



RenovAr (Argentina): Scaling ‘Express Edition’

In the last few years, IFC has prioritized an approach to creating bankable private sector infrastructure opportunities that we call “Scaling”—focusing not on single asset development, but on a holistic approach that creates a pipeline of infrastructure projects.

The essence of the Scaling approach is to develop a robust public-private partnership (PPP) model for a single deal and then replicate it. This spreads costs, enhances impact, and encourages programmatic, competitive tendering, with faster delivery and lower prices—genuinely creating new markets.

In some countries, this approach involved working with governments to design a process. In others, IFC has worked with investors and bankers, corralling views and facilitating dialogue. In each case, the ideas at the heart of Scaling—focusing on aggregation and

SCALING INFRASTRUCTURE

investing upstream to achieve credibility downstream—were adapted to specific country circumstances. In all cases, the Scaling effort in process design and organization had a meaningful and long-lasting impact.

Here we consider the case of one of these experiences—RenovAr—in more detail. This case study accompanies four other case studies and an Executive Summary, and provides insights and key takeaways that are directly applicable to other countries.

The intervention on Argentina’s Renewable Energy Auction (RenovAr) was a short-lived but extremely effective engagement to respond to the needs of a client—in this case, the Government of Argentina. Its target: to produce 20 percent of Argentina’s electricity from renewable sources. It was the country’s first renewable energy auction, aimed at attracting 1,000 MW worth of new projects, but ended up with bids for more than six times that amount. IFC and other institutions helped organize a renewable energy auction, including setting up the process to attract international bidders and create a new market for private investment in renewable energy. Ultimately, more than 2,400 MW were awarded, primarily to wind and solar projects.



I The Project

In early 2016, the Government of Argentina launched RenovAr to take advantage of the country's abundant clean energy resources by promoting private renewable energy generation via an auction.

IFC played a central role in the design of the program and drafting of bankable project documentation. This engagement was about much more than the projects that IFC ultimately financed. IFC's timely and effective upstream advice, provided jointly with the World Bank, eventually led to the creation of a market in which private firms have continued to show strong interest.

By the end of 2016, Argentina had successfully conducted two auction rounds (rounds 1 and 1.5) that were largely oversubscribed, and resulted in the award of 59 projects with a combined capacity of 2.4 GW and a combined investment of more than \$3 billion. The projects awarded under these first two rounds allowed Argentina to grow its share of renewable energy generation from 2 percent of total capacity, to 8 percent by 2018.

Following the success of rounds 1 and 1.5, Argentina conducted an additional round (round 2) in August 2017, that was also very successful in attracting investor interest and confirmed the success of RenovAr's scaling approach. Since its inception, the RenovAr program has awarded 147 projects representing more than 4.4 GW of renewable energy projects at very competitive prices. The program is also providing important lessons to other markets interested in scaling up investments in renewable energy.

IFC considered, for investment, four projects awarded under the first two rounds of RenovAr and eventually invested in two: La Castellana and Achiras—which became the first project finance deals to take place in Argentina in the past 15 years.

II Context: Making the Market

A large but imbalanced market

Argentina is the third largest electricity power market in the Latin America region after Brazil and Mexico, with a total electricity demand of approximately 126 Terawatt hours (TWh) per year. Approximately 41 percent of demand is driven by residential customers (98 percent of Argentines have access to electricity), 30 percent by industrial users and 28 percent by commercial consumers.

The sector is currently overseen by the Ministry of Energy and Mines (MINEM), which defines policies for the energy sector and oversees its application. The local wholesale market (*Mercado Electrico Mayorista—MEM*) was created and is administered by CAMMESA, which also acts as the economic and technical dispatcher for the main interconnected grid, oversees technical standards and procedures, and acts as a clearing house for transactions within the MEM. CAMMESA is owned in equal parts by large users, generators, transmission and distribution companies and by MINEM, which holds a 20 percent ownership stake.

