



# Argentinean Regulatory Framework

## *Analyst Update Meeting*

June 2017



# Agenda



## Argentina – General View

Market description

Regulatory framework

Generation

Distribution

# Argentina

## Country Overview



Estimated Population<sup>1</sup> (2016)  
**43,590,368**  
**45.62% (19,900,257) in City of Buenos Aires & Buenos Aires Province**

### Government Authorities

**President: Mauricio Macri**  
(Cambiemos) – Since Dec15

**Jefe de Gobierno (City of Buenos Aires): Horacio Rodriguez Larreta**  
(Cambiemos) – Since Dec15

**Governor of Buenos Aires Province: María Eugenia Vidal** (Cambiemos) – Since Dec15



## Access to Basic Services & Technology

### MODERN ENERGY <sup>2</sup>

- Homes with access to natural gas: **56.2%**
- Homes with access to Electricity: **98%**
- Individuals without electric service : **484,816**

### WATER & SANITATION

- Drinking Water coverage<sup>3</sup>: **96%**
- Sanitation coverage<sup>3</sup>: **91%**
- Access to domestic water network<sup>4</sup> : **84,4%**
- Sewage coverage<sup>4</sup> : **58,4%**

### INTERNET <sup>5</sup>

- Individuals with access: **69.40%**
- Homes with access: **55.52%**
- Cellular phone subscriptions (per 100 inhabitants): **143.91**
- Active cellular broadband lines per 100 inhabitants: **67.30.**

<sup>1</sup> Official estimation, INDEC.

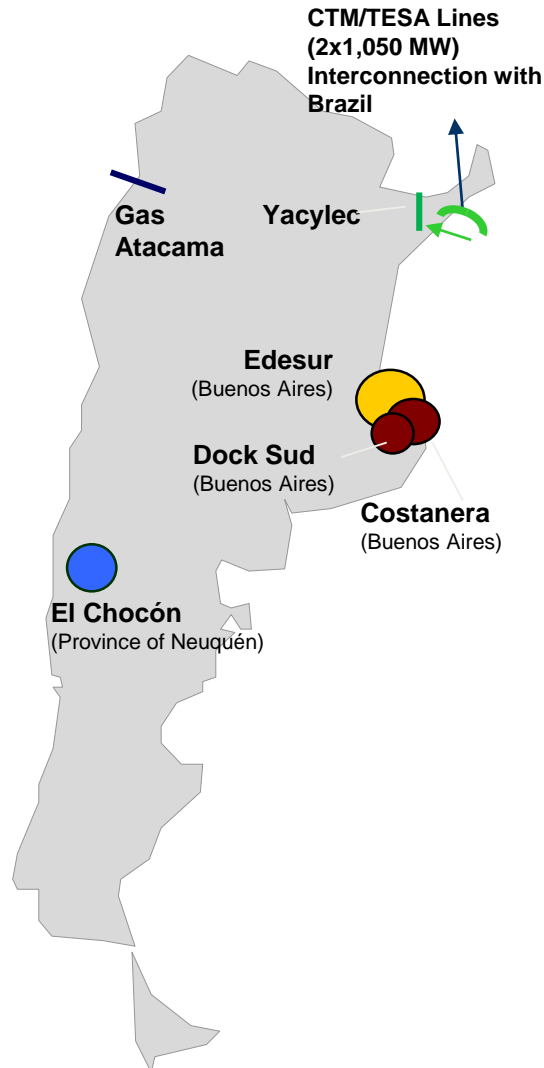
<sup>2</sup> Source: RAGA SE4ALL Argentina, Jan 2013.

<sup>3</sup> Fuente: Meeting the MDG drinking water and sanitation target, WHO,2006]

<sup>4</sup> Fuente: Plan Nacional de Agua potable y saneamiento, 2016

<sup>5</sup> Source: ITU 2016 <http://www.itu.int/net4/ITU-D/idi/2016/#idi2016countrycard-tab&ARG>

# The Enel Group in Argentina



\*Without including Foninvemem + VOSA (Vuelta de Obligado S.A.)

**Generation\***  
**4,558 MW**

**Distribution**  
**2.5 million customers**

**Trading**

**Transport**

**HIDRO**  
**1,328 MW**

**El Chocón**



**Installed power:** 1,328 MW  
**Type:** Hydraulic / **Concession:** Until August 2023

**THERMAL**  
**3,230 MW**

**Endesa Costanera**



**Installed power:** 2,360 MW  
**Type:** Combined Cycles (1,186 MW)  
Steam-Gas Turbines (1,138 MW)  
Engines (36 MW)

**Dock Sud**



**Installed power:** 870 MW  
**Type:** Combined Cycle (798 MW)  
Gas Turbines (72MW)

**Foninvemem**

Enel owns 26% of the company that operates the combined cycles San Martin and Belgrano (800MW each).

**Vuelta de Obligado S.A.**

Combined Cycle Project (800 MW) led by SADESA (56%), Enel (41%) and Duke Energy (3%) pursuant to the Gx 2008-2011 Agreement. Currently in Open Cycle service since 12/3/2014.

**Edesur**



**Distributed Energy:** 18 TWh/year  
**Concession Area:** 3,302 km2

- Higher customer density and higher unit consumption after Chilectra.
- Enersis's largest distributor in LATAM

**Cemsa**

- Energy management. Energy and fuels commercialization.
- Country Functions

**ELECTRIC**

**Yacylec**

Link in 500 KV between Yacyretá and ET Resistencia (274 Km)

**CTM / TESA**

CTM/TESA: Interconnection between Argentina and Brazil (Argentine side), managed by CIEN (Brazil) (135 km each)

**GAS**

**Gas Atacama**

Argentina-Chile Gas Pipeline with a 8.5 million m3 per day capacity.

