MAYER | BROWN

December 2020

Opportunities in the Brazilian Power Distributed Generation Market

By Débora Yanasse and Frank Affonseca

Abstract The Brazilian distributed generation ("DG") industry has been growing quickly since 2015 , driven by proper regulations (including net metering regulations), financing availability and technological developments, in addition to the natural incentive for electricity cost reduction. There are certain ongoing legal and regulatory reviews, which have not slowed down the investments in DG in the country. There are investment opportunities for different stakeholders in project development, Mergers & Acquisitions (M&A), Public Private Partnerships (PPP) and financing.

Overview

Distributed Generation ("DG"), one of the fastest growing Distributed Energy Resources ("DER") in the world, has also been quickly ramping up for the past five years in Brazil. Pursuant to Brazilian laws, DG refers to the renewable power generation by captive customers of a certain utility based on on-site or off-site power plants connected to such utility's distribution grid.

In Brazil, captive customers are allowed to install DG projects up to 5 MW. In addition to the possibility of installing an off-site DG project, customers may also form a consortium or a co-op to share an off-site power plant. The Brazilian net metering regulations allow customers to use the credits arising from excess power generated by its DG project within 60 months.

These regulations apply to all utilities in the country as they are subject to Federal regulations issued by the Brazilian Electricity Regulatory Agency ("ANEEL"). DG is specifically regulated by ANEEL's Normative Resolution No. 482/2012, as amended by Normative Resolutions No. 517/2012, 687/2015 and No. 786/2017 ("REN 482/2012").

Based on information available at ANEEL's website, there are 338,990 operational DG projects that added 4.3 GW of installed capacity. This represents approximately only 2 percent of the total installed capacity in Brazil. In comparison, China has approximately 50 GW and the United States 20 GW of DG installed capacity. Nevertheless, the DG market in Brazil has been rapidly growing and COVID-19 has not adversely impacted such trend. In fact, in the first semester of 2020, there was a 77.83-percent increase in DG projects in relation to the same period of 2019 pursuant to Canal Solar based on ANEEL's data.

Débora Yanasse
dyanasse@mayerbrown.com
+55 21 2127 42

Frank Joaquim Dias de Affonseca
faffonseca@mayerbrown.com
+55 21 2127 4225

The chart below shows the historic increase in DG projects in Brazil to date:

YEAR	DG PROJECTS	INSTALLED CAPACITY (kW)
2020	173,886	2,177,085.09
2019	121,223	1,551,068.98
2018	35,582	420,360.66
2017	13,972	155,687.23
2016	6,759	65,505.12
2015	1,464	11,416.40
2014	308	3,557.12
2013	59	1,494.66
2012	6	467.22
2011	4	81.00
2010	6	40.02
2009	2	23.20
2008	1	25.00
Total	353,272	4,386,811.70

Ninety-nine percent of the Brazilian DG projects are photovoltaic ("PV") installations, which are more competitive than other renewable energy sources. Studies indicate that accordingly, Brazil is following the global trend as forecast by the International Energy Agency ("IEA"). According to IEA's projections, DG PV total capacity in the world will more than double by 2024, surpassing 500 GW or even 600 GW in the accelerated forecast.

In Brazil, there are several business models in the DG market. Because Brazilian captive customers are not allowed to purchase power from or sell power to parties other than the utility to which they are connected to, DG developers and investors offer customers solutions through equipment supply and equipment leasing, which may be combined with real estate leasing for off-site projects, as well as equipment operation and maintenance, power management and other ancillary services.

Proper regulatory incentives have allowed this exponential growth of the DG industry in Brazil, where captive customers are keen to reduce costs with expensive electricity rates. In addition, access to multiple financing lines from development and commercial financial institutions as well as technological developments resulting in cheaper and more efficient equipment have also contributed to such expansion.

Ongoing Legal and Regulatory Reviews

ANEEL has proposed a new review of REN 482/2012, where the main and most polemic change is related to the net metering regulations. ANEEL proposes to correct a distortion related to the credits in kWh arising from excess power of DG projects. Currently, consumers with DG do not pay for the use of the distribution grid and sectorial charges in relation to these credits, which costs are thus borne by the other customers. Therefore, ANEEL proposes that customers with DG receive fewer credits to properly allocate such costs to them and terminate the cross-subsidy that is no longer needed to encourage the GD industry.

Such proposed regulatory changes may impact the pay-back and return on investments of DG projects, but they will certainly not stop its growth. In fact, the Brazilian Energy Research Company ("EPE") forecasts that the DG installed capacity in the country will reach 16.8 GW by 2030 if such new regulations as proposed by ANEEL are issued—that means a 400-percent increase in 10 years.

Unfortunately, ANEEL's review process of REN 482/2012 has not been concluded so far. The proposed regulatory change to the net metering rules has been facing fierce criticism from certain segments of the DG market. The main issues under discussion are related to the level of impact to the credit related to grid and charges costs (as per ANEEL's scenarios, there is a possible range from 28 percent to 62 percent of impact to the credits), as well as the transition rules for existing DG projects.

Following market claims, the Brazilian Congress has proposed three bills of law—Bills of Law No. 5,829/2019, No. 616/2020 and 2,215/2020—that are intended to address these issues. However, in our opinion, these bills do not appropriately resolve the controversies and they may cause further harm to the development of the DG industry in Brazil.

Recently, the Federal Court of Accounts ("TCU") has rejected a request from a public prosecutor for ANEEL to suspend the review of REN 482/2012 and indicated that ANEEL has been in the right direction towards ending cross-subsidies.

It is important to highlight that the Brazilian Congress, TCU, ANEEL and all market players agree that private investments demand legal and

regulatory certainty and stability. On the other hand, the dynamism of our society also demands efficient legal and regulatory adaptations in accordance with constitutional principles and public policies.

Opportunities

GD perfectly translates the so-called 3D trend in the power industry—Decarbonization, Decentralization and Digitization—and we believe that this is an irreversible worldwide movement in the years to come. In Brazil, in addition to greenfield development, M&As have also been an important investment strategy for diversified stakeholders—e.g., private equity funds, investment funds, sovereign funds, financial institutions, power and infrastructure companies and equipment suppliers. States and municipalities have also been structuring Public-Private Partnerships ("PPPs") to foster DG projects with developers for the supply of power to public buildings.

There are over 10,000 companies in the DG industry chain and more than 5,000 states and municipalities that may structure PPPs for DG projects in Brazil.

There are more than 70 different financing lines for DG developers and customers from public and private financial institutions.

Such a pulverized, regulated and competitive market is also a challenge in these transactions. A successful transaction demands support from experienced technical, financial and legal advisors.

In conclusion, the Brazilian DG industry currently faces legal and regulatory challenges that are expected to be overcome in 2021. These discussions or even the economic recession in 2020 have not slowed down investments in DG. Instead, "prosumers" have been proactively seeking energy efficiency solutions, and DG is a very attractive alternative.

Endnotes

[<?>] Based on information available at https://www.aneel.gov.br

[<?>] IEA (2019), Renewables 2019, IEA, Paris https://www.iea.org/reports/renewables-2019

[<?>] http://www.absolar.org.br/financiamento