In the 1990s, Argentina successfully reformed its energy sector, achieving notable results and becoming a model for deregulation. The sector has been open to private investment since 1992 and private players are present in the three vertically separated segments of the industry: generation, transmission and distribution. However, in the following decade, the energy sector was negatively impacted by a series of measures that the Argentinian government took in response to the economic crisis of 2001. Facing massive devaluation in the wake of the crisis, the government converted electricity, transmission and distribution tariffs from USD to Pesos; froze all regulated transmission and distribution tariffs; revoked all price adjustment provisions and inflation indexation mechanisms in public utility concessions; empowered the Executive Branch to conduct a blanket renegotiation; and required that spot prices be calculated based on the price of natural gas, regardless of actual fuel used.

The sector was severely affected, and electricity companies experienced a decline in revenues in real terms and deteriorating performance. The debt service burden of the private sector increased sharply (most sector entities had US dollar denominated debt), leading many of these companies to suspend payments in 2002. As a result, many of the generators, transmission and distribution companies deferred investments, leading to a supply deficit.

SCALING INFRASTRUCTURE

Starting in 2006, Argentina implemented several measures enacted through presidential decrees with the objective of promoting new investments in generation. One of these measures allowed CAMMESA to enter into PPAs with new power producers that had priority of payment. These producers mobilized corporate financing and received public funds that allowed for the delivery of an additional 7,000 MW of capacity. However, this was not sufficient to close the investment gap, leading to a sharp deterioration of the system. By 2015, government user charges only covered 30 percent of the average cost of energy supply and Argentina's subsidies became the largest in the region. Accounting for close to 4 percent of the country's Gross Domestic Product, these subsidies had an enormous fiscal impact. In addition, the number of power cuts had increased to 33 hours/user/year, more than five times the number of power cuts experienced in 2003.

Argentina has significant wind and solar resources. The Patagonia region has one of the highest wind energy potentials in the world, with capacity factors in the range of 38 to 50 percent, while the northwest region has important solar resources. Despite these abundant resources, and even with hydro providing about a third of generation capacity, Argentina has traditionally been reliant on fossil fuel-fired generation. As of October 2017, Argentina had a total installed capacity of approximately 36 GW, of which 62 percent was thermal, 31 percent hydro, 5 percent nuclear and 1 percent mini hydro, 1 percent wind and 0.02 percent solar.

An enabling legal framework and an ambitious target

In 2009, the Argentinian government launched the first renewable energy auction under its "GENREN program," which resulted in the award of 1 GW of renewable energy projects. However, due to macroeconomic conditions and regulatory bottlenecks, only 20 percent of these projects were built: 130 MW of wind, 7MW of solar and 2.7 MW of small hydro.

Mindful of the limited success of previous public-sector led efforts and seeking to capitalize on renewable resources in the face of a growing fuel import bill, the Argentinian government sought to prioritize the development of renewable energy generation by passing a new Renewable Energy Law in October 2015. The Law set mandatory renewable energy targets of 8 percent and 20 percent by 2017 and 2025, respectively. In order to achieve the 2025 target, Argentina would need to build more than 10.4 GW over the next nine years, or about 1.2 GW per year. This required the overhaul of the previously existing regime, the setting of clear rules for passing power purchase agreement costs to consumers and the introduction of fiscal incentives.¹

¹ Under the new legislation, RE projects benefit from anticipated Value Added Tax (VAT) returns, import tax exemptions, accelerated depreciation, local content and up to ten years of income tax loss carry-forwards.

SCALING INFRASTRUCTURE

The Renewable Energy Law also created the Fund for the Development of Renewable Energy (*Fondo para el Desarrollo de Energías Renovables* or FODER) to facilitate the financing of projects and mitigate liquidity and offtaker credit risks. MINEM set up FODER as a trust fund that can provide guarantees and direct financing (debt or equity) for renewables projects. FODER is funded out of the national budget, savings resulting from lower reliance on fossil fuel-based generation, specific taxes and revenues from the issuance of debt securities. The trustee of the FODER trust fund is Argentina's Investment and Export-Import Bank (*Banco de Inversión y Comercio Exterior*–BICE).

