



## Institutional Presentation



# About Renova

## Shareholders' Structure with solid Corporate Governance

### Controlling Shareholders

79.6% ON  
0.0% PN  
59.2% Total



36.8% ON  
0.0% PN  
27.4% Total

21.4% ON  
0.0% PN  
15.9% Total

21.4% ON  
0.0% PN  
15.9% Total

**BNDES**

3.9% ON  
22.8% PN  
8.7% Total

**Mantiq**  
INVESTIMENTOS

7.2% ON  
41.9% PN  
16.0% Total

**Other**

9.3% ON  
35.3% PN  
16.0% Total

### Board & Committees Composition

#### BOARD



Management	Audit
Talent & Compensation	Pipeline Development
Finance	Engineering & Operations

Controlling Shareholder	Seats
Cemig	2
RR	2
Light	2
Total *	6 / 9

**Decisions are always unanimous!**

### Unmatched Shareholders' Base

**RR**  
Participações



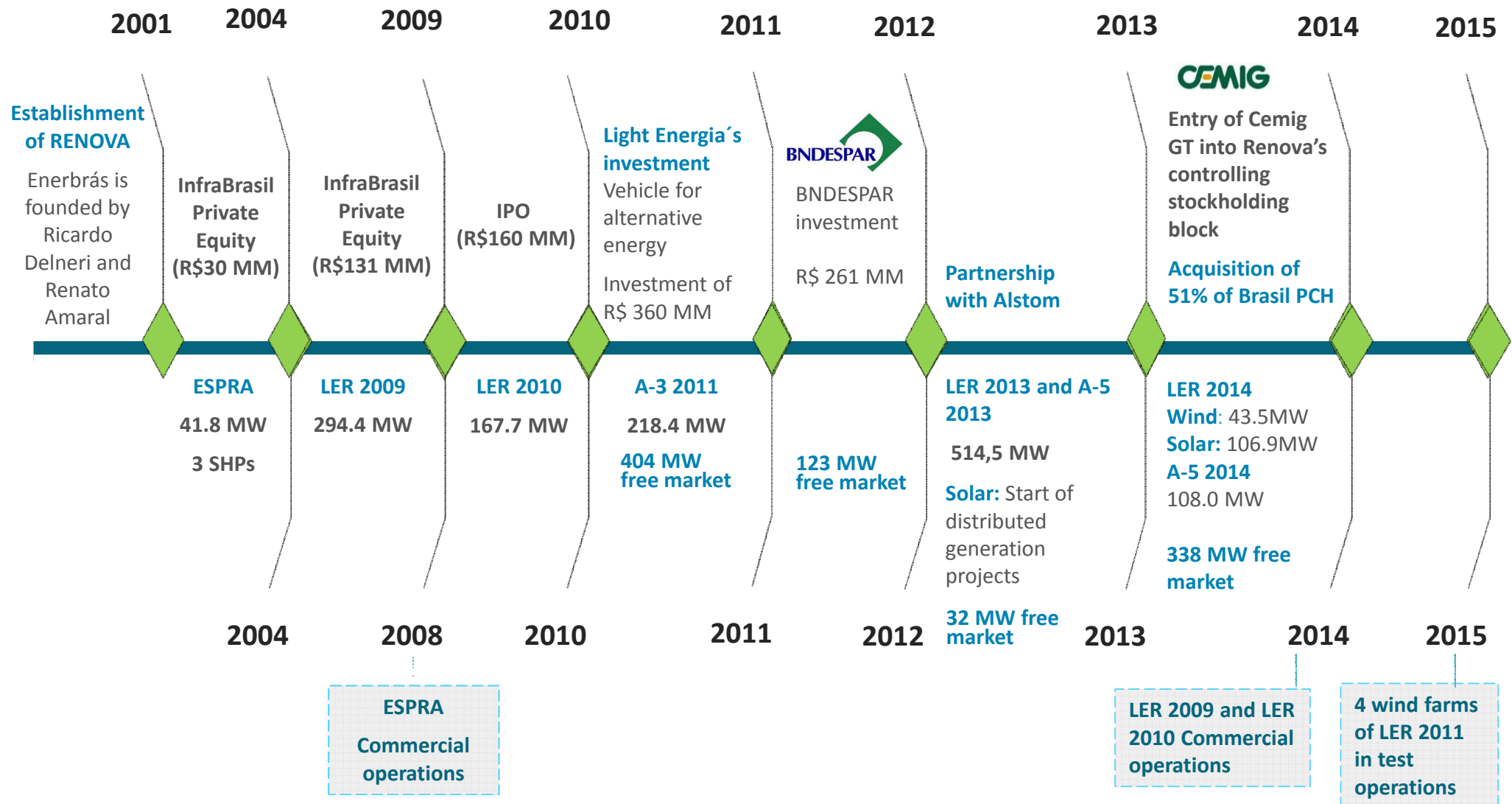
**CEMIG**  
A Melhor Energia do Brasil.

**Light**

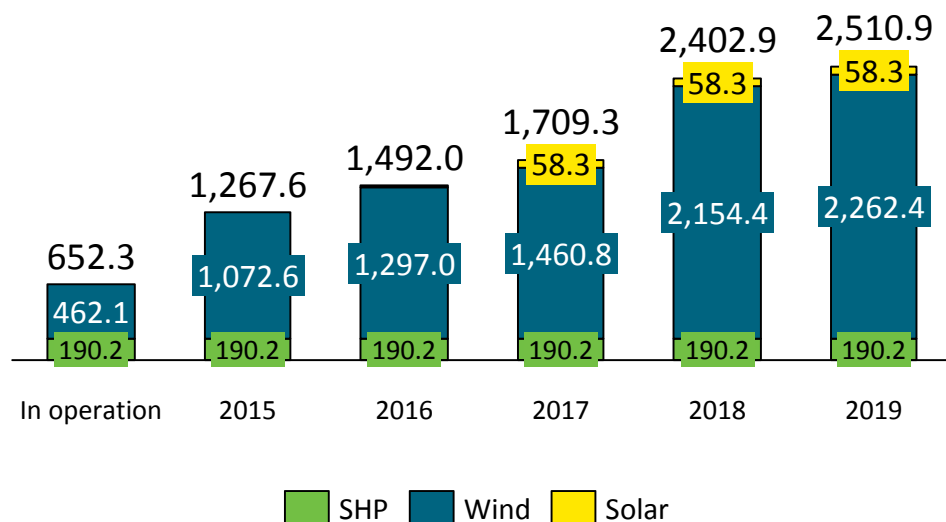
**BNDES**

\* The Board of Directors have a total of 9 members, of which 2 are independent.