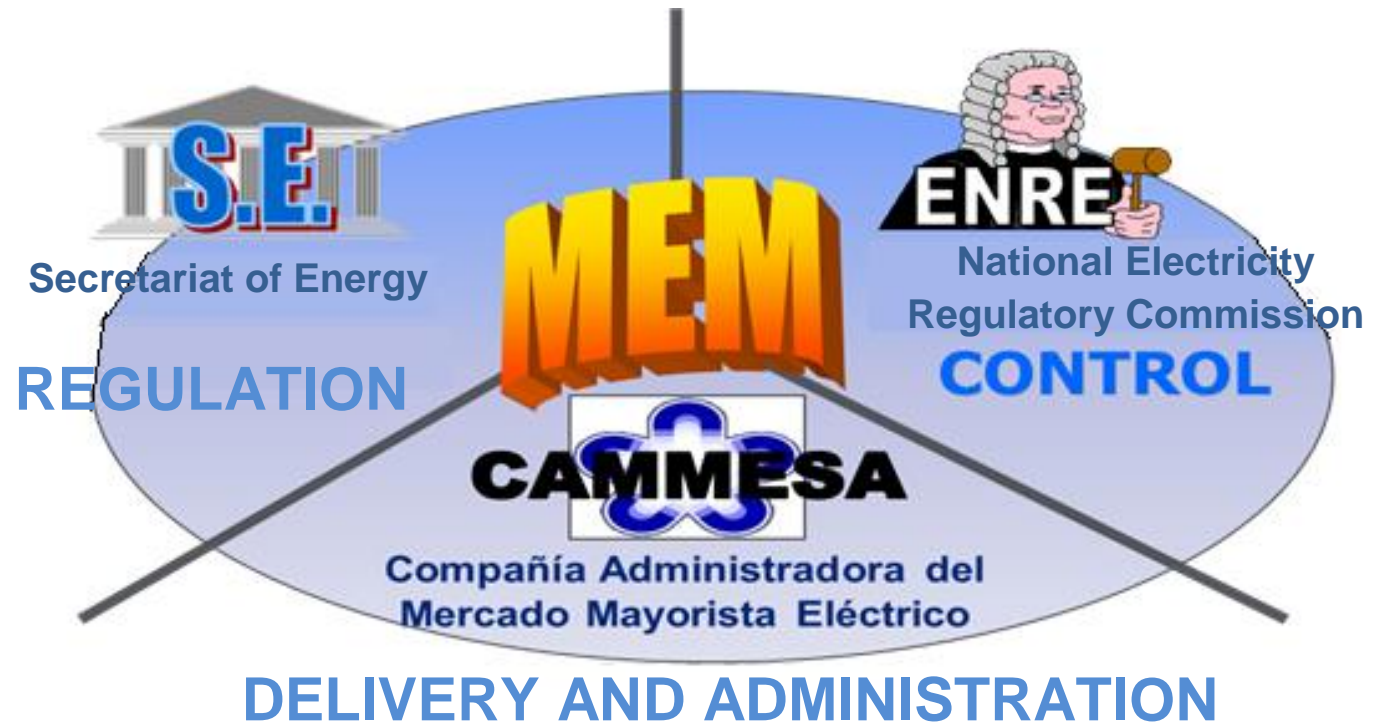
# Description of the Legal Framework



## Rules that make up the Regulation

- Legal Framework, Law N ° 24065
- Regulatory Executive Order 1398/92
- Concession Agreement
- Rules of Supply
- SEE resolutions related to the MEM
- ENRE Regulatory Resolutions

## Intervening Regulators

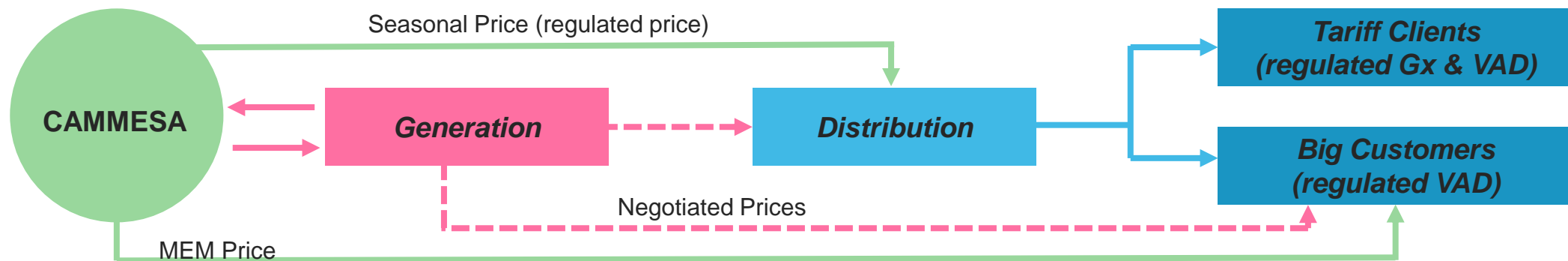


# Market structure

Vertical separation of the system



Generation (Gx)	Transmission (Tx)	Distribution (Dx)
<ul style="list-style-type: none"> <li>Semicompetitive Market</li> <li>Semicost plus retribution</li> <li>Market in process of change from a more competitive one.</li> <li>Forward contracts for Energy plus (new energy).</li> </ul>	<ul style="list-style-type: none"> <li>Natural monopoly</li> <li>Open access</li> <li>Regulated business</li> <li>No obligation to expand.</li> <li>Centralized planning (Secretary of Energy)</li> </ul>	<ul style="list-style-type: none"> <li>Natural monopoly</li> <li>Regulated business, VAD is approved for 5 years.</li> <li>Open access</li> <li>Obligation to expand.</li> <li>Pass-through of Tx and Gx costs.</li> <li>Gx costs are subsidized for several residential segments (social tariff and electrodependence)</li> </ul>

