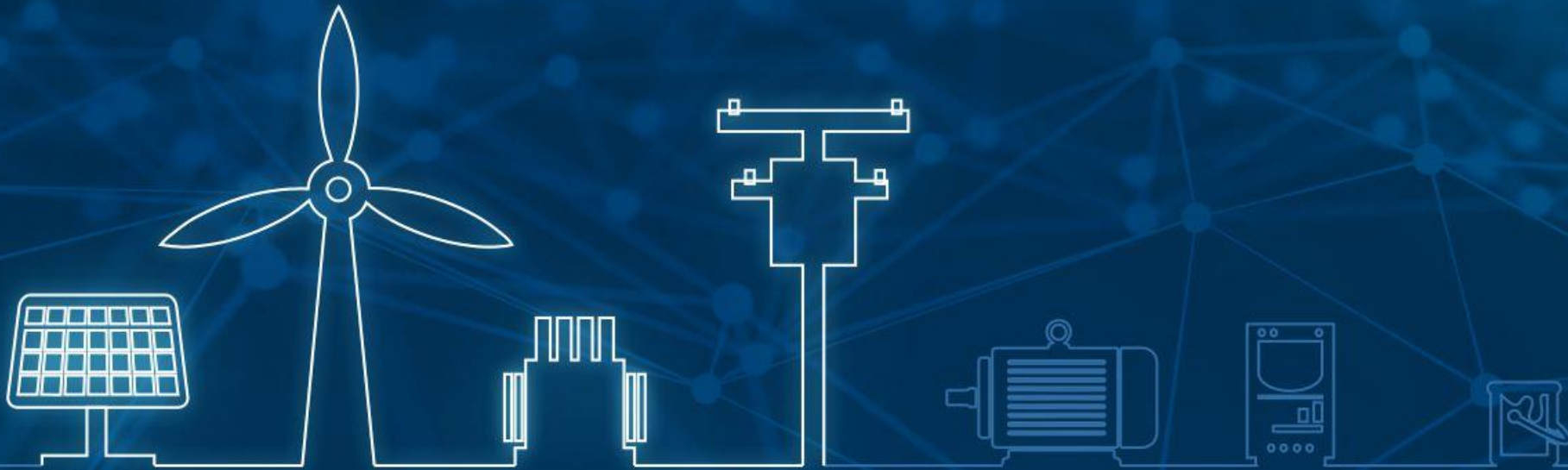


Energy Generation, Transmission and Distribution (GTD)

