

Enel Green Power

Open to New Challenges

Milan, June 30th 2017

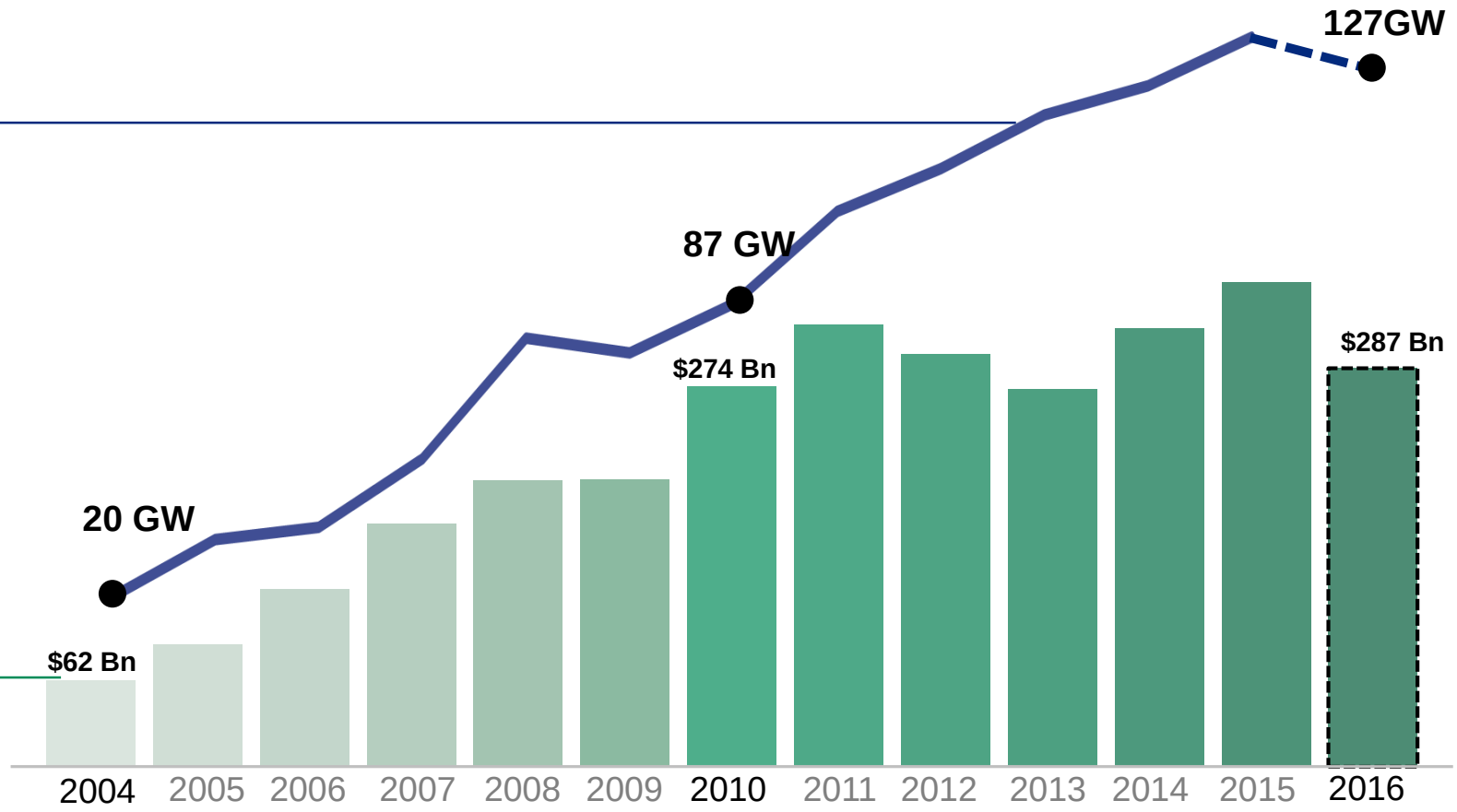
Green Power

RES investments in 2016 – key facts

A surprising slowdown

Installations (2004-2016)
+535%

Investments $Bn (2004-2016)
+363%

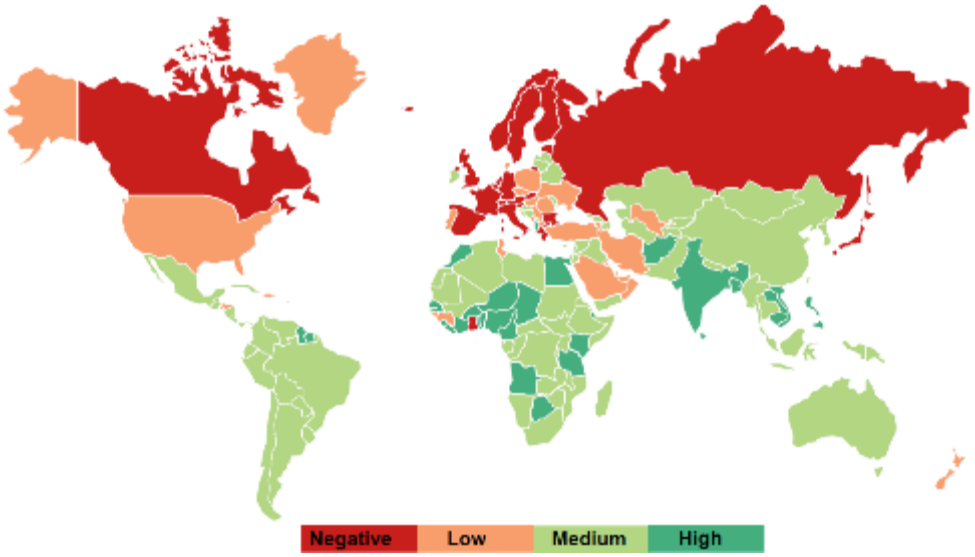


