of transmission projects is probably the most significant obstacle. If there is not enough available capacity in the STA (facilities essentially and mainly dedicated to supply non-regulated customers and allow generators to inject their energy to the grid), under the current regulatory framework it is not possible to force the owner of such facilities to expand them, and the interested parties are the ones forced to invest in such expansion. Consequently, the open access explained in question 23 in fact provides limited access only to those generation projects able to pay such expansion.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

28. What are the biggest growth areas in the electricity market in your jurisdiction?

Large conventional projects intended to cover Chile's growth in demand in the following years will probably take years to see the light of day, representing a huge opportunity for NCRE to step in and supply the additional 8,000MW needed to satisfy such demand. Chile is located on the "ring of fire" and has an astounding 20 per cent of the world's active volcanoes. Moreover, the potential geothermal estimations range from 3,350MW (ENAP) to 16,000MW (Lahsen, 1988), equivalent to 91 per cent of

Chile's current installed capacity. Additionally, the Atacama Desert has about 9.28 kilowatt-hours of sun daily per square metre – among the world's strongest solar radiation. Finally, Chile has 4,300km of coastline, with powerful waves and tidal currents, which lead to an estimate of over 160GW in marine energy resources, equivalent to more than 10 times Chile's current installed capacity.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

29. Please describe any recent trends observed in your jurisdiction affecting the structuring of investments and financings in power projects.

Credit-worthy counterparts interested in signing long-term PPAs are scarce. To make the PPAs more appealing, parties are introducing hedge mechanisms and creative supply alternatives. One example is the contract for difference, where parties agree on a price known as strike price. The generator's primary obligation is to sell an agreed amount of energy in the spot market at marginal cost and cover the agreed price. In turn, the client's primary obligation is to cover the strike price. Thus, when the marginal cost of energy falls below the strike price, the consumer shall pay the generator for the monetary difference up to the agreed price. If – on the contrary – the marginal cost is above the strike price, the generator is the one who shall pay the consumer the relevant difference.

Also, to aid NCRE to secure long-term PPAs, the authority changed the terms and conditions of the public tender processes "2013/03-2°call" and "2015 call", to secure the energy supply for distribution companies, allowing to bid and supply on an hourly basis, a more suitable scheme for intermittent power generation. Although initially lenders had to adapt to a pro forma sector-specific contract, which was considered "non-financeable" owing to the few to non references to the terms commonly used in the project finance market, in the long run, and after a thorough review of the Chilean framework, which helped lenders to understand the whole electricity distribution scheme, most of the generation companies whose projects were awarded this type of PPA secured financing.

Finally, local banks are becoming increasingly active in the finance of power projects, which brings more country-knowledgeable parties to the table, facilitating the negotiation process.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

30. Are debt offerings on the capital markets becoming a more common tool in your jurisdiction to refinance construction financing?

No, in Chilean energy projects are commonly financed via non-recourse financing, provided by multilateral or bilateral lending institutions and international and local commercial banks.

[Previous](#) [Next](#)

[Back to top](#) [Back to question list](#)

31. Are power purchase agreements in your jurisdiction denominated in local currency or US dollars?

Historically, PPAs in Chile are denominated in US dollars and indexed according to the US Consumer Price Index because of Chile's high dependency on coal, diesel and gas imports. This notwithstanding, owing to Chile's tax regulatory framework invoicing must be denominated in the local currency.

[Previous](#) [Next](#)[Back to top](#) [Back to question list](#)

32. Are there regulatory limitations on foreign investment in, or control of, electric generation, transmission or distribution assets?

No, there are not. However, electricity concessions may only be granted to nationals or companies incorporated in Chile, therefore if a foreign developer wishes to obtain an electricity concession it must do so via a subsidiary incorporated in Chile. Additionally, if the foreign company is to carry out a trunk transmission activity it must comply with article 7 of LGSE, namely, it must be incorporated in Chile as a stock corporation and it shall not conduct, directly or indirectly, any generation or distribution activity. Furthermore, companies engaged in generation or distribution are allowed to participate and may hold an economic interest in the STT not exceeding 8 per cent of the investment value of the relevant system. At the same time, the interest of all these integrated companies taken as a whole cannot present more than 40 per cent of the total investment value of the system. Any merger or acquisition that exceeds these thresholds is expressly prohibited by the LGSE.

[Previous](#) [Next](#)[Back to top](#) [Back to question list](#)

33. How active in your jurisdiction is the M&A market for power assets?

In Chile, M&A and finance-related deals are very active at all levels and segments of the energy sector. During 2014 energy M&A is estimated to have reached US\$5 billion, and we expect several deals throughout 2015. Although the forecasts for the Chilean economy over 2014 and 2015 have decreased, there is still relevant activity in connection with energy M&A owing to several factors: Chile is a highly sophisticated platform, the first South American economy to join the Organisation for Economic Cooperation and Development, party to dozens of free trade agreements, has a stable regulatory framework and solid institutions, with a consolidated energy industry and interesting mixed pipeline. All the above add up to a steady growth in energy demand and a foreseeable shortfall of energy supply, which opens up opportunities for investors in the energy field.

[Previous](#) [Next](#)[Back to top](#) [Back to question list](#)

34. What are the most common dispute resolution mechanisms under local law-governed power purchase agreements in your jurisdiction?

The most common dispute resolution mechanism under PPA governed by Chilean law is arbitration, either domestic or international commercial arbitration. It is more usual for parties to choose arbitration over national courts, considering the technical nature of this kind of agreements, the sophistication and efficiency of arbitration, combined with the fact that arbitration is usually the dispute resolution forum agreed under related agreements such as interconnection agreements and engineering procurement and construction agreements, and it is preferred by lenders. There are no notable differences in the dispute resolution clause agreed in PPAs with governmental entities as off-takers and private entities as off-takers.

[Back to top](#) [Back to question list](#)