

Electricity Projects & Regulation 2016

Published on Tuesday, 9 August 2016

Chile

Juan Francisco Mackenna, José Miguel Bustamante 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 2016 was 20,080MW: 15,852MW (79 per cent) corresponded to the SIC (Central Interconnected System), 4,062MW (20.2 per cent) to the Norte Grande Interconnected System (SING) and 166MW (0.8 per cent) was distributed among the Easter Island, Aysén and Magallanes electricity systems. According to the CNE, the principal power sources in the jurisdiction are thermoelectric generation (56.8 per cent), followed by conventional hydroelectric power (29.9 per cent) and non-conventional renewable energies (NCRE) (13.3 per cent).

Next

Back to top | **Back to question list**

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

(i) The increasing interest in NCRE-based small distributed generation units (PMGDs); (ii) cross-border power exchanges; (iii) gas exports to Argentina through the GasAndes pipeline (3 million m³ per day supplied by Enap, Endesa and Metrogas from the LNG Quintero Terminal), and through the NorAndino pipeline (1.5 million m³ per day); and (iv) the growth of the LNG market.

Previous | **Next**

Back to top | **Back to question list**

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

According to the 2015–2030 Demand Forecast prepared by the CNE, the energy consumption in SIC will increase from 49.9TWh to 88.2TWh, which means a 72.95 per cent increase in the said period, with an annual growth of 3.72 per cent. On the other hand, according to the same forecast, energy consumption in SING will increase from 16.8TWh to 32.5TWh, meaning a 93.76 per cent increase in the 2015–2030 period, with an annual growth of 4.51 per cent.

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 and 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, being 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 Commission 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 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 (DisCos) 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 June 2016 installed capacity statistics, Engie, Aes Gener and Endesa represent respectively 37.49 per cent 32.90 per cent and 17.9 per cent of SING's installed capacity, whereas Endesa, Colbun and Aes Gener represent respectively 31.37 per cent 22.40 per cent and 13.62 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 DisCos. 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, currently 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. According to Bill of Law No. 10240-08 (New Transmission Law), CDECs will be replaced by a new coordinator, the Independent Electric National System Coordinator (CISEN), as of January 1st, 2018. CISEN will have the same duties and obligations of current CDECs: coordinate operations; maintain the global safety of the system; guarantee the most economic operation; assure open access to the transmission systems; and determine the marginal costs of electricity and the economic transfers between members of the CDEC; and also will collaborate with the authorities monitoring competition in the electricity market and will have a more demanding standard of transparency in the management of information. The New Transmission Law is in the final stages of discussion in Chilean Congress, and its enactment is expected in July 2016.

[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 only to free customers or to DisCos; and
- contracts market – where you find fixed tariffs or freely negotiated prices.

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.

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 or theoretical DisCo 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 a "unique charge".

[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).

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 ranging from US\$70 to US\$8 million.

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

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

11. Is the government or the ISO conducting public auctions to award long-term power purchase agreements to public and private off-takers? Are the auctions open to any source of power, or are they focused on specific sources and technologies?

Yes. Law No. 20,018/2005 introduced to LGSE a public, open, non-discriminatory and transparent tender process system to supply regulated customers. On 29 January 2015, Law No. 20,805 improved the system, introducing a number of amendments to LGSE, among others, such tender processes would be designed,

coordinated and directed by the CNE from then on, instead of the DisCos themselves. According to both old and new article 131, LGSE, DisCos must permanently secure the power supply necessary to satisfy the total consumption of their regulated customers in their relevant concession areas, consumption not already covered by supply awarded in previous tender processes and not including their free-customers consumption. For such purposes, DisCos must enter into long-term power purchase agreements (PPAs), strictly via regulated tender processes. Although these auctions are open to any source of power, as explained in question 29, to aid NCRE the “2013/03-2°call” and “2015 call” bidding conditions changed from the standard 24-hour block to certain amount of the contracted supply being offered on an hourly basis, a more suitable scheme for intermittent power generation, a distinctive feature of some NCRE.