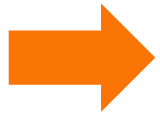


--- Currently suspended

# Agenda



Argentina – General View



**Market description**

Regulatory framework

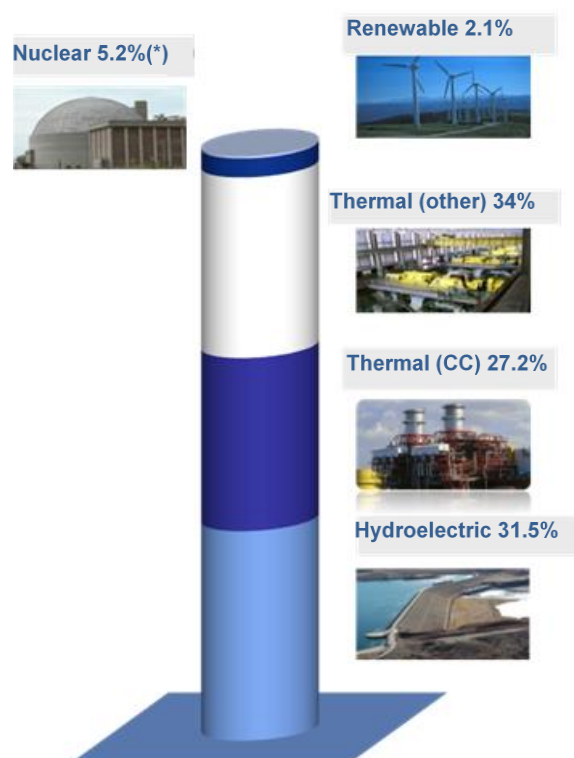
Generation

Distribution

# Generation Sector

## Argentina Figures

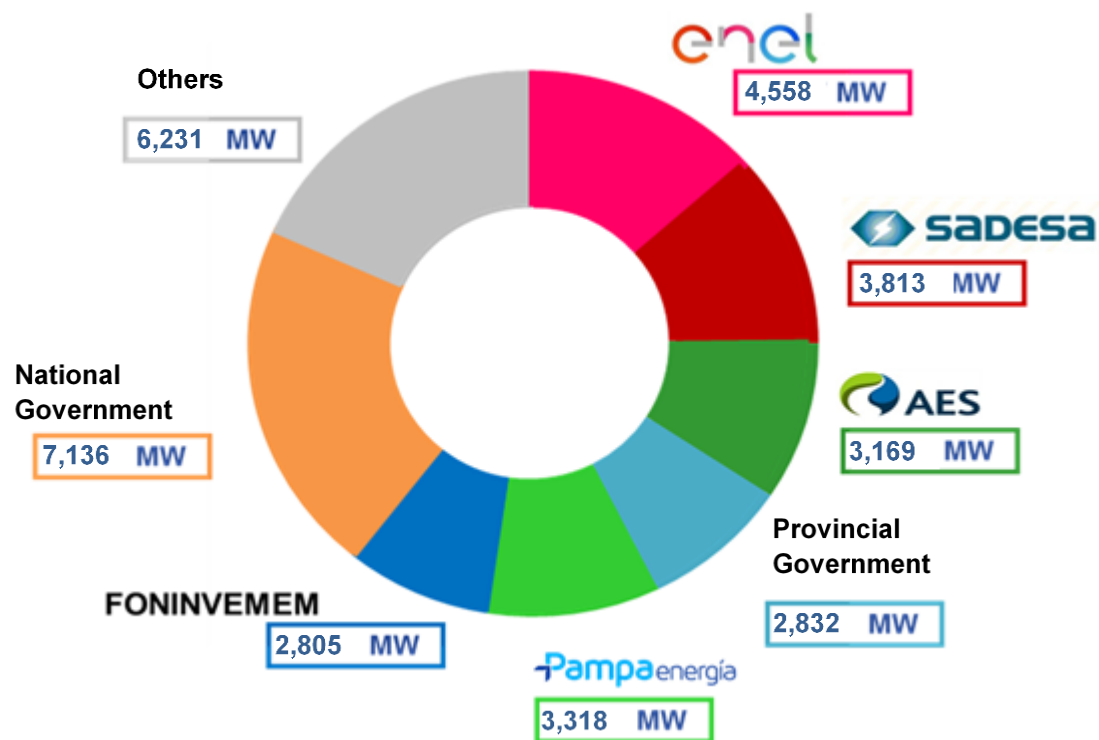
### Installed Capacity by Technology



(\*) Property of the National Government



### Main participants (MW share%)



**Total installed capacity as at 2016**  
**33,862 MW**



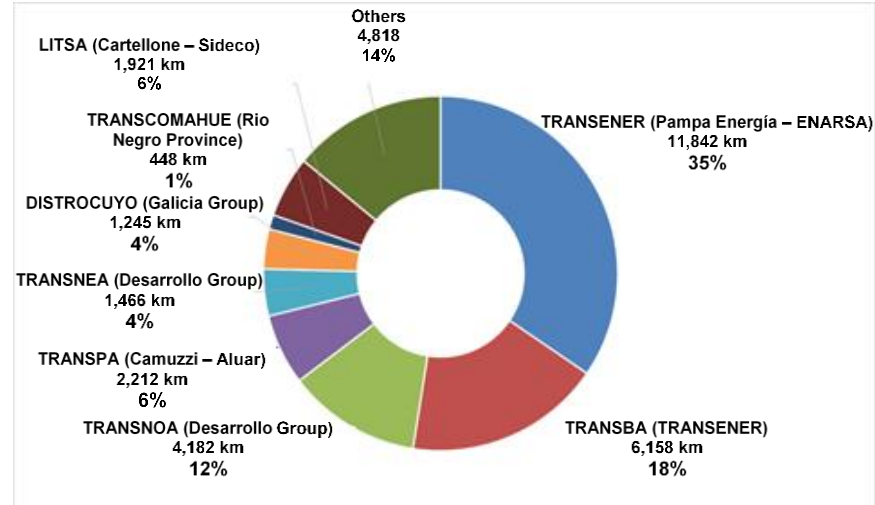
# Transmission Sector

Transmission - SADI



Available Transport Capacity and Delivery Point.