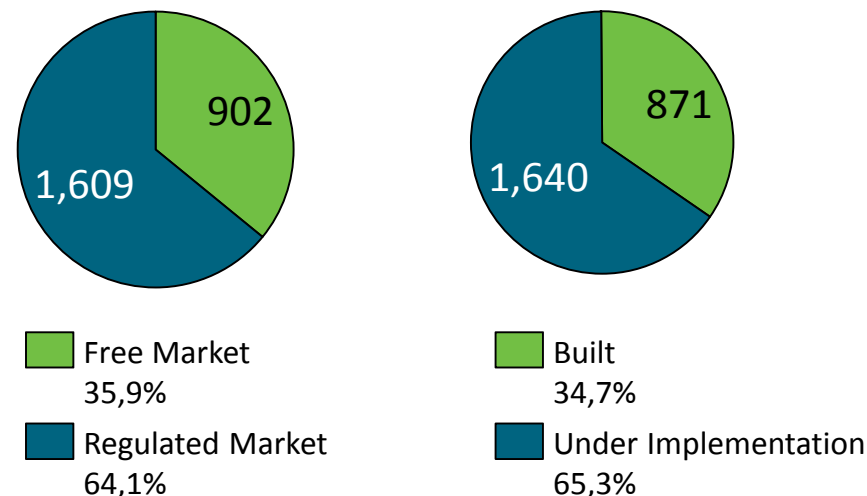
## Successful track record of project sourcing, structuring, implementation and operation of renewable energy projects



## Installed Capacity



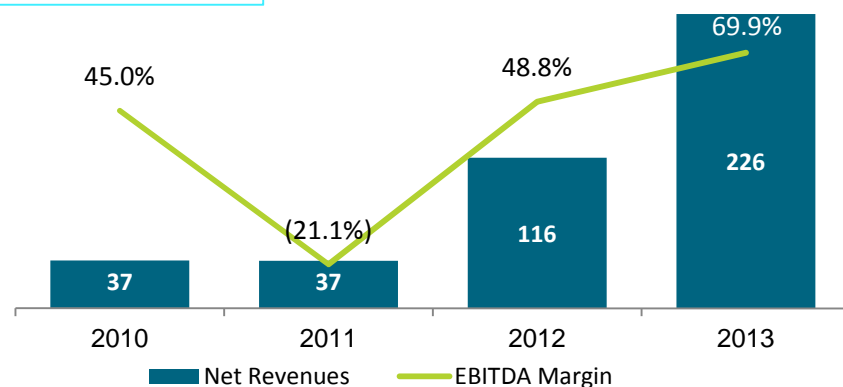
## Installed Capacity – Operational Status and Market



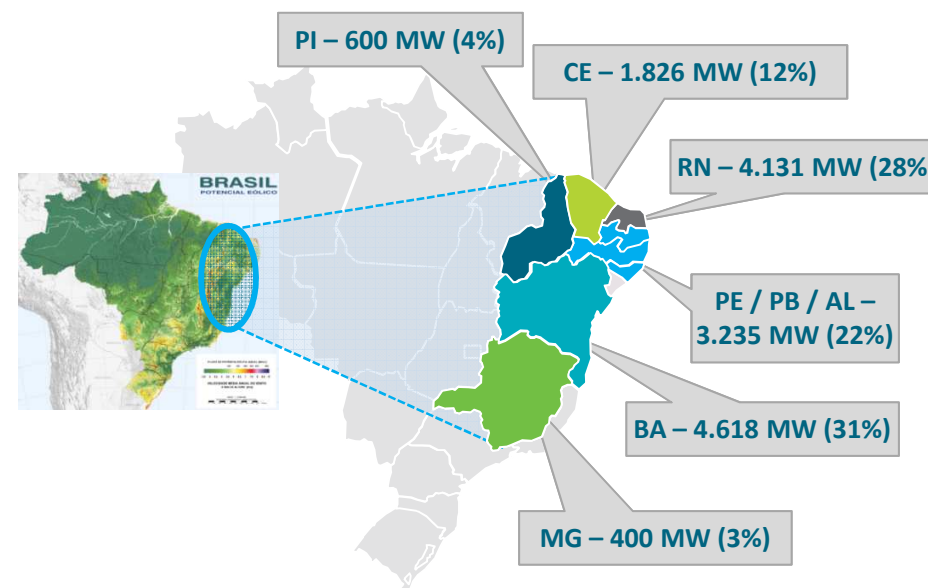
## Net Revenues and EBITDA Margin

(R\$ MM)