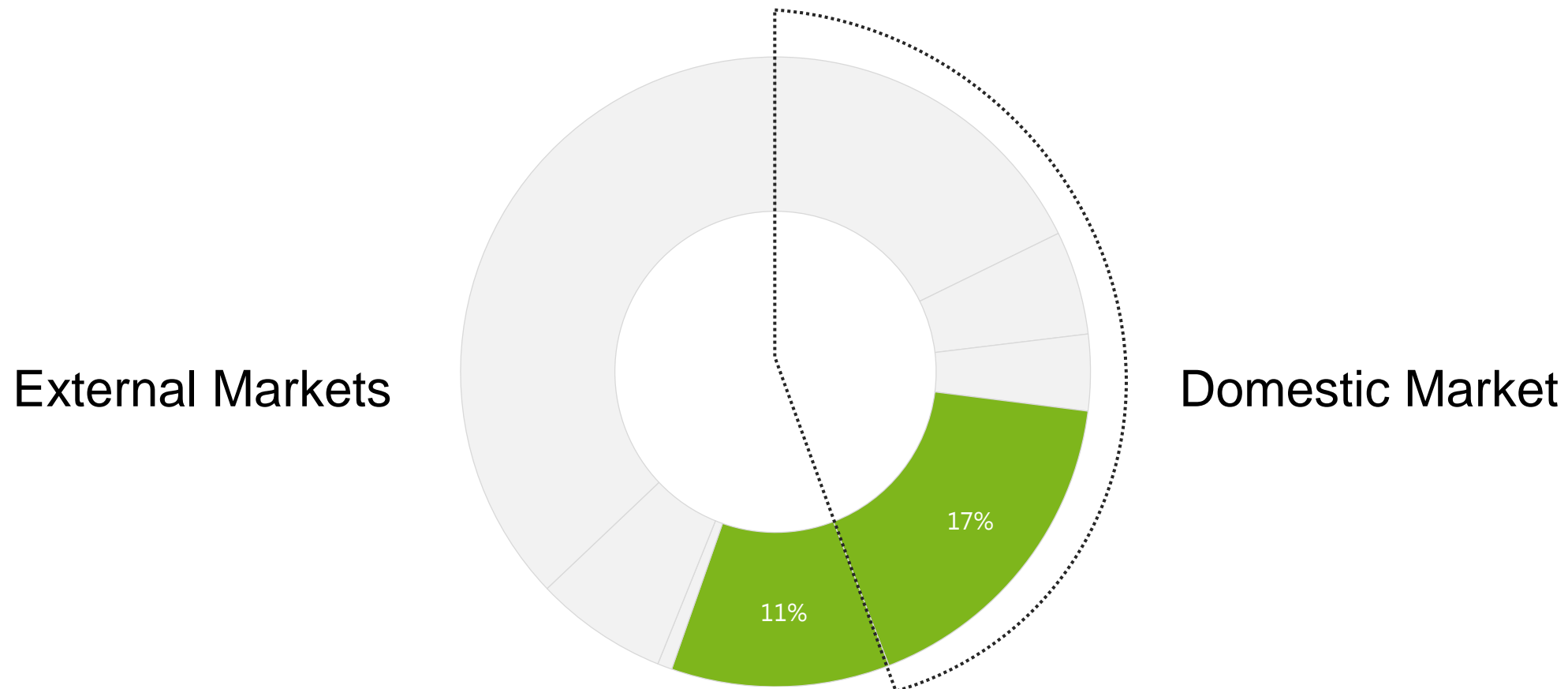
Mr. André Luís Rodrigues



WEGDAY2018

Business Area

2017 Net Operating Revenues Breakdown



Energy Generation, Transmission and Distribution

Energy Generation



WEGDAY2018

WEG Energy

At a glance



+2,600
Employees



8
Manufacturing sites in 6 countries
4 continents



Wide service network



Leader in Indian market of Hydro Generators



94
GW Installed



One of top suppliers in Latin America market of Small Hydro Power



650
MW Installed



One of top suppliers in Latin America market of Biofuel Power Generation



Certifications around the world such as: UL, CE, etc.