Operators are now installing more capacity with the same amount of money

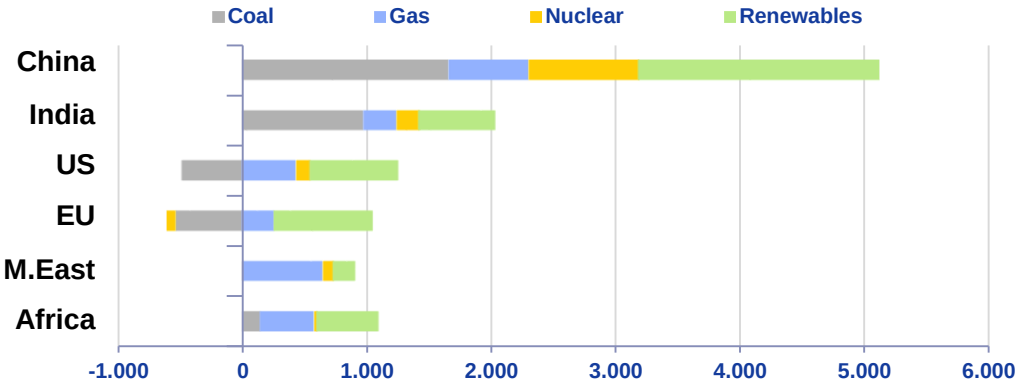
Source: BNEF

Renewable role in demand growth

Electricity Demand Growth 2012-2040



Changes in Power Production Mix until 2035 (TWh)