CAGR 10'-13': 83.1%



## Additional pipeline of 14,8 GW







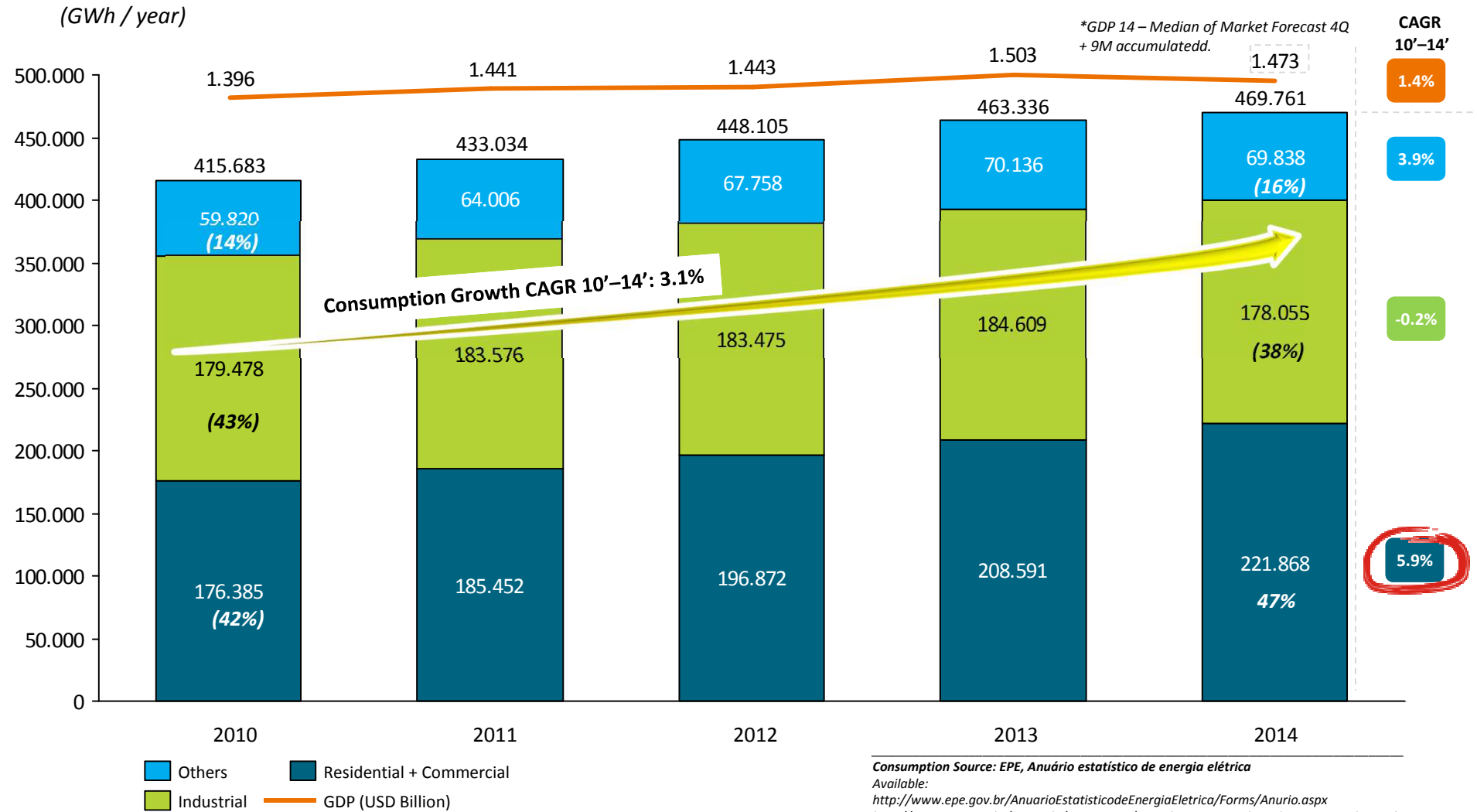
## Sector Overview

# Sector Overview

Energy Demand grew at a CAGR of +3.1% between years 2010 and 2014.

Despite low GDP growth in recent years (2010-2014 @ ~1.4%), energy demand has grown at stable pace driven by increase in population purchase power: Residential + Commercial consumption grew at a CAGR of +5.9%.

## Brazilian Energy Consumption by end-use sector



Others –Government Buildings, Public Street Lights, Rural Appliances.  
GDP discounted by IPCA (inflation) - baseline set on y2010.  
Exchange Rate – R\$ 2,70 = USD 1,00

Consumption Source: EPE, Anuário estatístico de energia elétrica

Available:

<http://www.epe.gov.br/AnuarioEstatisticoEnergiaEletrica/Forms/Anurio.aspx>

<http://www.epe.gov.br/mercado/Documents/Resenha%20Mensal%20do%20Mercado%20de%20Energia%20El%C3%A9trica%20-%20Dezembro%202014.pdf>

GDP Source: IBGE, Séries Estatísticas and Bloomberg Terminal

GDP 14 – Median of Market Forecast 4Q + 9M accumulated.

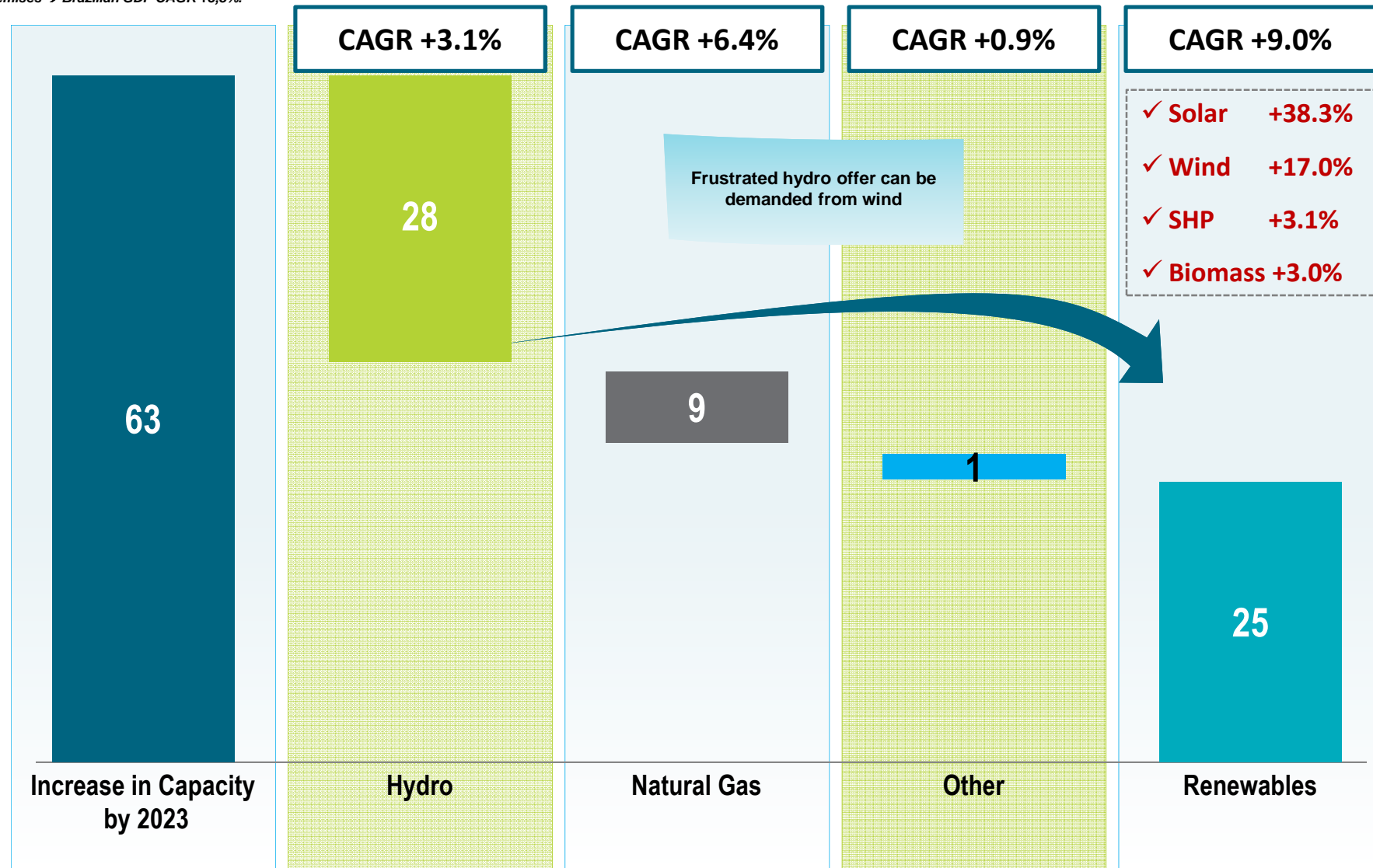
# Sector Overview

## Strong Demand to be Covered by Renewables

There will be an increase in installed capacity between year 2014-2023 of 63 GW, and renewable energy is strong in the pipeline.

### New Energy Demand in Brazil (GW)

Premises → Brazilian GDP CAGR +3,8%.