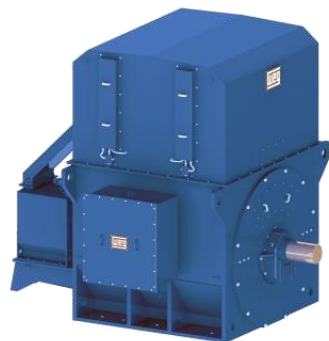


Complete solutions for solar power generation

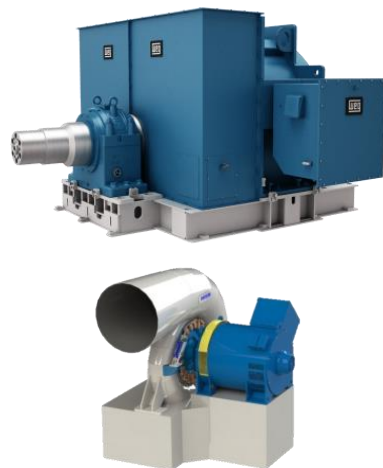
Products

Complete range of products to address all markets segments

Turbo generators



Hydro generators



Hydro turbines



Steam turbines



Wind turbines



Solar



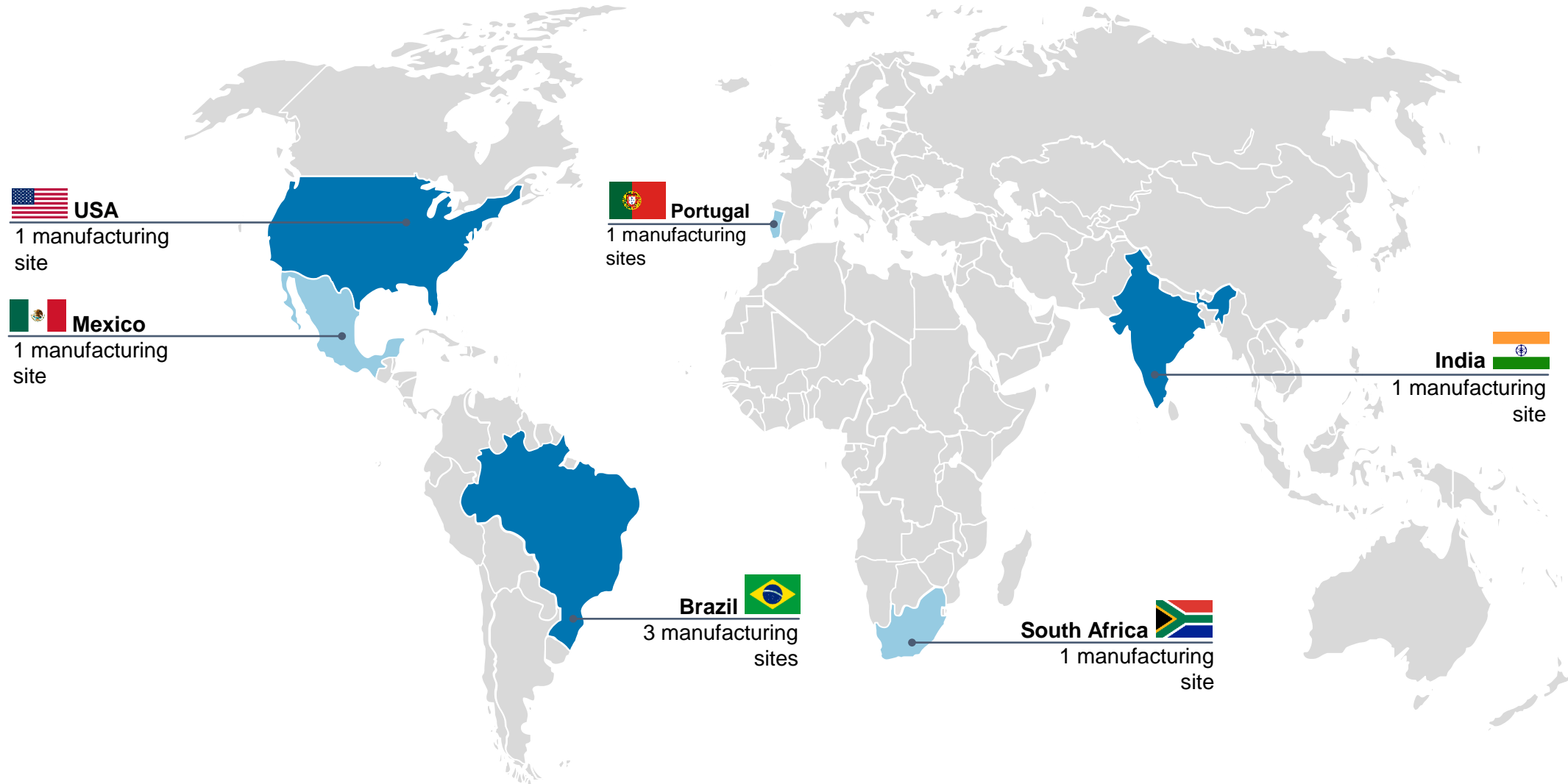
Synchronous alternators



Services



Global Footprint



Hydro Power Generation

One stop shop for hydro power plants

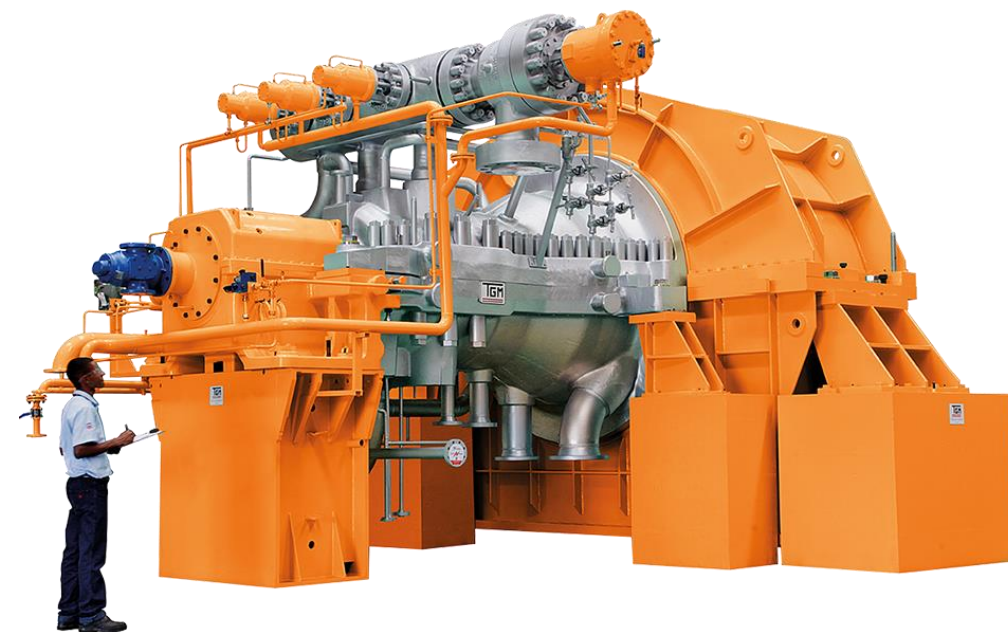
- Complete packages “*water-to-wire*” for hydro power plants (HPP) up to 80 MW
Turbine + Generator + Automation + Substation
- Strong presence in Brazil and Latin America
- Local partners to develop this business outside Latin America (Generator Supplier)
- Opportunities to increase our presence in Southeast Asia through our manufacturing site in India



Thermal Power Generation

Recent TGM acquisition increased our product portfolio for thermal power plants

- Complete packages for steam thermal power plants up to 160 MW
Turbine + Generator + Automation + Substation
- Solutions for different end users
 - Sugar & Ethanol
 - Oil & Gas
 - Pulp & Paper
 - Others
- TGM acquisition – steam turbine producer
 - Increased our products portfolio
 - Strengthens our commercial presence outside Brazil
 - Synergies with other businesses



Wind Power Generation

Increased energy capture

- Direct drive with gearless design
- Permanent magnet synchronous generator
- High availability: simple design, quicker repair

