

## **Renewal of Concessions in the Brazilian Power Sector - Evolution and Prospects**

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### **Overview**

Brazil has 157 GW of installed capacity - 64% is hydropower, 26% is thermopower, 8% is wind and 0.6% is solar. The National Interconnected System (SIN) has more than 140 thousand kilometers of transmission lines, making the universalization of access to electric power in the country viable. The SIN load is stagnant around 65 GWa since 2014 and the consumption reached 460 TWh in 2017, representing a still reduced per capita consumption of 2,525 kWh/hab. The distribution of electricity is carried out mainly by 53 distribution concessionaires, and by 43 other small local permit holders. In a country with continental dimensions and a dynamic power sector, public and private capital companies face constant uncertainties related to the continuity of their future activities.

Until the Constitution of 1934, the concessions were bargained and granted by the municipalities or states. Since then, the Union has had the legislative and granting powers for hydropower potentials (DIAS LEITE, 2007). In general, the concessions were granted by decree and without term. Otherwise, the duration was long (between 30 and 50 years) and the extension was practically automatic. In this context, vertically integrated monopolies prevailed, predominantly of public capital, regulated by the cost of the service.

The Federal Constitution of 1988 determined that all concessions or permits for the provision of public services must be granted through a bidding process. This new requirement establishes the competition for the selection of concessionaires and initiates the opening of the sector for the entrance of private agents. This new practice represented a radical change in the sector, since the existing concessions were not preceded by bidding and many had indefinite or overdue terms. During the 1990s, several laws were edited to bring the sector into line with the new constitutional guidelines. In this sense, it was determined that the plants in operation granted without a bidding process should be tendered at the end of the concession period. Initially, the concessions for generation without term should be tendered in two years (Law 8,987/95). However, subsequent law (Law 9,074 / 95) allowed the extension for 20 years of existing concessions granted without bidding, in order to guarantee quality of service at adequate costs. This same law determined that new generation concessions would have a limited term of 35 years, and could be extended for an equal period. New transmission and distribution concessions were limited to 30 years, renewable for the same period. In 2004, with the definition of the new sectorial model based on centralized expansion auctions, the Law 10,848 established the maximum duration of 35 years for new generation concession contracts, with no forecast for extension. Already for the previous concessions, the Law established the limit of a single extension for a maximum period of 20 years, changing the previous legal provisions. (BARCELOS, 2008, IAC, 2011)

In brief synthesis, there are different legal regimes and interpretative possibilities. The laws moved in the direction stipulated by the Constitution to require prior bidding for granting a concession. There is a legal debate on whether laws can change the contractual forecast of renewal or whether these clauses are administrative in nature and therefore are subject to regime changes (BATISTA, 2009). The interpretation that the State can intervene in these clauses prevails, being only an expectation of future rights.

In turn, the economic aspects are fundamental for understanding the debate about the renewal of concessions in the Brazilian power sector (BROWN, 2012). On the one hand, it should be noted that generation concessions in Brazil involve expressive infra-marginal rents due to the preponderance of hydropower generation and its characteristic of high fixed cost and low marginal cost of operation. The infra-marginal rent emerges from the difference between the low marginal cost of the hydro generation and the average price of electricity defined by the marginal cost of the costly unit. Under the cost of service regime, the infra-marginal rent is automatically passed on to the consumers in the tariff reviews. However, under a market regime, the concessionaire absorbs this rent. In theory, infra-marginal rent is intended to cover all costs, especially fixed costs - which explain why high fixed cost technologies should appropriate larger infra-marginal rents. However, in practice, it is commonly argued that the hydropower costs of old concessions have already been amortized, therefore this revenue capture would be undue. On the other hand, there is a common notion that competition occurs around the bidding process for granting concessions and that its benefits would be captured precisely by the granting dispute. Thus, the periodic bidding process of "expired" concessions would be the mechanism for capturing infra-marginal rents and the means to promote competition and efficiency.

The existing generation, transmission, and distribution concessions that were renewed for 20 years from Law 9,074/1995 could not, in theory, be renewed again. However, Provisional Measure 579/2012, converted into Law 12,783/2013, allowed for the conditioned extension of concessions, only once more time, for a period up to 30 years. The concessions that expired in 2015 represented (i) 20 GW of installed capacity, about 20% of the total capacity of the country at the time; (ii) 95 thousand km of line extension, about 85% of the transmission lines of the impacted concessionaires; 38 energy distribution concessionaires, which together supplied about 120 TWh (TCU, 2011). The transmission and distribution concessions were extended, conditioned to efficiency and quality targets set and monitored by the regulatory agency (ANEEL). Among the conditions for the extension of the generation concessions stands out the acceptance of commercialization through energy quotas, accepting the tariff stipulated by ANEEL. Thus, the hydropower rent would be transferred to the consumers, who would also assume the hydrological risk. The concessions of Eletrobras were renewed under the influence of the federal government, but the other state concessionaires did not join, claiming the acquired right of renewal (GONÇALVES, 2015).

## **Methods**

The article aims to present the evolution of the renewal of concessions in the Brazilian power sector, identifying the main legal frameworks established since the Constitution of 1988. The legal regimes will be analysed from an economic and regulatory perspective, identifying the impacts of the Provisional Measure 579. The Brazilian framework will be contrasted with the practice of renewal of concessions in the United States and in the European Union. The prospects for future renewal will be analysed from the identification of the impacted concessions.

## **Results**

There are examples of countries that do not envisage bidding for granting concessions, such as the United States, and countries that define a bidding process, such as France (BARCELOS, 2008). On the other hand, the European experience generally points to a long concession period for hydropower plants (GLACHANT et al., 2015), mitigating uncertainties for long-term investment horizons. Although concessions should not be perpetual, the mandatory periodic bidding process for concessions of assets that have long-term investment horizons and provide continuous services does not generate an efficient incentive structure (BROWN, 2012). On the contrary, it opens space for uncertainty related to the reversal of assets and, consequently, establishes perverse incentive of underinvestment, compromising the quality of the public service rendered.

## **Conclusions**

The renewal of concessions should not be tied to issues related to rent capture, since competition and its benefits should be structured under commercial and tariff spheres. The right to renew the concession must be related and conditioned to the quality of the service provided. Competition and its benefits must be pursued through efficient regulatory processes (for regulated monopoly activities, such as transmission and distribution) and via appropriate remuneration arrangements (for competitive activities). Thus, competition is not only for the future market, but above all, it is constantly for the current market.

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