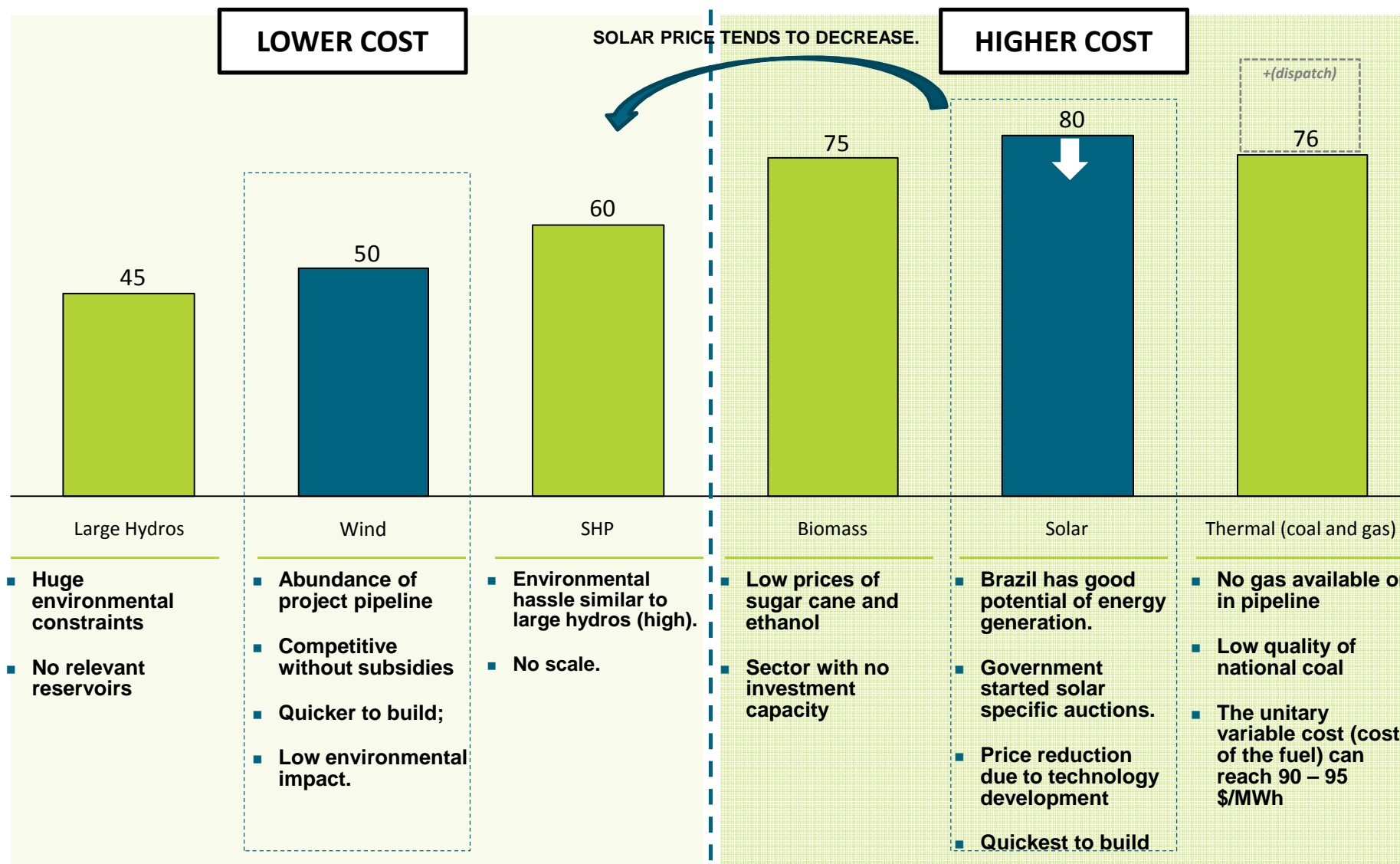


Source: PDE 2023 and Aneel.

Among renewable sources the highlights are wind and solar and both are focus of Renova's scope.

### Last Action Average Price

USD / MWh Exchange Real-Dolar = R\$ 2,70



### Maximize Capacity



#### Goal

The model with subsidy seeks to maximize energy generation (MW or MWh) to develop the market



### Minimize Cost



#### Goal

The current Brazilian model aims to minimize costs (R\$/MWh) in a model oriented to competition



### European Wind Farms



- Oriented layouts to maximize capacity
- Turbines placed in good and average winds
- Lower average load factor

### Brazilian Wind Farms



- Turbines placed only in excelente winds
- Turbines in line side-by-side on hilltops
- Minumum Wake/treadmill effects
- Higher average load factos / Lower cost of energy