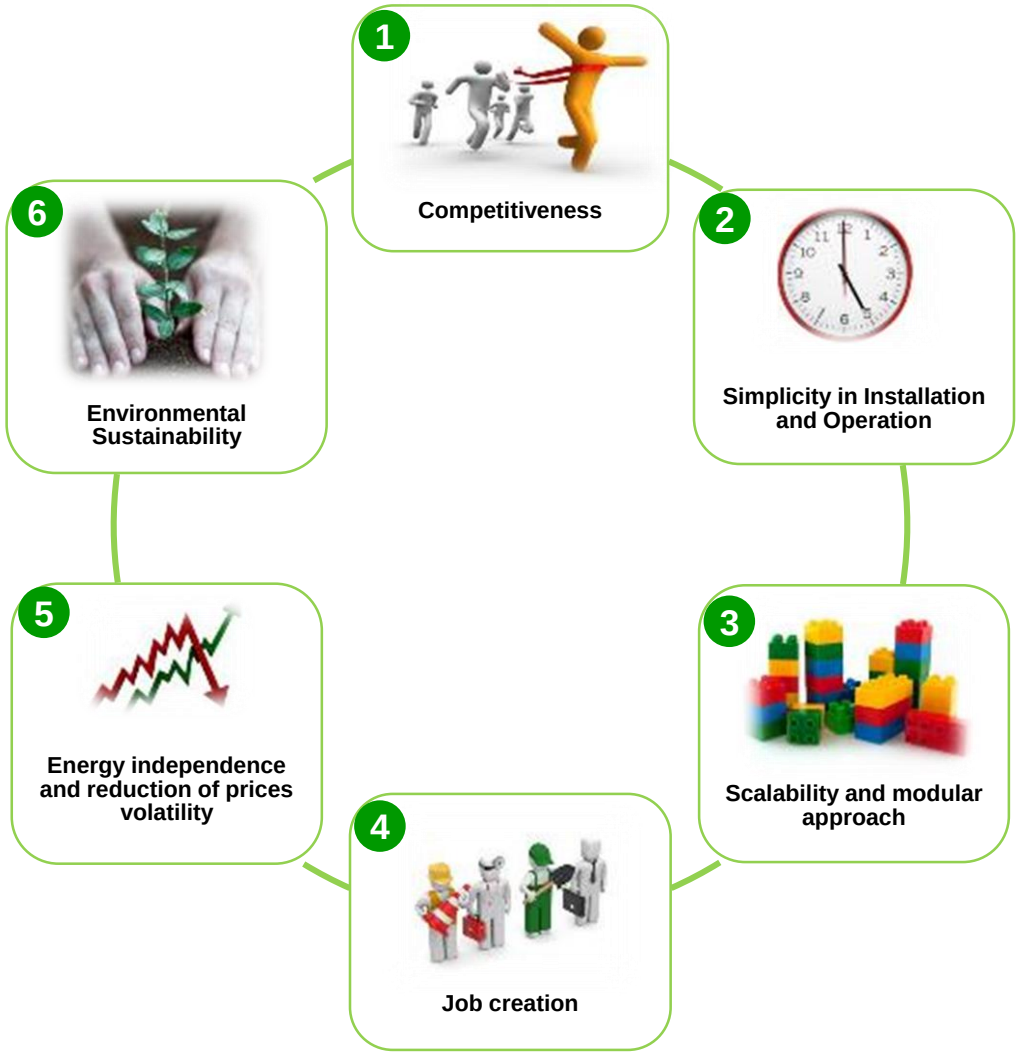


The RES market is expected to grow steadily worldwide

Developing countries will contribute over 60% to global growth in electricity production until 2035