A driven government

In early 2016, the newly-elected Government issued an "electric emergency" decree in effect until December 2017. The emergency protocol gave the Argentinian government extraordinary powers to tackle the problems faced by the system, including the ability to increase electricity prices and the option to fast track new contracts with energy companies.² The first step towards reform was in removing subsidies from the retail price, a step that would improve CAMMESA's credit standing and send a positive signal to investors. The Government increased utility tariffs (around 240 percent in 2016 and 50 percent in February 2017). In addition, Argentina also announced a 3-year plan to eliminate energy subsidies by 2019 (except for a social tariff to protect the poorest 1.5 million households). Under the 2017 budget, Argentina cut subsidies to 1.7 percent of GDP down from 4 percent.

On top of addressing the deficit in the energy sector, the Government also had to tackle macroeconomic imbalances and improve the country's fiscal position. With a supportive congress, the Government implemented an economic policy that resolved Argentina's default situation, allowing the government to issue debt in the international capital markets (more than US\$30 billion, with tenors ranging from 3 to 20 years). In addition, the Macri administration eliminated foreign exchange restrictions, a measure that led to depreciation of the Argentine Peso (ARS): the exchange rate increased from ARS 8.9 per USD in December 2015 to ARS 16 per USD by the end of 2016.

² "Decision Paper Final," Tab 1 IRM files

III Transaction Evolution

Let's call the World Bank Group

Following the introduction of the renewable energy law, in early 2016, the Government of Argentina called on both the World Bank and IFC to provide advice on the structuring and implementation of a new tender process to advance the objectives set out in the legislation. The IFC and World Bank received a clear mandate to act fast to set up the financing for the large scale RenovAr program. The IFC team was tasked with providing advice on the overall attractiveness of the program for private investors and developing bankable project documentation. The World Bank team started working on a guarantee program to support the financing of RenovAr projects.

With the advice of the World Bank Group, the RenovAR program was designed to mitigate the risks faced by investors in renewable energy projects. Its bankability was strengthened by the following key features: (i) top priority dispatch to RenovAr projects; (ii) PPA tariffs in US\$, but payable in ARS; (iii) provisions for lender consent prior to assignment, termination, amendment or renegotiation of the PPA and a 180-day cure period in connection with a termination event attributable to the project; (iv) backstops offtaker obligations with a pre-funded liquidity and guarantee fund (FODER) that benefits from structural protections including a top up obligation by the GoA if the fund balance drops below 65 percent of the required amount and a 12-month reserve account; (v) a dispute resolution mechanism based on international arbitration; (vi) compensation triggered by payment default or convertibility/transferability restrictions in the form of a put option granted by the Government of Argentina and payable out of FODER and with additional backstops from MINEM, the Ministry of Finance and earmarked government securities; and (vii) optional World Bank guarantees in the event that the above-mentioned compensation is not paid or in the event of inconvertibility or non-transferability.

World Bank Guarantee

The World Bank and IFC conducted investor roadshows domestically as well as in the United States and Europe to gauge investor appetite for RenovAr. The general feedback was of cautious optimism given Argentina's track record in the last 15 years of policy reversal and non-compliance with contracts (political risk), and the limited experience with renewables in the country. Although the risk mitigation provider by FODER was welcomed, it was not sufficient in the eyes of some investors, particularly international players. For this reason, Argentina decided to look into World Bank Partial Guarantees.

The World Bank Guarantee offered to Argentina is an optional, partial cover to investors willing to pay for it and covers FODER's obligations to purchase the project if the put option (investor's right to sell the project) is exercised—covering cases where CAMMESA payment and other obligations are not met, inconvertibility, non-transferability, and termination of the FODER trust fund. For the partial guarantee to be triggered, the sequential backstop of the put option obligation that is provided by MINEM, the Ministry of Finance and earmarked treasury notes would need to fail first, making it unlikely that the guarantee will be called.

The World Bank first approved a guarantee envelope of \$480 million on February 28, 2017 in support of RenovAr's rounds 1 and 1.5. This envelope was later increased by \$250 million, when the Bank approved an additional guarantee envelope of \$250 million for round 2 on March 15, 2018. As investors showed an increasing confidence in investing in the Argentine RE market, the percentage of bidders requesting the World Bank guarantee decreased, going from 52 percent in round 1, to 35 percent in round 1.5 and 19 percent in round 2. Overall, close to half of the investors that requested the guarantee were foreign investors, with the share of foreign investors requesting the guarantee increasing in round 2.