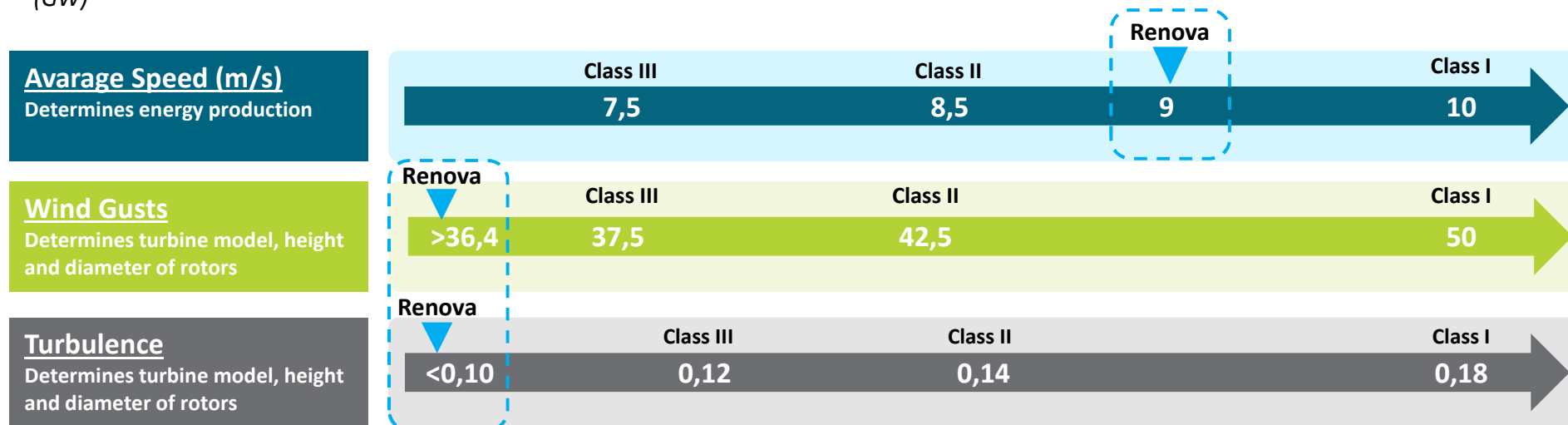
# Sector Overview

## Wind Comparison Brazil vs. World

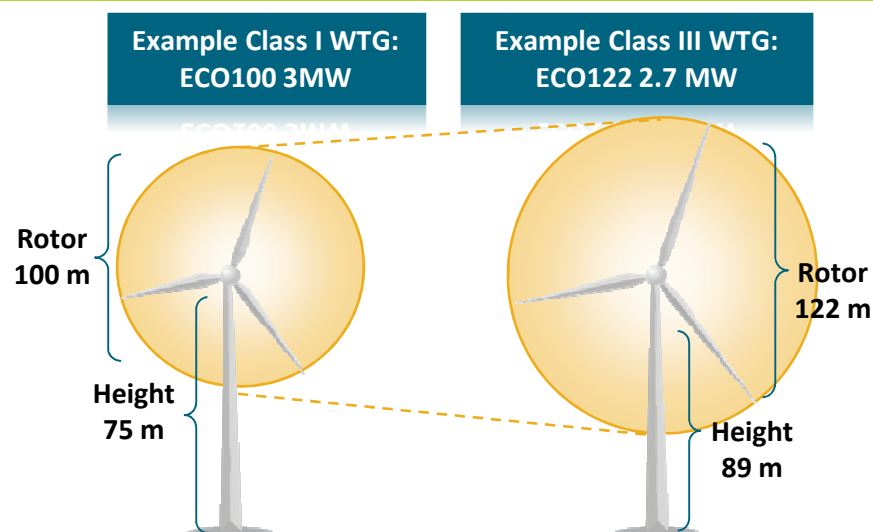
*Large rotor for fast winds, because lack of turbulence and Wind gusts*

### WTG's Classes According to IEC 61400-1 (2005)

(GW)



### Low Turbulence and Gusts: Larger Rotor



$$\text{Energy} = \text{Air density} * (\text{Rotor Diameter})^2 * (\text{Wind Speed})^3$$

Energy is directly related to speed and rotor diameter

#### Capacity factor by class of turbines

Wind Speed	Class I	Class III
9,4 m/s	44%	59%

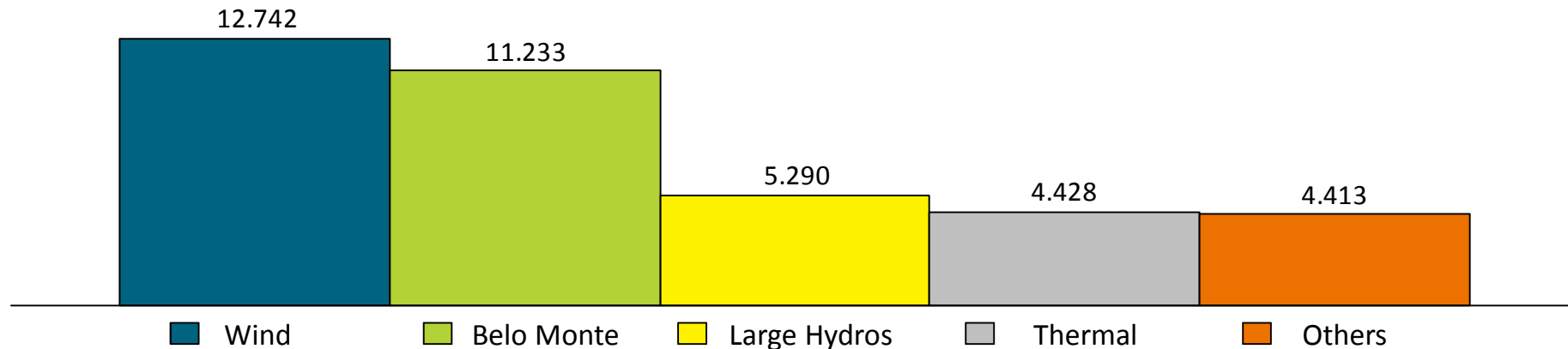
*Wind became the most negotiated source by the government between years 2009-2014.*

### Total installed capacity auctioned by government

Installed Capacity (MW)

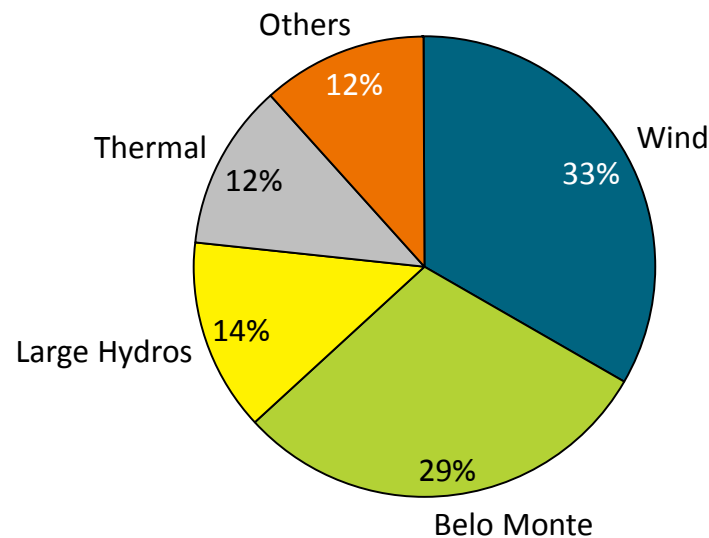
2009 - 2014

Source: CCEE- Camara Comercialização Energia Elétrica



### Installed capacity auctioned share by source

Installed Capacity (%)



*Wind is clearly seen as a source with great potential and competitive in auctions.*

Source: CCEE- Camara Comercialização Energia Elétrica



Best Positioned Company to Grow

# Best Positioned Company to Grow

## Renova Meets All the Requirements to Lead the Renewables Sector

### Strong Fundamentals Sustaining the Best Performing Company in the Sector



#### **Highly Competitive Pipeline**



- Assets located in the best regions for wind in Brazil
- Taylor made projects for Renova's wind farms
- Unmatched project development capabilities

#### **Execution track record**



- Projects delivered on time and on budget
- 680 MW of wind projects build – in operation the biggest latam wind farm
- Proprietary engineering and own staff

#### **Integrated Business Model and Scale Sustaining High Performance**



- Strategic partnerships with key suppliers providing significant bargaining power from scale: (70% of capex) produced in factory lines
- Operations in clusters allow increased O&M efficiency

#### **Financial Strength to Execute Business Plan**



- Renova's ability to fund its equity requirements provides a competitive advantage
- Strong balance sheet is key to support leveraged business model
- Strong sponsors

# Renova's track record

*High quality and diversified portfolio*

Regulated Market	Installed capacity (MW)	Energy Sold (MW avg)	Avg Price (R\$/MWh)	Source	Assets	COD	Contracts duration <sup>1</sup> (y)
Alto Sertão I	294.4	127.0	191.3	Wind	14	Jul-12	17.5
Alto Sertão II	386.1	181.6	134.9	Wind	15	Oct-14 / Feb-14	19.0
LEN A-5 2012	18.9	10.2	95.4	Wind	1	Jan-17	20.0
LER 2013	159.0	73.7	106.0	Wind	9	Sep-15	20.0
LEN A-5 2013	355.5	178	120.7	Wind	17	May-18	19.7
LER 2014	43.5	20.9	138.9	Wind	3	Oct-17	20.0
LER 2014	53.5	21.8	220.3	Solar	4	Oct-17	20.0
LEN A-5 2014	108.0	49.4	136.4	Wind	5	Jan-19	20.0
ESPRA	41.8	18.75	217.7	SHP	3	2008/2009	14.5
Brasil PCH	148.4	95.83	217.7	SHP	13	2008/2009	14.5
<b>Total - Regulated</b>	<b>1609.10</b>	<b>640.8</b>	-		<b>84</b>	-	-