Expectance of less expensive O&M

- Lower failure rate: lower part count and gearless

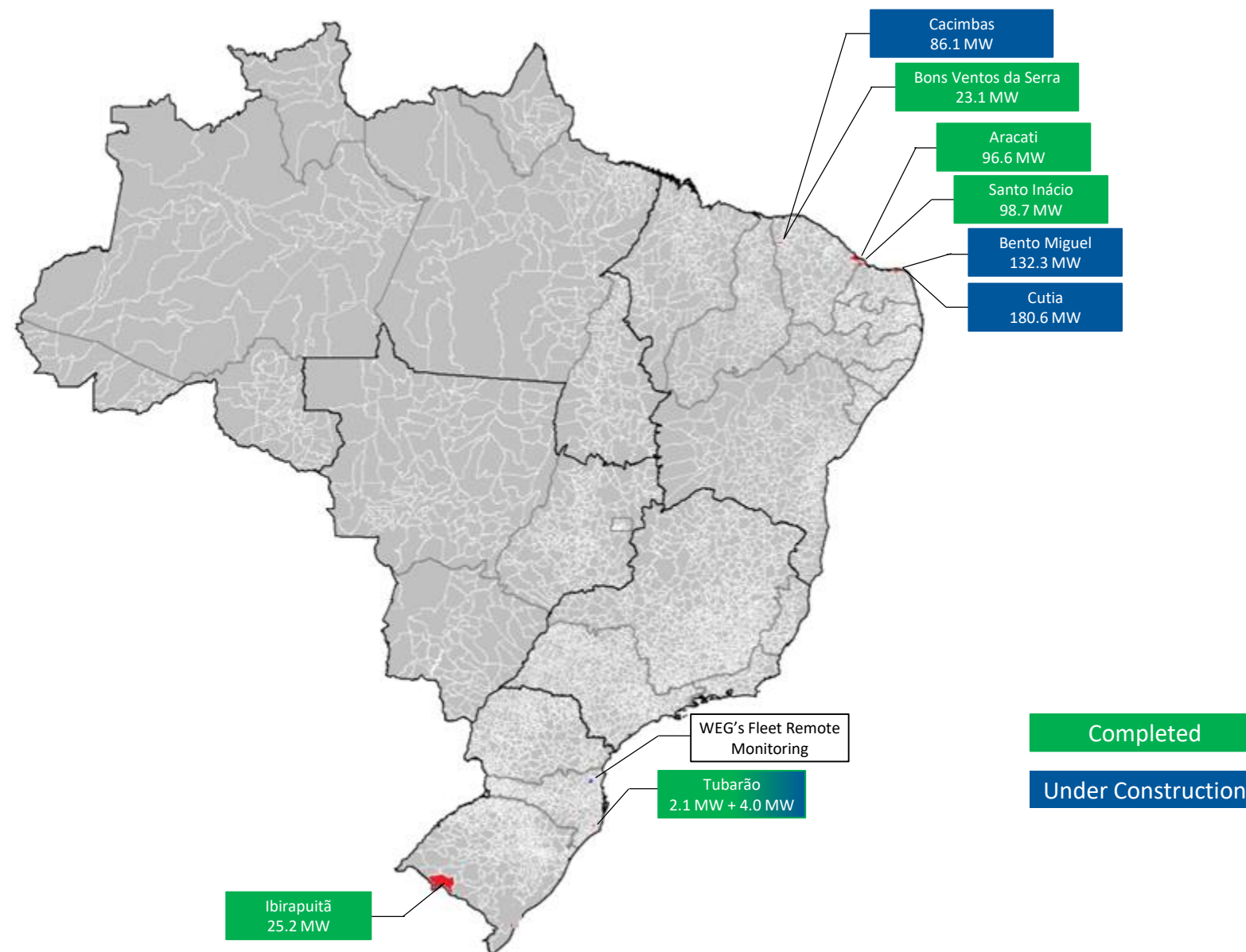
Smooth grid interconnection

- Compliant with most strict grid operator codes



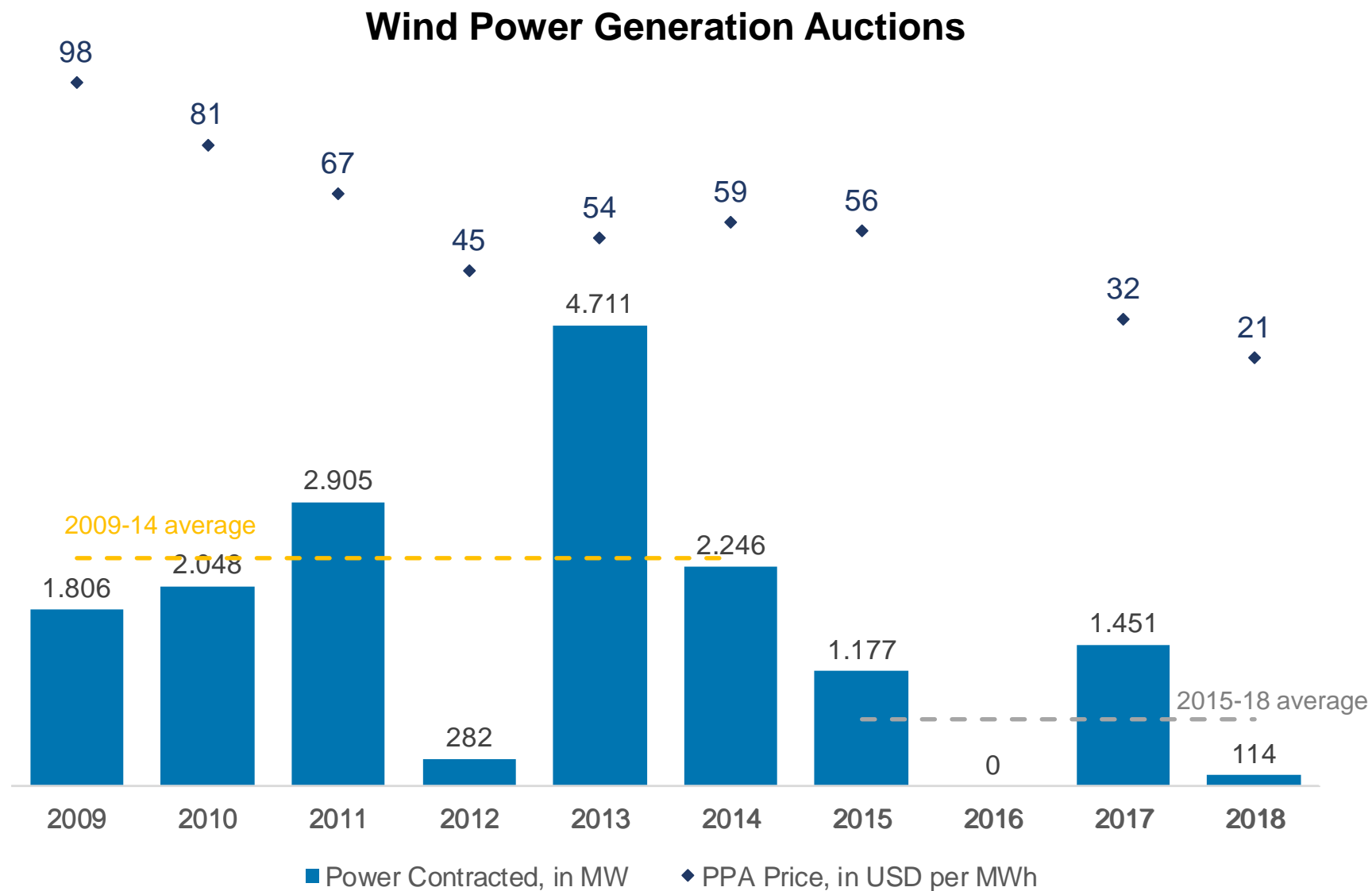
Wind Power Generation

WEG offers a turn key solution with a solid track record in Brazil



Wind Power Generation

Brazilian market recap: Challenging scenario ahead



Solar Power Generation

Solar Farms