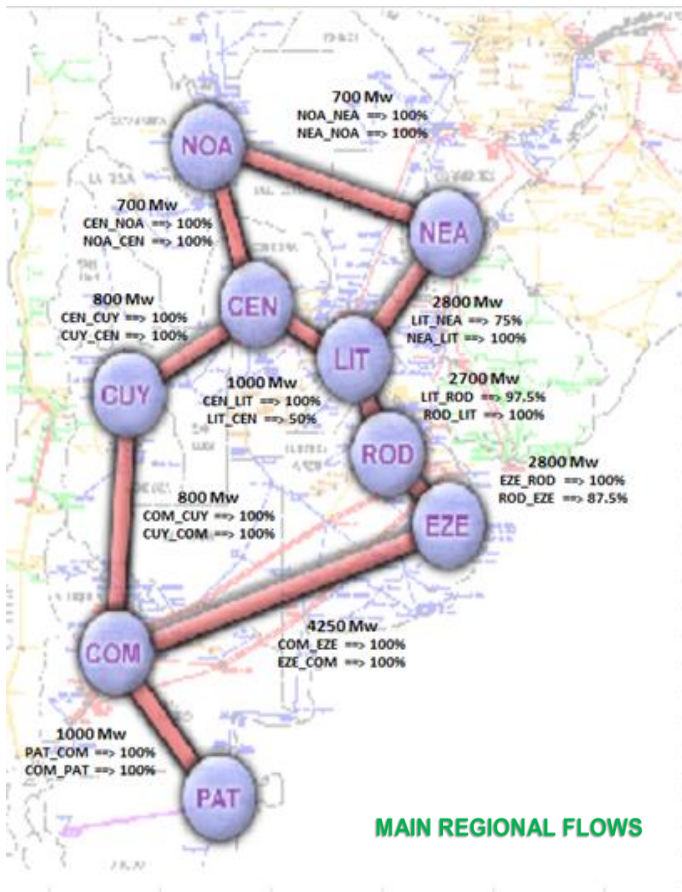
## Corporate Groups



19,532 km of line Trunk Distribution

14,192 km in 500 kV

Most of the grids are close to their capacity limits in times of greater demand

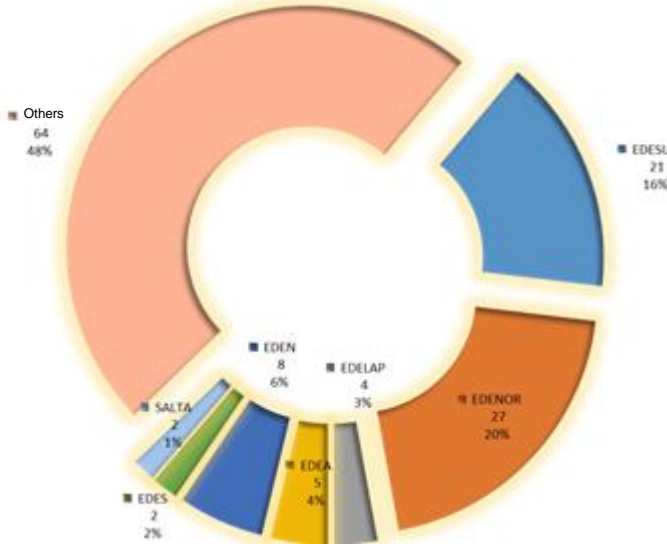


## TRANSMISSION SYSTEM

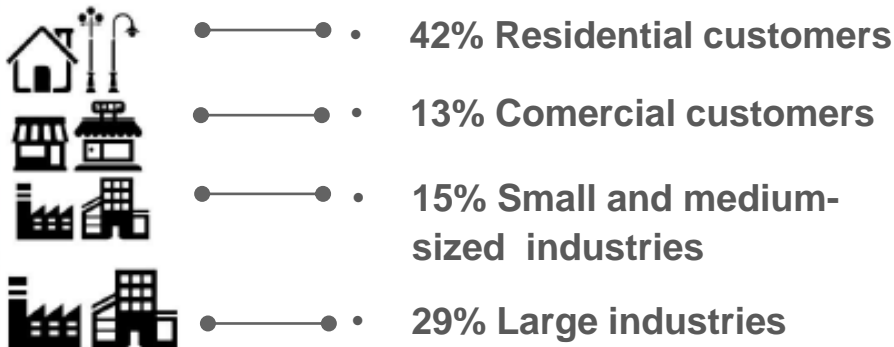
	500 kV	330 kV	220 kV	132 kV	66 kV	33 kV	TOTAL
High Voltage	14.192		562	6			14.760
Trunk Distribution		1.116	1.114	16.881	398	24	19.532
- Cuyo Region			642	625			1.267
- Comahue Region				1367			1.367
- Buenos Aires Region			177	5583	398		6.158
- NEA Region			30	2133		24	2.187
- NOA Region				5050			5.050
- PATAGONIA Region		1.116	265	2123			3.504

A vertical bar chart with two bars. The first bar is grey and the second bar is blue. The blue bar is significantly shorter than the grey bar.