## Free market

Light	403.5	200.4	143.3	Wind	24	Sep-15 / Sep16	20.0
Free Market I	21.6	11	112.0	Wind	1	Jan-16	6.2 <sup>2</sup>
Free Market II	101.4	50	112.0	Wind	8	Jan-17	6.2 <sup>2</sup>
Free Market III	32.4	15	112.0	Wind	1	Sep-15	6.2 <sup>2</sup>
Cemig	338.1	147.5	141.3	Wind	26	Sep-18	15.0
Solar Hybrid Project	4.8	1.0	143.3	Solar	1	-	-
<b>Total – Free</b>	<b>901.8</b>	<b>423.9</b>	-		<b>60</b>	-	-

<b>TOTAL</b>	<b>2,510.9</b>	<b>1,179.3</b>	-		<b>144</b>	-	-
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✓ LEN: 'New-build' auction: Auction to contract energy supply to be provided by facilities yet to be built (Leilão de Energia Nova – 'New Electricity Auction'), A-3 or A-5 Auctions - to contract supply starting respectively 3 and 5 years ahead.

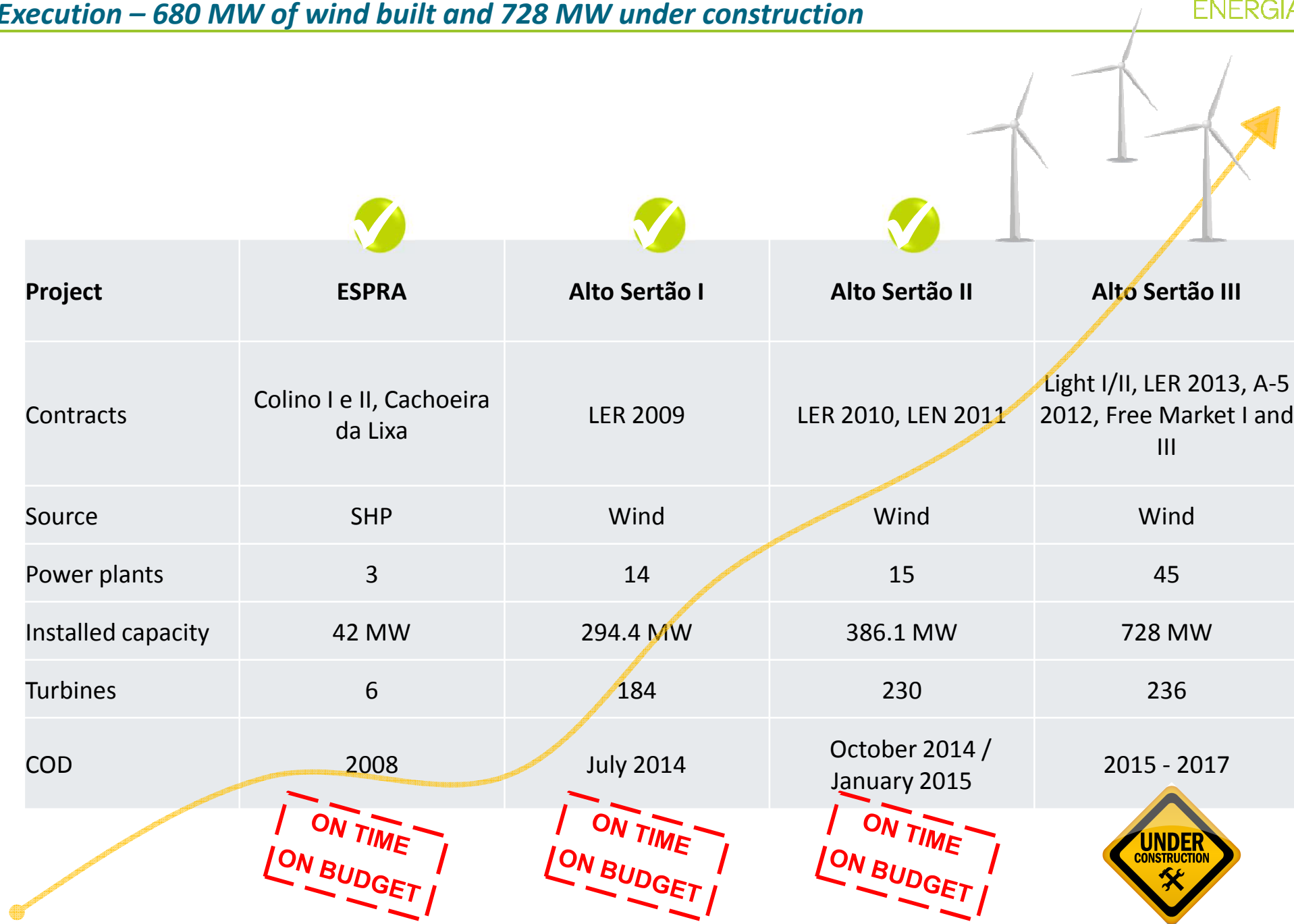
✓ LER: A "Reserve Capacity" auction (Leilão de Energia de Reserva – Reserve Energy Auction)

1 – Remaining years

2 – Average term considering the 3 Free Market commercialization

# Greenfield track record

Execution – 680 MW of wind built and 728 MW under construction

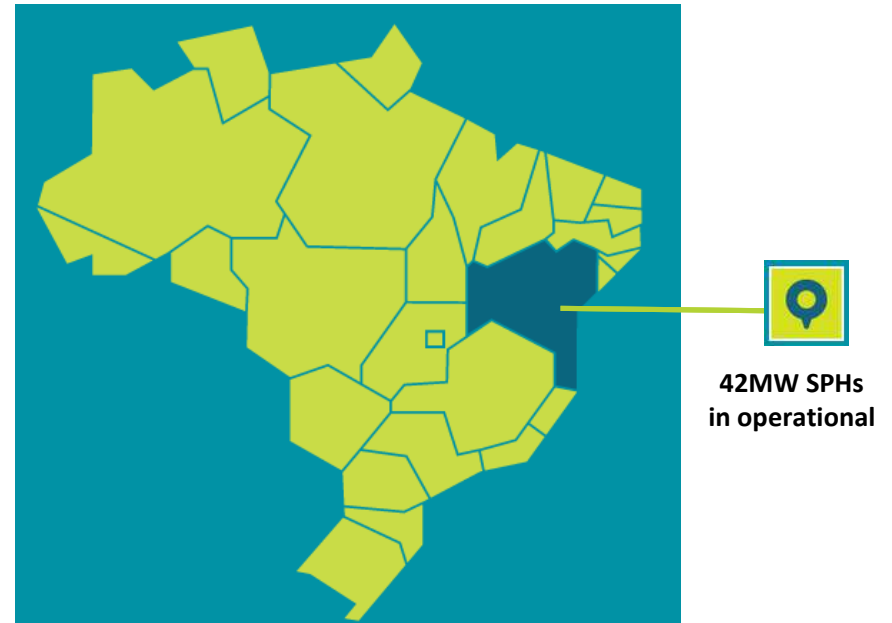


# Best Positioned Renewable Player to Grow

*SHPs in operation – 190 MW*

## ESPRA:

- ⚡ 3 Small Hydroelectric Plants (SHPs), with aggregate installed capacity of 42 MW;
- ⚡ Assured energy of 24,8 MW avg
- ⚡ In operation since 2008;
- ⚡ 20 years long-term contracts for energy sale under PROINFA\*