WEG manufactured products

- Central Inverters 1000 and 1500 V
- Power Inverter Containers
- DC String Boxes and Monitoring Systems
- Transformers, substation and transmission lines

WEG offering

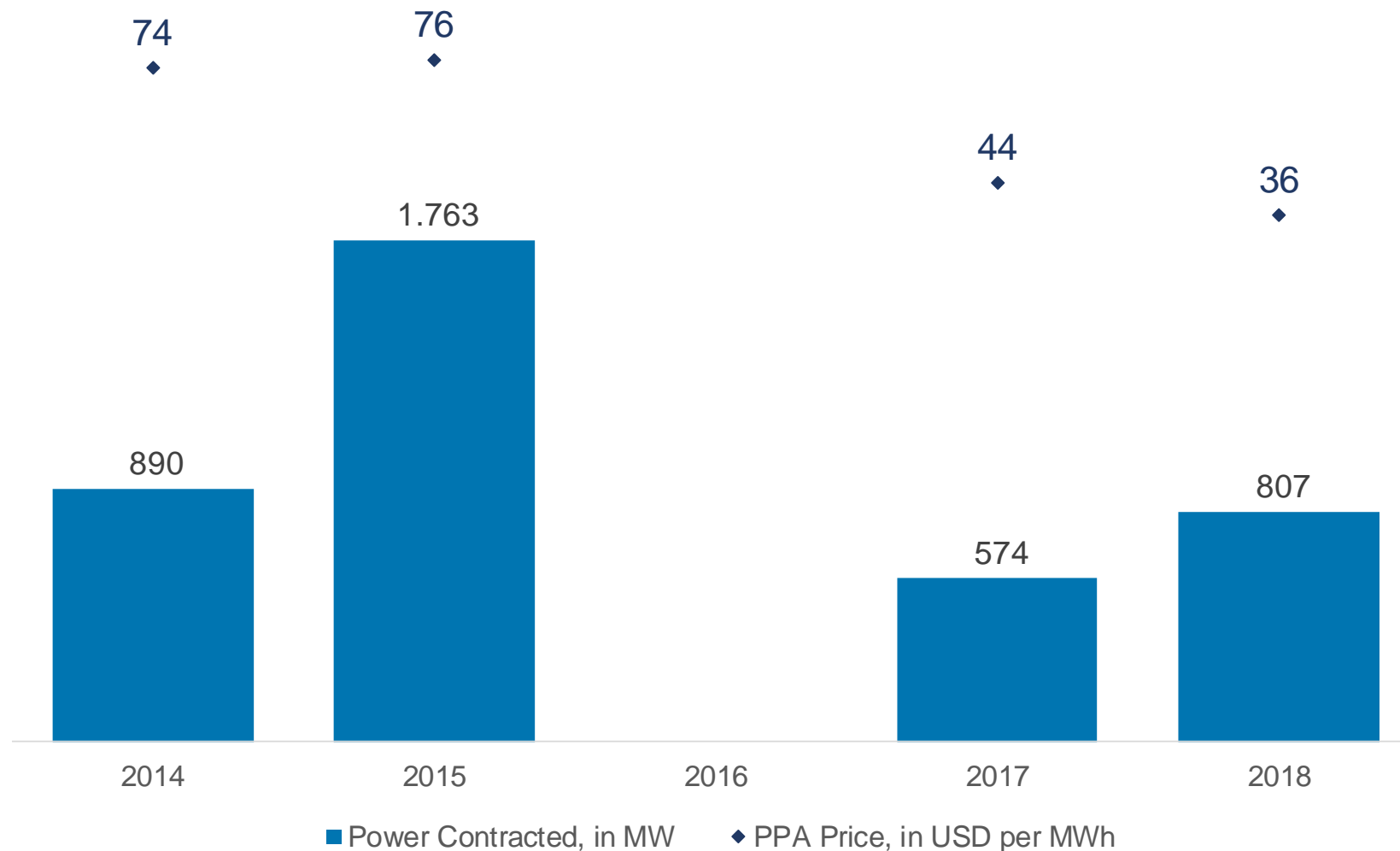
- Engineering , Procurement and Construction of PV Power plants in turnkey solution.
- Complete line of electrical equipment for PV plants.
- Central Inverter can be mounted in shipping containers
- Operation and Maintenance of PV Power Plant