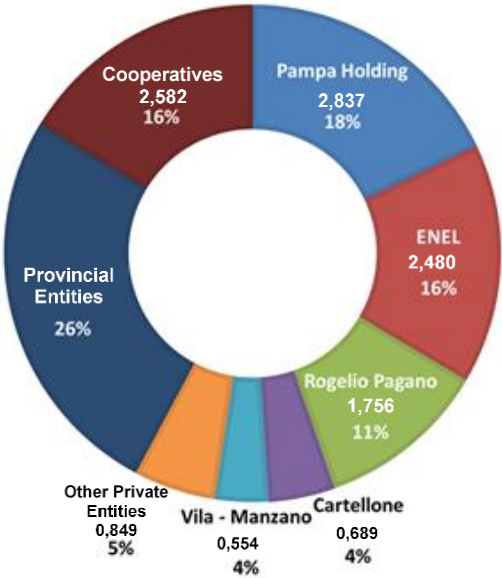
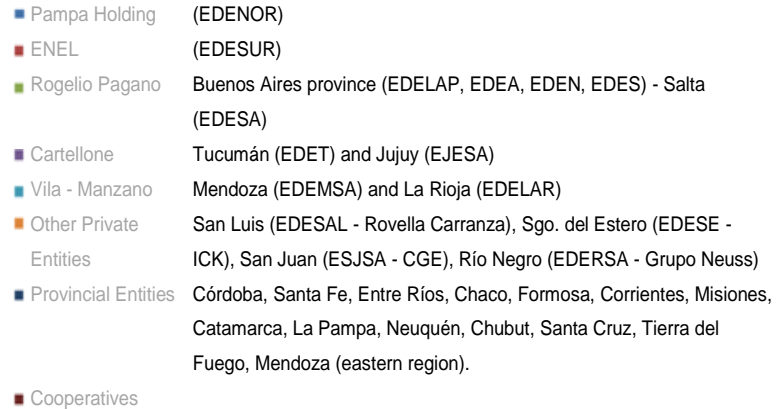
Distributors' Participation - Total Energy Distributed 133 TWh (year 2016)



Start of Demand



## Corporate Groups



# Agenda



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# Evolution of regulation in Argentina



## Plan Renovar 1.0 y 1.5

- Offers: 123 for a total of 6.366 MW
- Adjudicated: 2.424 MW (59 projects)
- Weighted price: 57,4 US\$/MWh.



## Existing Generation Remuneration

- New Remuneration that reward of the power availability
- 3-year commitment offers



## RTI of National Distributors

- First RTI since 1992.
- Definition of WACC , Asset Base and Remuneration Methodology



## RTI of Transport

- Second RTI in 25 years
- Pending for independent and international carriers



## Energy Projects Bids

- Presentation MDI: 196 projects
- Generacion: 34 GW
  - Alternative Fuel
  - Ducts and liquid management
  - Transportation



## Wholesale Price Rebuild

- Start of the reduction of subsidies to the cost of energy
- Spot price increase after 15 years



## Auction of Emergency Thermal Energy

- Offers: 61 for a total of 6.746 MW
- Adjudicated: 3.108 MW

## Regulatory News

# Agenda



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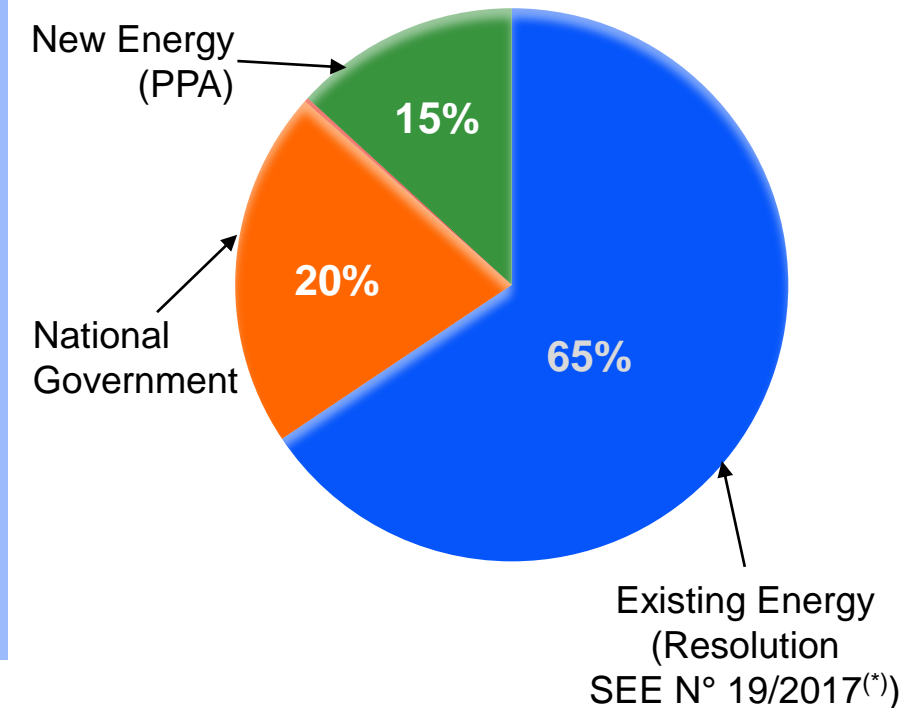
# Generation Regulation



## Key regulatory considerations:

- Remuneration for power and energy based on a cost recognition system pursuant to the technology and scale for the existing Energy (installed before the year 2006).
- Capacity expansion (New Energy) pursuant to Agreements (PPA).
- Government generators have their own remuneration.
- Generators do not manage fuel, it is provided by the System Operator (CAMMESA) at no cost.
- Restricted Forward Market - Free customers are supplied through CAMMESA.