## Brasil PCH:

- ⚡ Acquisition of 51% of Brasil PCH in 2013;
- ⚡ 13 SHPs with aggregate installed capacity of 291 MW,
- ⚡ Assured energy of 194 MW avg;
- ⚡ In operation since 2008;
- ⚡ 20 years long-term contracts for energy sale under PROINFA\*

\*Program of Incentives for Alternative Electricity Sources

# Strategic alliances' track record

## Differentiated Long Term Alliance With Key Suppliers

*Renova has always pursued and conquered the best partnerships with suppliers to achieve growth and scale*



GE Energy

### Scale Gains

■ Turbines assembled: 414 / 680 MW

### Alliance Enabled:

- ✓ Special class of turbines
- ✓ Distribution center in loco
- ✓ Own crane (saves up to 2 weeks)
- ✓ Optimization of O&M costs

ALSTOM

### Scale Gains

■ Turbines contracted: 570 / 1.300 MW

### Alliance Enabled:

- ✓ Best price guarantee
- ✓ Price fixed in R\$
- ✓ Distribution center in loco
- ✓ Optimization of O&M costs
- ✓ Factories close to Renova's projects
- ✓ Priority access to new technologies
- ✓ Co-development of technologies
- ✓ Specification of each turbine for every location

*By anticipating market trends, Renova has actively seek to shape competitive landscape to deliver premium returns*

# Experienced Management Team

Executive Management Team		Position	RENOVA ENERGIA	Background
	Carlos Mathias Becker Neto	CEO	3 years	  
	Pedro Villas Boas Pileggi	CFO, IRO and Commercialization	4 years	  
	Ney Maron de Freitas	Environment Director	7 years	 
	Ricardo de Lima Assaf	Institutional Relations	1 year	
	Álvaro de Freitas	Engineering and Construction Director	1 year	   

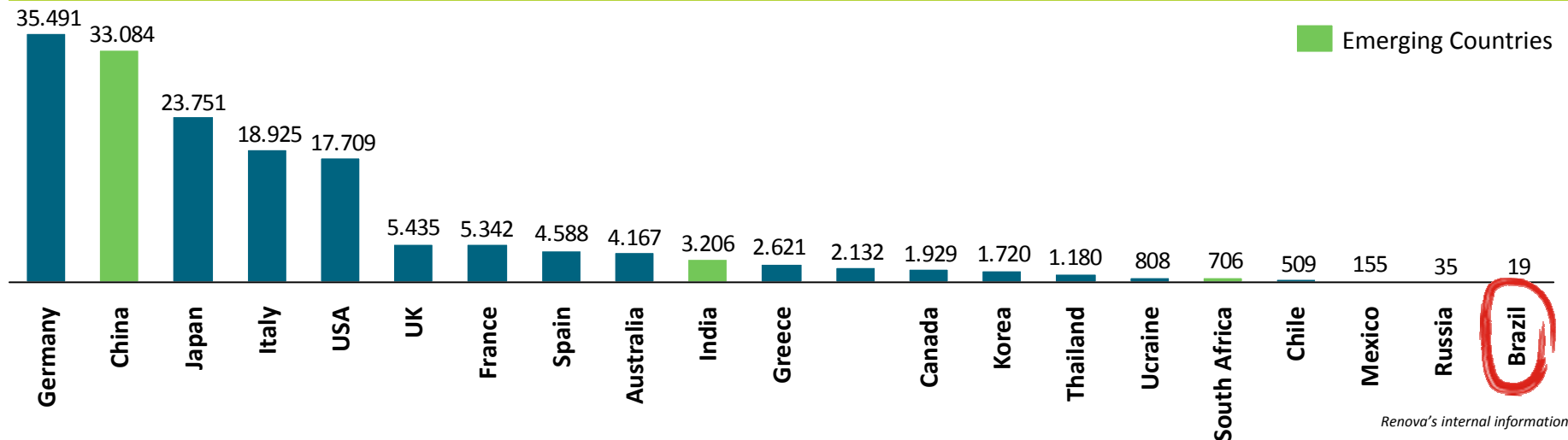


## Renova in Solar Energy



*Despite having an abundant resource, Brazil has just begun developing its solar potential*

### Installed Capacity (MW)



✓ Great solar potential across the country



Load factor of ~27% with trackers.

✓ EPE 10 year plan of 2014 included solar for the first time



Plus 3,5 GWp forecast for the next 3 years.

✓ First dedicated solar auction in 2014: 1 GW of installed capacity



Solar project auctioned in 2014 at same price as thermal, thus not expensive anymore.

✓ Solar components factories are already being installed in Brazil.



First auction was the trigger for supply chain development → SunEdison, Ingeteam, among others.