Solar Power Generation

Brazilian Market Recap: Opportunity for new projects in the coming years

Solar Power Generation Auctions



Solar Power Generation

Solar Distributed Generation

WEG made products

- Solar Inverter
- Accessories

WEG offering

- Complete EPC for commercial & industrial projects
- Distribution of solar equipment/products to our integrators for residential & small commercial projects
- Supply Chain (PV modules + trackers + cables)

Commercial & Industrial



Residential



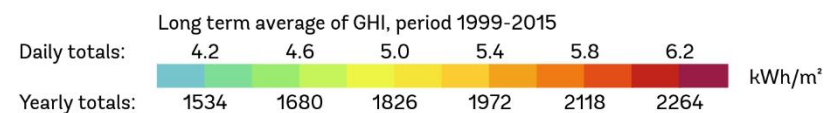
Agribusiness



Up to 5 MW Plants 

Solar Power Generation

Brazil, one of the best countries in solar radiation in the world

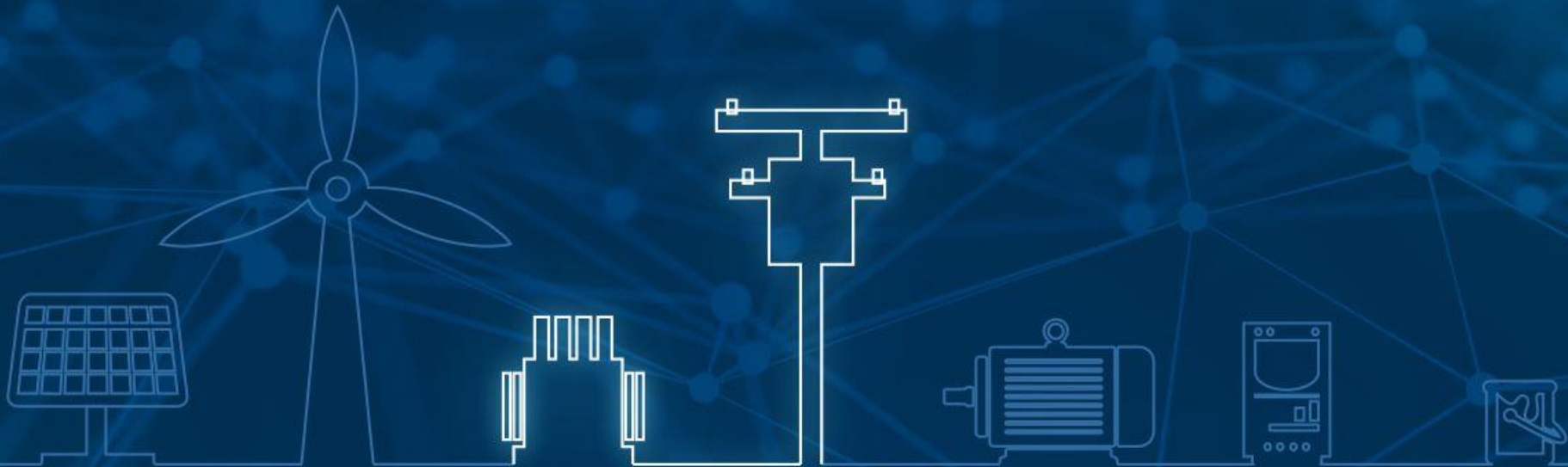


Key messages

Energy

- Opportunities to increase our presence in the small hydro power outside Brazil, mainly in Southeast Asia through our manufacturing site in India
- TGM acquisition increased our product portfolio and strengthens our presence outside Brazil
- Wind generation is facing a challenging scenario in Brazil, but we are still looking for opportunities abroad and developing a new 4.0 MW wind turbine to be prepared for market recovery
- EPC supply in solar farms should continue on the back of more reliability to investors, tax benefits and good financial conditions
- Great perspectives for solar distributed generation, in two different strategies:
 - Distribution of set of equipment (kits) via integrators partners
 - Direct supply of turn key solutions for PV distributed generation plants

Transmission & Distribution



WEGDAY2018

WEG Transmission & Distribution

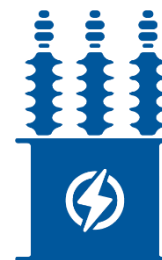
At a glance



+3,300
Employees



11
Manufacturing sites in 5 countries
2 continents



Largest Manufacturer in Latin America of Transformers



Leader in the Brazilian market of Mobile Substations



Largest Latin American Manufacturer of Dry Transformers



58,000
MVAs/ year of Manufacturing Capacity



More than **430**
Turn-Key substations delivered up to 550 kV



Certification in the main utilities in our markets



Wide service network

Products

Complete range of products to address all markets segments



Distribution transformers
15 to 300 kVA
15, 24 and 36 kV



Industrial transformers
500 to 3.000 kVA
15, 24 and 36 kV



Dry-Type Transformer
112,5 to 30.000 kVA
15, 24 and 36 kV



Underground-type and submergible transformers
300 to 2.000 kVA
15 and 24 kV



Pad Mounted Transformers
45 to 3.000 kVA



Medium Power Transformers
3.001 to 50.000 kVA
Up to 138 kV



Power transformers
Above 50.001 kVA
Up to 550 kV



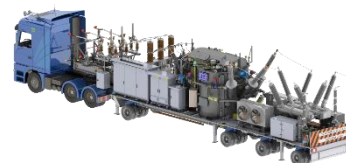
Reactors (Shunt)
Up to 500 kV



Transformers for furnaces and for rectifier systems
3.000 to 150.000 kVA
Up to 36,2 kV – 150.000 A