## Market Segmentation pursuant to Applicable Regulation



(\*) Replaces Resolution SE N ° 22/2016

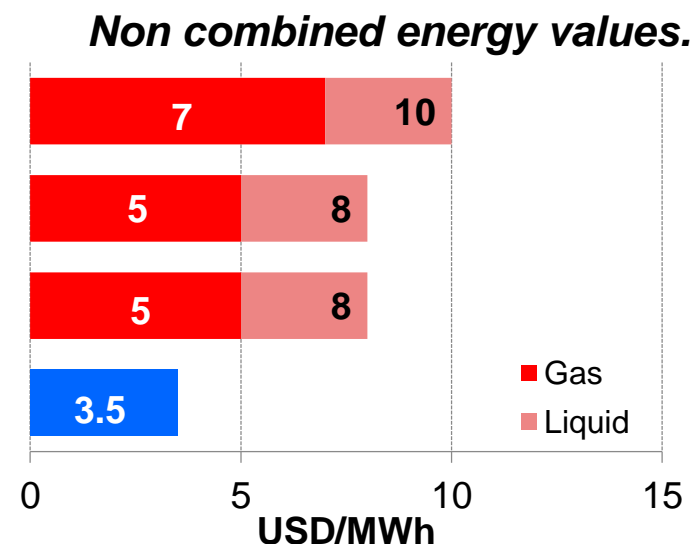
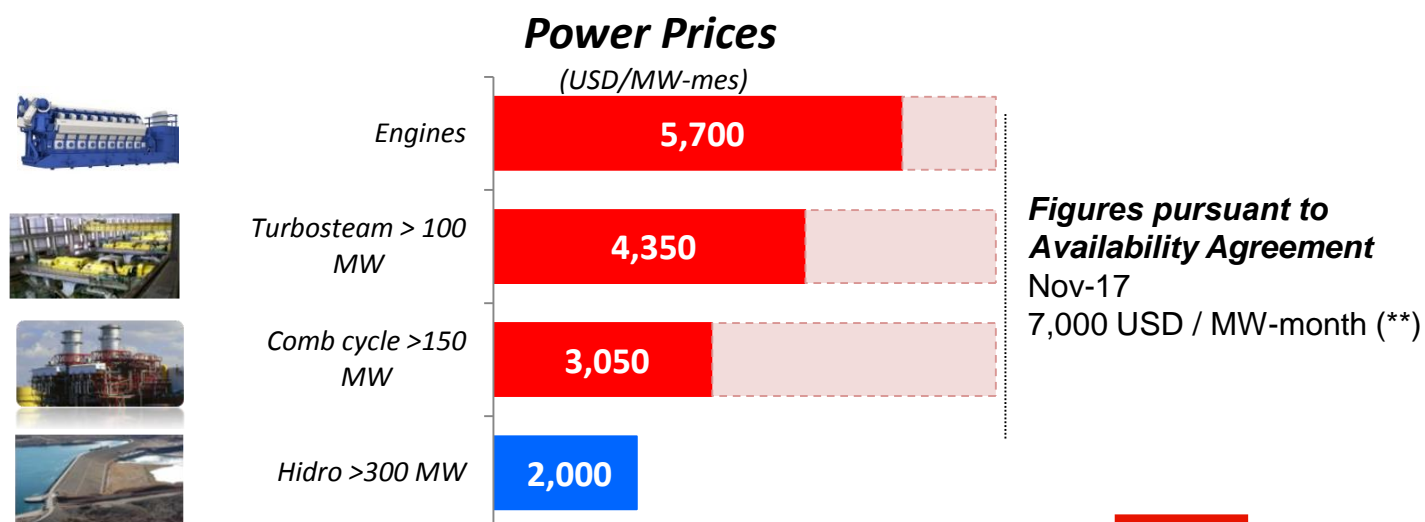
# Regulatory Framework for Generation

Remuneration for Existing Generation(\*) *Resolution SEE N ° 19/2017*



## REMUNERATION SCHEME

- Payment according to Capacity (available) pursuant to the technology and size.
- Variable remuneration according to energy generated (non fuel) and operated.
- Possibility to enter into Agreements of Availability of Guaranteed Power with the system operator (CMMESA) for 3 years (*only for thermal units*).
- Fuel supplied to thermal plants by CMMESA at no cost.
- Income denominated in dollars.