SCALING INFRASTRUCTURE

Evolution of the auctions

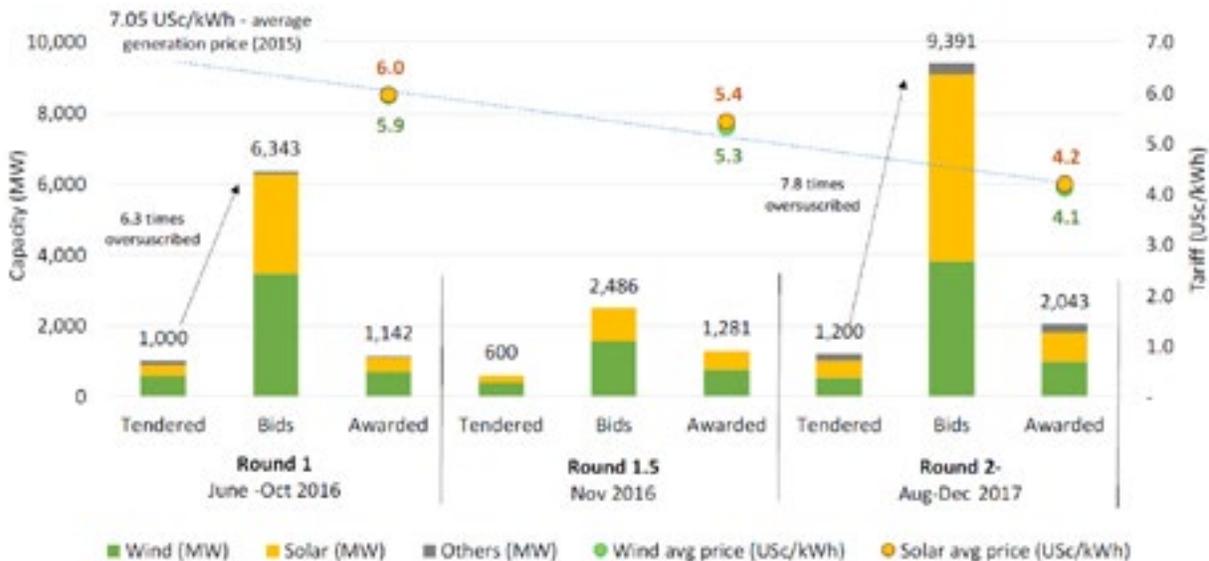
The program launched in May 2016, just one month after the World Bank Group first engaged with the Government. Despite rapid implementation, the initial tender achieved strong results, prompting Argentina to issue various rounds:

Round 1: In July 2016, CAMMESA issued a Request for Proposals (RfP) for 1,000 MW of renewable energy capacity under 20-year PPAs. The RfP included a term sheet for an optional World Bank guarantee. The response exceeded expectations with 123 bids received, representing an aggregate of 6,343 MW capacity (over six times the request). In October 2016, 29 projects (1142 MW) were awarded. These included wind (707 MW), solar PV (400 MW), biomass (15 MW), small hydro (11 MW), and biogas (9 MW) across 14 provinces. At 6.13 US¢/kWh, the average bid price was lower than the generation price of 7.05 US¢/kWh.

Round 1.5: Given the strong investor interest, In October 2016, CAMESSA issued an additional RFP for 600 MW of capacity in other provinces. A total of 30 projects were awarded (765 MW wind and 516MW Solar PV), and in this round the bid price was lower: 5.33 US¢/kWh and 5.44 US¢/kWh respectively.

Round 2: Launched in August 2017, this round received 228 offers for an overall installed capacity of 9,391 MW, more than seven times the requested capacity of 1,200 MW. Under Round 2, CAMMESA awarded 88 projects amounting to 2,043 MW.