Conventional Substations
Up to 550 kV



Mobile Solutions
Up to 230 kV



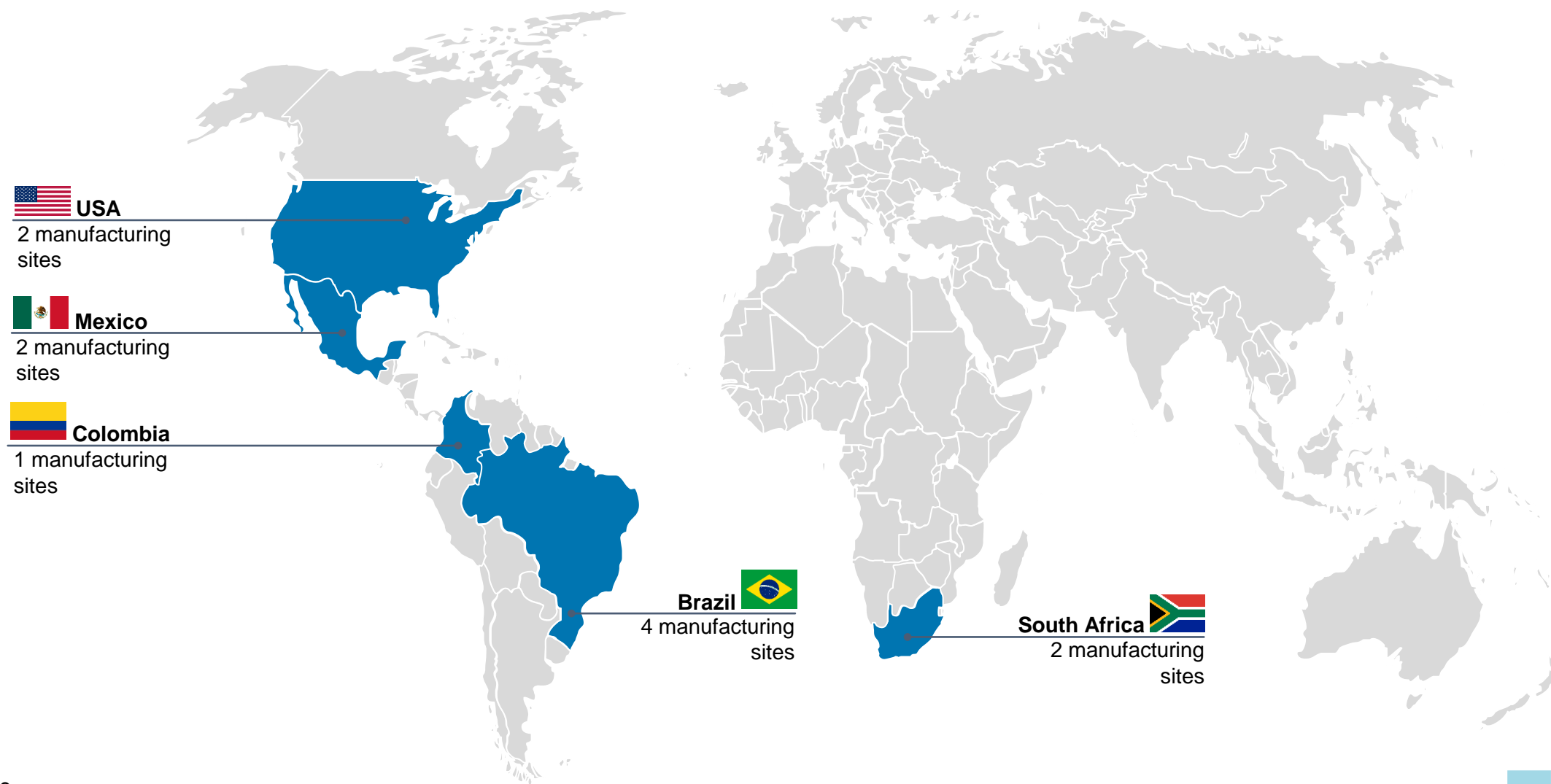
Disconnectors
Up to 550kV



Retrofitting and Repowering Services
Up to 550 kV

Global Footprint

WEG manufacturing sites have been structured to supply according to the current market demand

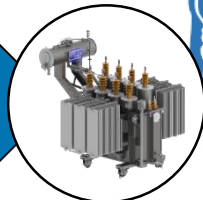


WEG's Market Share

WEG's market share: 4.5%



WEG's market share: 17%



WEG's market share: 8%



Investments

Reactor 550 kV

Investments in power transformers plant in Brazil for Reactors production up to 550kV.

Goal

Enter a market where WEG's Transmission and Distribution was not participating and has great potential. In Brazil, this market is around BRL 300 million per year.

Potential Market

Few manufacturers work with reactors at this voltage level.



Investments

Brazil

Blumenau

Expansion of Distribution Area (30 to 300kVA)

Increased production capacity for 1,000 units per month.