[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?

According to the CNE, 12 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): generation units under certain circumstances are 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. Also Chile's electric framework incentivises the development of PMGD, granting them the possibility to opt between selling energy at the spot market price, or at a stabilised price (ie, the node price set forth by CNE through the biannual short-term node prices decree).

[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. Notwithstanding, Law No. 20,780 established a new tax for greenhouse gas emissions (eg, particulate matter, nitrous oxides, sulphur dioxide, and carbon dioxide), tax regarded as “green tax” since it would work as an incentive for the development of energy projects based on NCRE.

[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 as interest payments under the debt structure at a very low withholding tax rate.

[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 (i) the Ministry of Energy carried out the following programmes to incentivise NCRE power projects: programme for the development of large-scale solar projects and programme to foster energy efficiency and NCRE-based self-supply, each through US\$25 million in soft loans; and (ii) 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. In January 2016 CORFO launched jointly with the German bank KfW a line of credit to finance NCRE projects up to 20MW, for a maximum of US\$15 million.

[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) and Law No. 20,848/2015, which sets forth a new legal framework and the relevant institutional structure (ie, Foreign Investment Promotion Agency) for direct foreign investment, in replace of Decree-Law 600/1974 administered by the Foreign Investment Committee. 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. From 2006 to date, 1,679 million CERs have been issued worldwide, of which Chile issued until 2012 approximately 12 per cent. Since 2012, the price of carbon credits has fallen to less than €5 (the average price between 2009 and 2011 was €13), but despite the low prices, the Chilean government promotes the carbon market, through the Intended Nationally Determined Contribution towards the Climate Agreement of Paris

submitted by Chile to the UNFCCC on 5 January 2016, undertaking the voluntary commitment to reduce its emissions intensity by 30 per cent by 2030 from the 2007 level.

[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 June 2016 Report, to date the most successful NCRE sources are wind (with 26.19 per cent) followed by biomass (22.20 per cent), solar PV (21.56 per cent), and mini-hydro (15.97 per cent). The medium to long-term outlook in Chile is promising partly because of the following statistics: in June 2016 2,501MW of NCRE projects were under construction, 19,901MW were environmentally approved and 9,461MW 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: Nueva Era and El Campesino, to trunk transmission lines such as the new Cardones-Polpaico line, currently under construction by InterChile, the LNG Terminal Penco-Lirquén, among others. 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. A notable example is the opposition to all the wind projects in Chiloé, like Mar Brava, the Parque Eólico Chiloé and the Pililín project in Los Ríos region. 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 conflicting 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 or her 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 as leverage for negotiating higher compensation, 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. Recently, Law No. 20,897/2016, modified article 34 bis of the LGSE, article originally meant exclusively for electricity concessionaires. Through this amendment, now article 34 bis of the LGSE, widens its protection to any developer of NCRE projects, and hence both electric concessionaire and NCRE developer face a Summary Possession Trial may appeal to the injunctions placed on new NCRE projects based on legal actions such as the *denuncia de obra nueva*.

[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 (eg, PMGD) 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.

Currently there are no postage-stamp wheeling tariffs in Chile; and transmission costs are allocated through a "presumption of use method". Notwithstanding, precisely through the New Transmission Law a "postage stamp method" will be implemented, and thus, 100 per cent of the tolls for the use of the National Transmission System (currently STT), Zonal Transmission System (currently STx) and Dedicated Transmission System (currently STA) utilised by users subject to price regulation shall be borne by the end consumers (whether non-regulated or regulated), through a flat rate per kW (capacity-based charge), based on average system costs and independent of the transmission distance.

[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 expressly 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. In 2015, the Ministry of Energy granted this authorisation to AES Gener, to export energy through Andes-Salta 345kV transmission line (owned by AES Gener) up to the Argentinean Salta Substation. On 12

February 2016, the export of energy began with a supply of 110MW from the GasAtacama power plant. On the other hand, CDEC-SING is studying a series of alternatives for expansion and cross-border interconnection, mainly to Argentina's SADI and Peru's SEIN, Finally, Chile is a member of *Comunidad Andina de Naciones* (CAN), multilateral organism currently developing an international agreement called *Sistema de Interconexión Eléctrica Andina* (SINEA), whose objective is to deepen and expand the international energy exchanges.