**It represents a monomic increment of around 50% with respect to the previous regulation**

(\*) Any company without agreements pursuant to special regulations

(\*\*) May-Oct 17 □ 6000 USD/MW-month

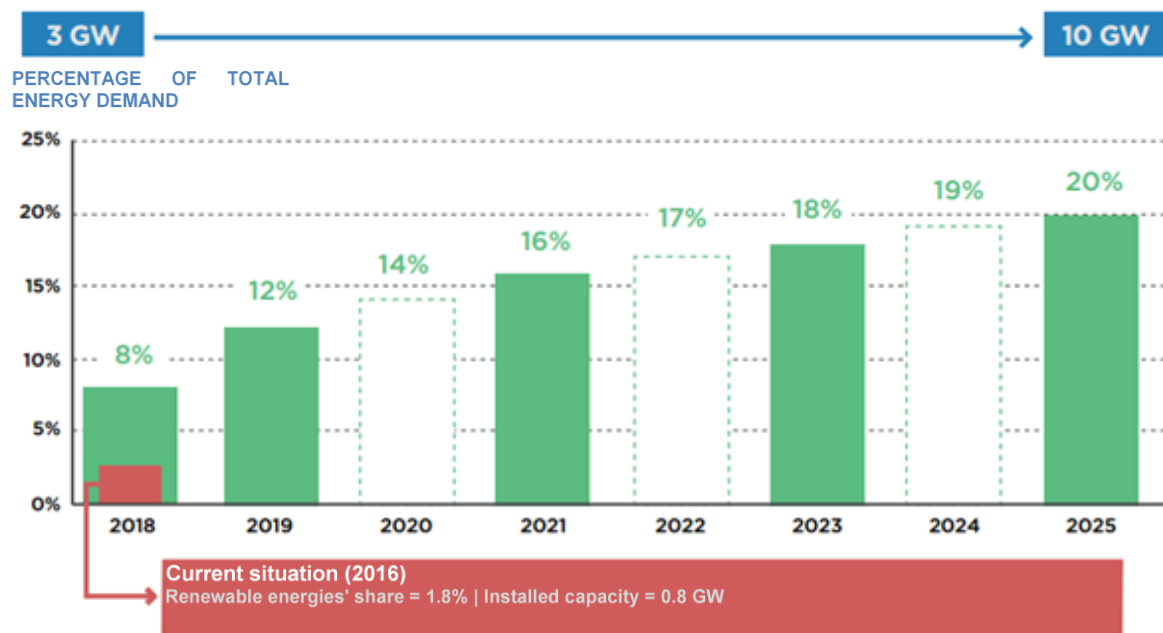


# Renewable Energy Tender Offers



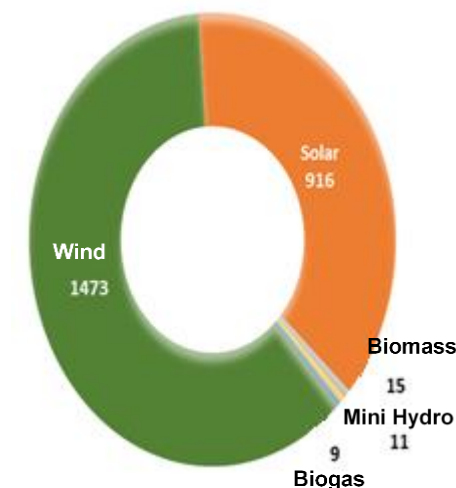
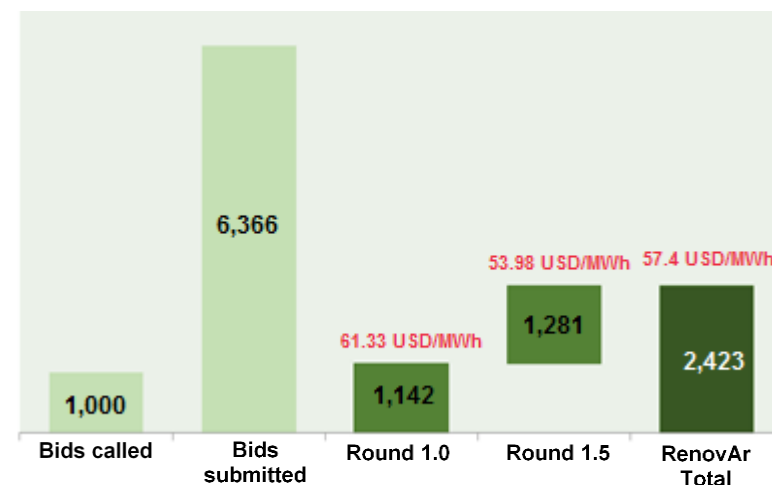
## GOALS

- Law 27191 sets forth a phased target for non-conventional renewable energy to reach 20% of demand in 2025.



## PROGRESS

- The Government launched the RenovAr Program in stages to boost the renewable energy sector and reach the first target of 8% (2018).



Does not consider former GENREN projects that are begin negotiated (Res. MEYM N ° 149/17)



# Energy Projects Tender Offers

(Thermal generation and electric and fuels transport)



Resolution MEYM N ° 420/2016

## Expressions of Interest

Expressions of Interest for **196 projects**, divided into categories:

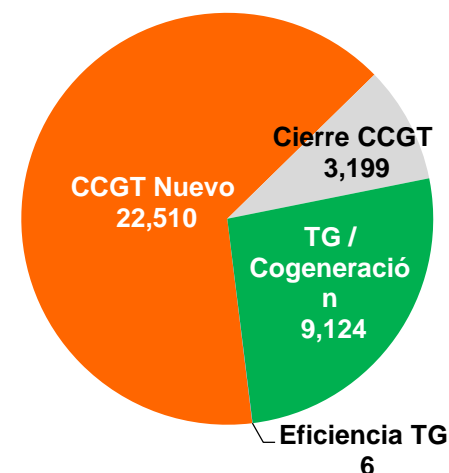
- *New Generation (combined cycle, TG and co-generation): **34 GW***
- *Alternative Fuel Supply*
- *Pipeline Construction and Liquid Management*
- *Expansion of Electric Transportation*

## 1st stage Tender offers for Combination Cycle and Cogeneration Closure

### Res. SEE 287/2017 - Tender Offer Specifications:

- *Execution of a PPA (in USD and for 15 years)*
- *Remuneration: Payment for Capacity and for energy (non fuel)*
- *Fuel: Supplied free of charge for cycle closures. For Cogeneration projects, it is provided by the offeror.*
- *Maximum period of entry into service: 30 months*
- *A Guarantee Fund is established for the payment of the PPA*
- *Submission of tender offers □ July 19th - Awarding □ September 1st*

Presented power (MW)



**Total: 34.84 GW**

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# EDESUR

Executive Summary Res. ENRE 64/2017



## Previous Situation

- Concession Agreement and Tariff Scheme of year 1992.
- Changed by ACTA ACUERDO (Agreement renegotiation)
- Rates with Arbitrary Updates that DO NOT reflect Costs
- Ad hoc regulations

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## Current Situation

### Definition of business variables

- Capital base → VNR depreciado técnico
- Rate of return → +WACC real fijada por el ENRE
- Remuneration Methodology → PRICE CAP

### Definition of Rates Criteria and Calculations

- Rates Based on Efficient Costs
- Update Formula
- Efficiency Factor
- Investment Incentive Factor
- Quality system oriented to customer service
- Regulation Restatement