Expansion of Medium Power Line (5 to 40 MVA)

Increased production capacity and reduction of delivery time.

Jaboatão dos Guararapes

Products and Services

- Transformers for application on wind and solar sites
- Power Transformers up to 30MVA - 72 kV
- Retrofitting and Repowering Services up to 40MVA – 145kV

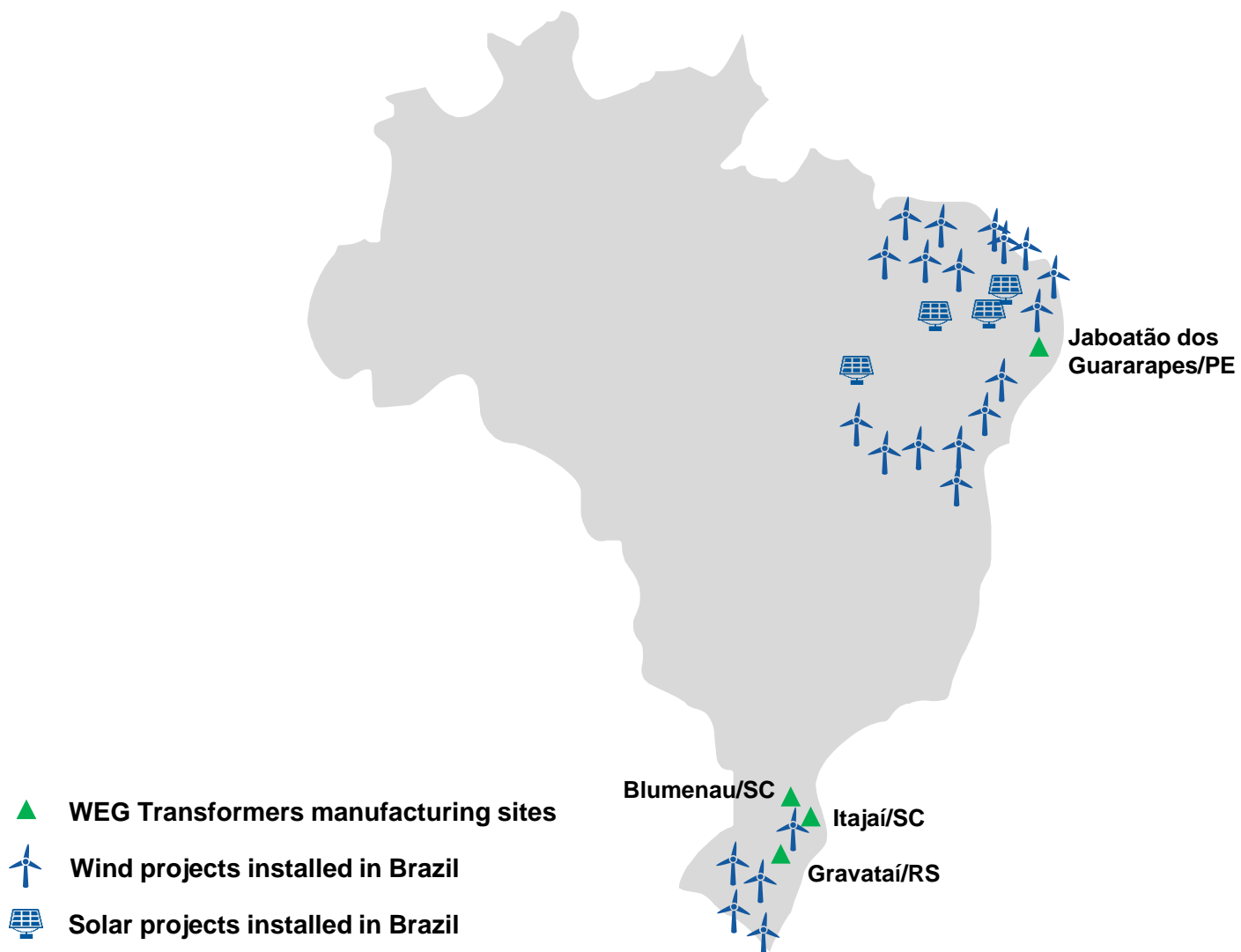
Strategic Location

Strategic location for immediate delivery to northeast states.



Strategy for renewables

Brazil



Acquisitions

WEG Transformers USA

Distribution Plant



Location: Washington / MO

Area: 176,000 sq. ft.

Line: Oil Transformers up to 10MVA - 46kV

Power Plant



Location: Washington / MO

Area: 71,000 sq. ft.

Line: Oil Transformers from 5 to 60MVA – 161kV

Acquisitions

WEG Transformers USA



Market Access

The acquisition is aligned with WEG's Strategic Planning, with emphasis on growth in the American market



Technology

Strong know-how in oil type distribution transformers for applications in the renewable energy segment



Synergy: Mexico and USA

Important synergy between production, sales, supplies and administrative activities

Key Messages

Transmission & Distribution

- Continue international expansion with focus on Americas and sub-Saharan Africa markets
- Acquisition of WEG Transformers USA positioned us as leader in transformers for renewable energy improving our competitiveness due to operational synergies with Mexico
- Growth in the domestic market will come through:
 - Leadership in distribution and renewable transformers
 - Development of new products, like shunt reactor for example
 - Market recovery on the back of last transmission auctions