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

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

25. Are merchant power projects financeable in your jurisdiction?

Fewer merchant power projects are being financed due to an increasingly variable spot price (according to CNE's June 2016 "Monthly Energy Sector Report", the average spot price in May 2016 was in SIC 42.7 US\$/MWh and in SING 73.4 US\$/MWh, whereas in CNE's same report of May 2015, the average spot price in April 2015 was in SIC 134.2 US\$/MWh and in SING 52.9 US\$/MWh). Financing alternatives are 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.

[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 the highly competitive environment to secure a long-term PPA with a creditworthy counterpart. 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, 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. Mitigators to such risk would be the works to expand the capacity of the trunk transmission, such as the SIC-SING trunk interconnection works included in Decree No. 158/2015; the Nueva Línea Cardones-Maitencillo 2x500 kV", Nueva Línea Maitencillo-Pan de Azúcar 2x500 kV, and Nueva Línea Pan de Azúcar – Polpaico 2x500 kV new transmission lines, currently under construction by InterChile SA (Colombia's ISA's subsidiary); and the new "Cardones-Diego de Almagro 2x220 kV transmission line constructed by Eletrans SA and in operation since November 2015. The New Transmission Law will also help to overcome the transmission obstacle, through the following: redefinition of the current transmission systems, including a new transmission segment for areas with high potential of power generation, also known as "development poles"; allocating a central role to the state in the evaluation of transmission lines' paths and strips; and extension of the scope of the open access regime to all transmission facilities.

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

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

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

The NCRE market: (i) Chile has an astounding 20 per cent of the world's active volcanoes; (ii) the potential geothermal estimations are equivalent to almost 91 per cent of Chile's current installed capacity; (iii) the Atacama Desert has about 9.28 kilowatt-hours of sun per square metre – among the world's strongest solar radiation; (iv) Chile has 4,300km of coastline, with powerful waves and tidal currents, which lead to an estimate of more than 10 times Chile's current installed capacity in marine energy resources.

Another growth area is the LNG market: (i) expansion of the LNG Quintero Terminal (operative in 2021, US\$300 million investment) and LNG Mejillones Terminal (under environmental assessment, US\$40 million investment); (ii) the construction of new LNG terminal Penco-Lirquén; and (iii) major power plants based in LNG are either in the permits stage or under construction, like El Campesino (640MW), owned by Biobío Genera: Nueva Era (510MW), owned by ENAP, Luz Minera (760MW), owned by Codelco; and Kelar (517MW) owned by BHP Billiton.

[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.

The typical long-term PPAs with a private creditworthy counterpart is being replaced by less traditional contractual structures:

- DisCos PPAs: To aid NCRE to secure long-term PPAs, the authority changed the terms and conditions of the public tender processes, allowing to bid and supply on an hourly basis, a more suitable scheme for intermittent power generation. Lenders have become more agreeable to this pro forma sector-specific contract, which at first was considered “non-financeable”, the foregoing after a thorough review of Chilean energy framework, which helped them to understand this PPA's risks and their mitigating circumstances, and thus, most of the generation companies awarded in past tender processes secured financing.
- Cluster of PMGD, mainly due to the possibility to opt for a stabilised price regime reducing the spot market price exposure.

[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, energy projects in Chile are commonly financed via non-recourse financing, provided by multilateral or bilateral lending institutions and international and local commercial banks. Notwithstanding, an increasing interest to analyse and implement such tools has been recently observed in the energy market.

[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 the 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 2015 energy and natural resources M&A agreements reached approximately US\$3.1 billion. Although the forecasts for the Chilean economy over 2015 and 2016 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 OECD, party to dozens of free trade agreements, has a stable regulatory framework and solid institutions, with a consolidated energy industry and interesting mixed pipeline.

[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, 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.

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