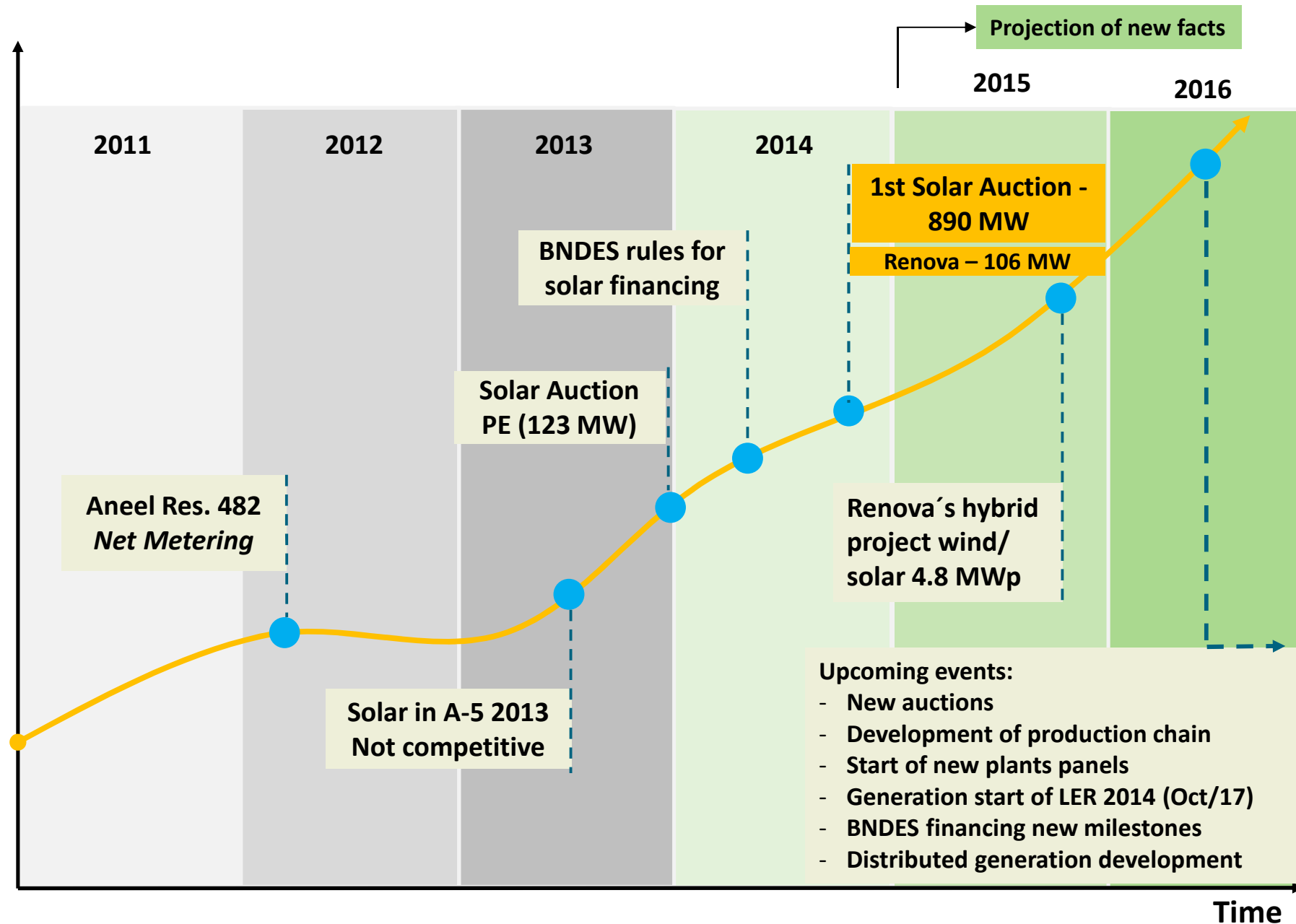
✓ Two solar auctions already scheduled for 2015



More than 10 GW registered at LER 2014, with good capacity factor.

# Recent evolution of solar energy in Brazil

## Relevant events



# Strategic alliance in solar

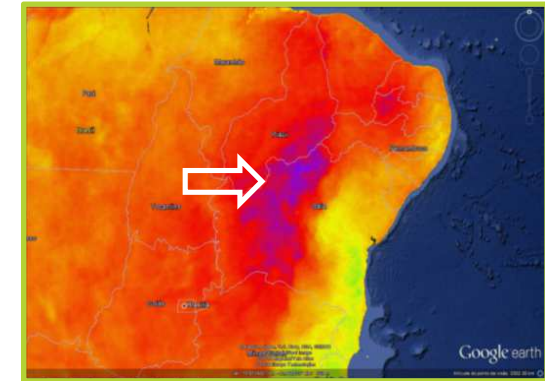
*Renova adapted its strategy to deal with different challenges in solar*

Some attributes continued to be important...



## **High quality projects / Synergy with wind projects**

- Located at the “Gold Mine” (top 3% solar location in Brazil)
- Net load factor of 27%



And others needed to be achieved, with reduced learning curve, to guarantee returns...

- No single factor determines competition
- Need to create advantages in every component
- Solar industry is already huge and advanced outside Brazil
- Investment necessary for local content
- Competitors with foreign cost of capital



## **Partnership with a world leader - SunEdison**

- Expertise in operation and construction
- Competitive CAPEX
- EPC



## **Optimized financial structure and risk reduction**

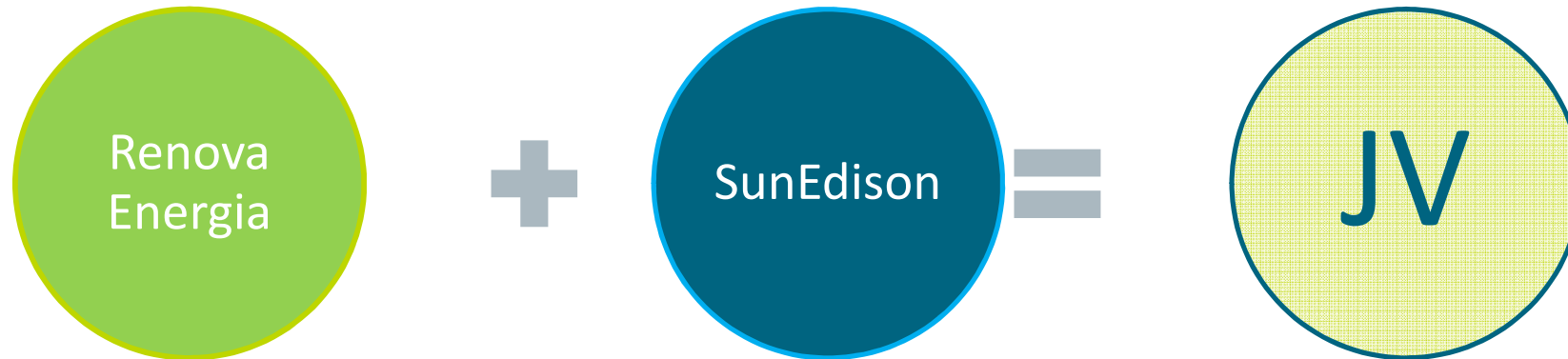
- Finame (BNDES)
- Costs fixed in R\$



## **LER 2014 Auction - Solar**

- 21.8 MW average
- 106.9 MWp of capacity
- Average price of R\$ 220.30
- Only local player to win

# Joint Venture to develop solar projects



## Renewable leader in Brazil

Local Expertise in the areas:

- ✓ Environmental
- ✓ Regulatory
- ✓ Transmission
- ✓ Financing structure

Value:

- ✓ Best energy potential
- ✓ Execution
- ✓ Development of technological partnership

Strong local shareholders

## One of the world's solar leaders

Technological Expertise:

- ✓ Solar construction and operation
- ✓ Semiconductors
- ✓ Solar panels
- ✓ Trackers

Value:

- ✓ Leadership in technological dev.
- ✓ Choice of local partners

Experienced group, diversified, solid

HIGH COMPETITIVENESS

MAXIMUM VALUE CREATION

LER 2014

Exclusivity

*JV is the exclusive investment vehicle for regulated market*  
*Goal= 1,000 MWp*



# IR Contact



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