# EDESUR

## EXECUTIVE SUMMARY Res. ENRE 64/2017



- Methodology → **PRICE CAP**
- Wacc → **REAL RATE +12.46% (before taxes)**
- Currency unit → **Argentinian pesos**
- Adjustment formula Dec 15 to Feb 17 → **IPC**
- Theoretical VAD resulting → **14.540 MMar\$ (≈ 910 MMU\$D)**
  - Increase in 3 installments with financial recovery in 48 monthly installments as of February 2018
- Adjustment → **VAD update (Salaries, IPIM (wholesale price index), IPC (retail price index))**
- Stimulus Factor → **Efficiency X Factor and Q Investments**
- Penalties → **Quality Path with increasing the exigency**

### FOCUS

In reducing the  
duration of  
outages (SAIDI)

- Scheme of Increasing Sanctions with an Improvement Path
- Average Replacement Time **from almost 5 hours to less than 2 hours**

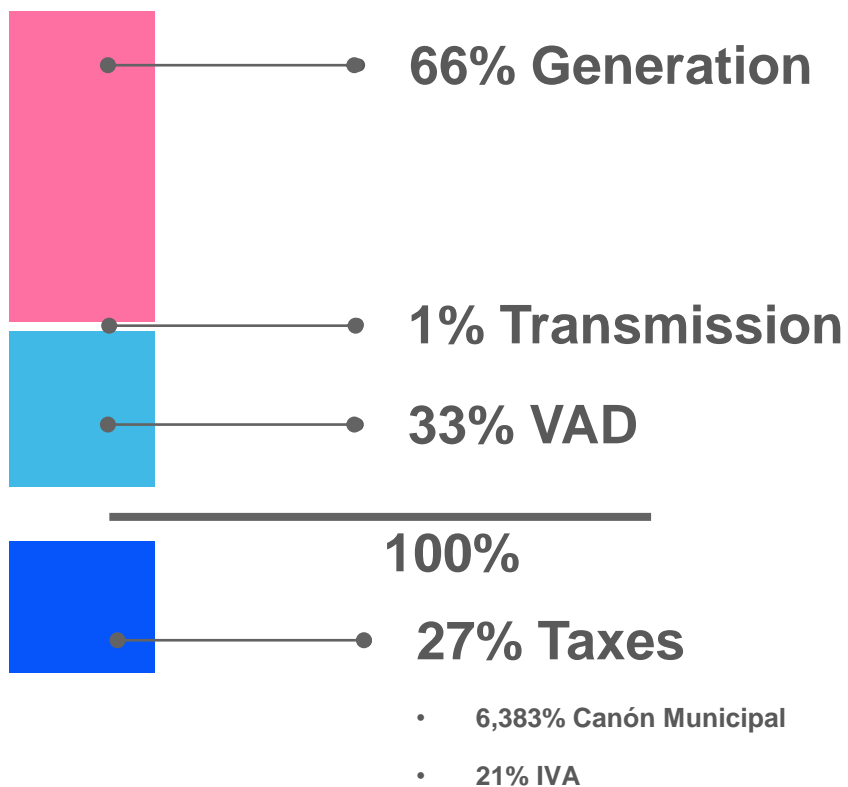
### FOCUS

In Customer  
Service

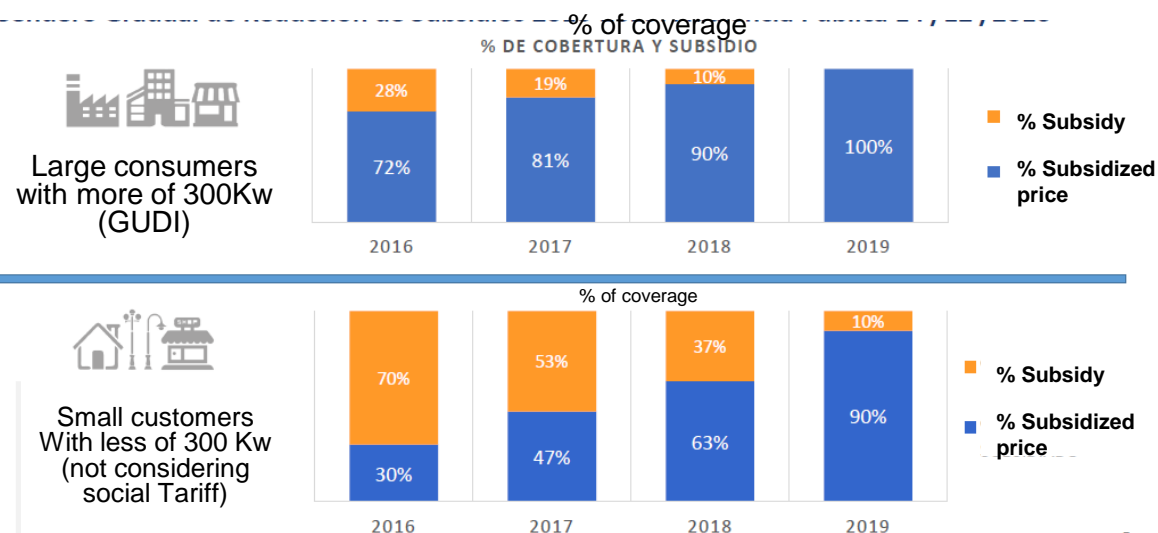
- New Obligations for Commercial Service and New Supplies
- Time of Commercial Service **Less than 30 minutes**
- Compliance with Information requirements and Others

# Tariff structure

Residential tariff (jun 2017): **88 u\$s/MWh** for a 200 kWh/month customer (with taxes)



## Gradual Path in reduction of subsidies: Public hearing 12/14/2016



**Increases are expected not related with EDESUR remuneration**

5

# Thank you