Figure 1: RenovAr Program Evolution



Source: Project Paper on Proposed Guarantee in Support for the Fund for the Development of Renewable Energy (FODER), February 22, 2018, International Bank for Reconstruction and Development, Report No. 123616-AR

IV A Tango Just in Time

The Tango is a dance where one can obsess about having the most elaborate technique, but where the only thing that matters is feeling the music and being in rhythm with your partner. Likewise, in the case of RenovAr, IFC and the World Bank not only had considerable expertise but crucially, they acted in tune with client needs—getting renewables to work in Argentina quickly.

The first key step in implementing this upstream mandate was to mobilize the required internal actors and to secure the required funding. Given that the scope of work requested by Argentina was not part of any ongoing mainstream mandate or project, it was key to secure the human and financial resources internally to execute the task. With internal funding, the team set about hiring international counsel that could deliver a strong work product within the given timeframe.

The advice provided by IFC and the World Bank focused on the following key areas:

Establishing grid limits: IFC advised the government to announce defined limits on capacity for each transmission node being auctioned to mitigate curtailment risk. These limits were based on a grid plan that set bounds for transmission loss and capacity by corridor and node. Nodal capacity limits were also a creative way to ensure bids were awarded at the best price under maximum capacity. Each bidder could select a partial award option for projects that have merit in price but are too large for the nodal capacity limit. Addressing curtailment risk was fundamental in mobilizing investments at scale. A pro rata allocation of capacity would not have allowed for this build out.

Respecting the renewables share target: IFC recommended that the government respect the set 8 percent renewables target set in the Renewable Energy law, since awarding projects resulting in a higher participation of renewables in the energy mix would dilute the FODER framework (Treasury and World Bank support were fixed at set financial thresholds, not based on capacity tendered). Round 1.5 however increased the participation of renewables in the energy mix to 9 percent by 2018.

Maximizing price competition: To focus the bid award solely on the best price, IFC recommended changes to the selection method and tender design:

- *No credit for local content:* Since the Renewable Energy Law already provided fiscal incentives for local content, IFC advised the government to remove local content as one of the components in the formula for evaluating bids. This was key to attract financing from bilateral Development Finance Institutions.

SCALING INFRASTRUCTURE

- *Excluding balancing:* Argentina had initially considered passing on the uncertainty of balancing costs to investors through market clearing. IFC advised against this approach, noting that this was a cost that the system operator could bear through efficient scheduling of the country's storage reservoirs and by taking advantage of the high share of gas in the energy mix. However, in exchange for taking on this risk, the government could require generators to commit to bid volumes and agree to make up for any annual shortfall within a 12-month period. If still keen to pass on this risk to investors, the government could do this in the next round, once it had built a track record in the sector and risks perception was lower.
- *Disclosing price cap after bid opening:* To allow market dynamics to determine pricing, IFC advised the government not to disclose its price cap until bids were opened. This was prescient as the average price for Round 1 ultimately was US\$20–30/MWh below the envisaged price cap. In Round 1.5, the average price from Round 1 was announced as the new cap.

Relying on international arbitration: IFC advised the government to allow for international arbitration as a key condition for project bankability. The provision to seek arbitration abroad was integral in attracting international investor and lender interest. In this case, the United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules will apply if arbitration is triggered.

Standardizing Environmental and Social criteria: Each province initially wanted its own Environmental and Social (E&S) rules to apply in the projects located in their jurisdictions. IFC recommended a universal approach whereby IFC Performance Standards would apply across provinces. This standardization of E&S requirements provided comfort to bidders pursuing projects in multiple locations and to lenders accustomed to IFC's standard. The use of IFC performance standards was also critical to ensure project eligibility for the World Bank guarantee and increased preference for RenovAr over one-off tenders.

Fine tuning the World Bank guarantee: IFC provided input into the design of the guarantee reflective of its experience in private power projects. IFC advised that it was key to include the guarantee upfront as part of the package to set up a successful precedent for future rounds, even if these did not eventually benefit from a guarantee. In addition, IFC recommended that the World Bank guarantee only cover termination events triggering the put option, as it deemed that FODER and its sovereign backing would be able to cover liquidity risks. Finally, noting the need for flexibility to facilitate the mobilization of other lenders, including bilateral Development Finance Institutions, IFC recommended for the guarantee not to have any restrictions on assignment.

SCALING INFRASTRUCTURE



Once projects were awarded, IFC chose to invest in a small number of the resulting projects, reflecting both the strong private sector response, and IFC's country risk allocation criteria, beyond specifics of the RenovAr program itself. In this context, IFC's focus was on strong sponsors with larger projects that would not require a World Bank guarantee (given IFC's comfort with the program structure without the guarantee); sponsors with no integrity issues, with strong corporate governance, prior experience or partnerships in the electricity sector, and seeking to maintain a long-term ownership in the project; and on larger projects for operational efficiency reasons.

IFC initially considered investing in four projects, but ultimately supported only two—the La Castellana and Achiras projects. The 100 MW La Castellana project to which IFC provided a \$54 million financing package, out of a total project cost of approximately \$154 million, was awarded under Round 1.5 of the RenovAr program with a tariff of US\$61/MWh—above the US\$53.3/MWh for wind projects awarded in this round. The project is in the city of Bahia Blanca, located in the Province of Buenos Aires.

The 48 MW Achiras wind farm, had a total project cost of approximately \$80 million, out of which IFC provided a \$20 million financing package. The project was awarded under Round 1 of the RenovAr program with a tariff of US\$59.4/MWh, in line with the US\$59/MWh average tariff for wind projects awarded in this round. The project is in the Department of Rio Cuarto, located in the Province of Cordoba.

V Lessons Learned

Scaling needs a champion: Argentina has a large and developed market that had long been constrained by structural barriers, despite high institutional and technical capacity at the sector level. The strong commitment of the new government spearheaded by a sector champion in the name of Secretary Sebastian Kind were fundamental factors in the success of RenovAr. The high level of government engagement enabled IFC to provide effective assistance in creating a framework for private sector participation in the renewables sector *within six weeks*.

Scaling can be done even in a market with high risk perception: The RenovAr program was successful in attracting private investment with scale in the context of a sector that still had not completely resolved all issues and with an offtaker with an uncertain financial condition (CAMMESA did not have financial statements and its credit capacity was deemed low). For this reason, the program required considerable de-risking in the form of payment and termination guarantees with multiple backstops. Further de-risking was achieved by introducing key conditions in the project documentation. Although the government did not initially want to take on some of the risks, it eventually acknowledged that this was necessary to attract investors and create the track record required to eventually be able to pass on some risks.

Scaling can be done with limited resources if the incentives are in place: IFC's engagement in RenovAr did not require a large, fully staffed, multi-year, funded programme. IFC's upstream engagement was carried out by a few people with a limited budget for external advisors. Within IFC, RenovAr was possible because of driven individuals with keen knowledge of the market as well as supportive management that worked with the team to get funding and remove barriers. The team was driven by a direct request from a very committed government client that wanted to make things happen and that sought advice from both the Bank and IFC.

Scaling with speed requires a common-sense and practical approach: The World Bank Group-wide approach to the initiative was respectful of government needs, while at the same time pushing for standardization and best practices, serving both the client and World Bank Group interests. While the client disregarded some of IFC's recommendations, the aim was to incorporate as many features as possible to make the program viable.

SCALING INFRASTRUCTURE

RenovAr reminds us that IFC may only directly support a small portion of the markets it creates: In markets where programmatic approaches lead to a significant scale up in investments, IFC direct financing at significant scale may not be needed to ensure that market creation efforts are realized, nor will it necessarily make sense for IFC to do so, given broader considerations, such as country concentration. RenovAr generated more than 4.4 GW of renewables market, out of which IFC only financed 148 MW, for \$74 million.

Scaling approaches can have impact in more advanced economics and less developed countries alike. RenovAr heralds what will be more frequent in coming years, as more countries emerge with technically strong governments with clear objectives and an ability to implement infrastructure programs that mobilize the private sector at scale.



Creating Markets, Creating Opportunities

2121 Pennsylvania Ave., N.W.

Washington, DC 20433

+1 (202) 473-3800

www.ifc.org/infrastructure