It is estimated that RES will account for around 50% of new business

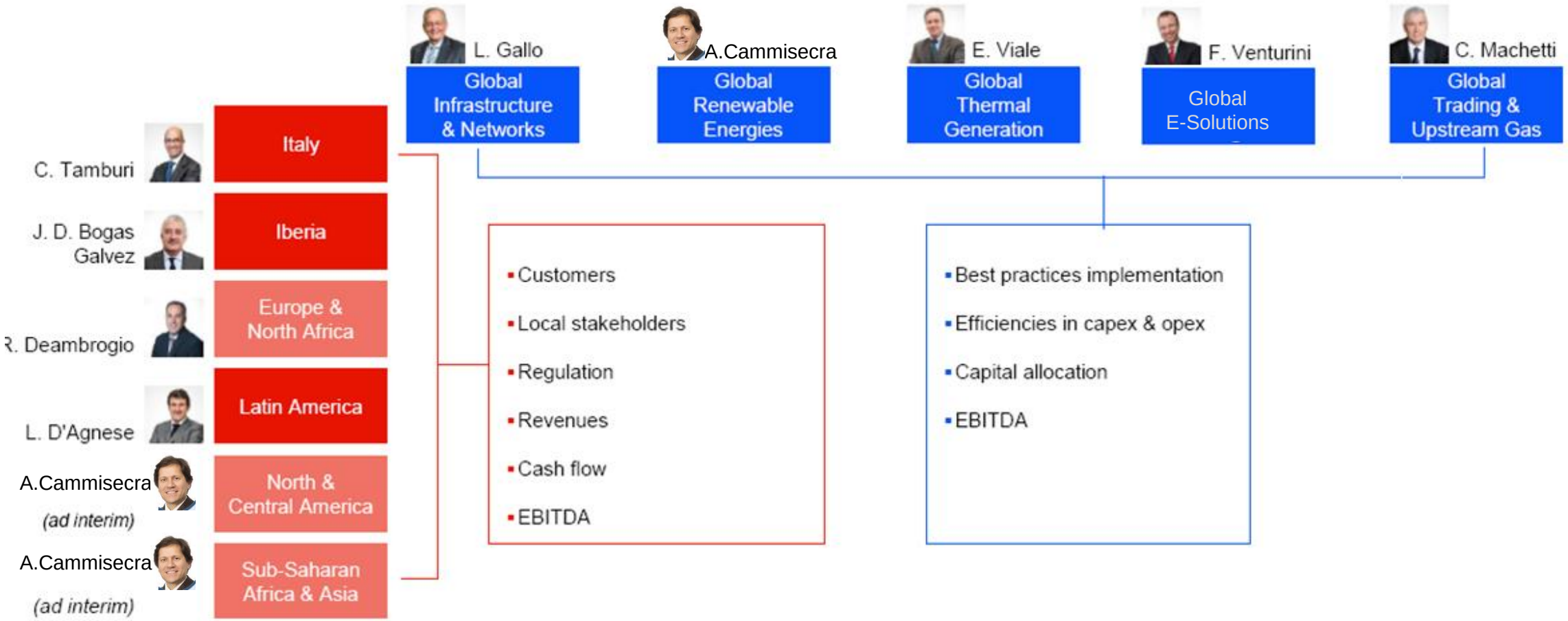
RES success factors



Strengths of Renewable Technologies

1) RES technologies are more and more **competitive**. In case of abundant resource they can compete with fossil fuel generation
2) RES have a shorter construction time, and offer a **fast and flexible response to growing demand**
3) RES are modular and their flexibility allows the **reduction of costs thanks to scale economies**
4) Investment in RES can create **new local jobs** from the preliminary phase of studies (when engineers, surveyors and local specialist are requested) to the construction and the maintenance phases
5) **RES mitigate the energy dependency and contribute to secure the energy supply**, reducing the exposure of power prices to commodities market fluctuations
6) RES are a e**nvironmentally-friendly** option to solve air and water pollution issue and to fight the climate change

Enel transformation: updated organizational structure



Enel Green Power - Organization



Global Renewable Energies

Antonio Cammisecra



Business Development

Antonio Cammisecra (a.i.)



Engineering & Construction

Umberto Magrini



Health, Safety, Environment and Quality

Giovanni Tula



Operation & Maintenance

Luigi La Pegna



Renewable Energies Italy

Carlo Pignoloni



Renewable Energies Iberia, East Europe and North Africa

Carlo Pignoloni



Renewable Energies Sub-Saharian Africa and Asia

Lamberto Dai Prà



Renewable Energies North America

Rafael Gonzalez Sanchez



Renewable Energies Central America

Paolo Romanacci



Renewable Energies South America

Antonio Cammisecra (a.i.)



Human Resources and Organization Global Renewable Energies

Roberta Bonomi



Global Renewable Energies Communications

Mi9chele Bologna



Legal and Corporate Affairs Global Renewable Energies

Giuseppe Conti



Innovation and Sustainability Global Renewable Energies

Riccardo Amoroso



Audit Global Renewable Energies

Giuseppe Tralongo



Global Renewable Energies Procurement

Renato Mastroianni



ICT Solution Center Renewable Energies

Roberto Balzerani



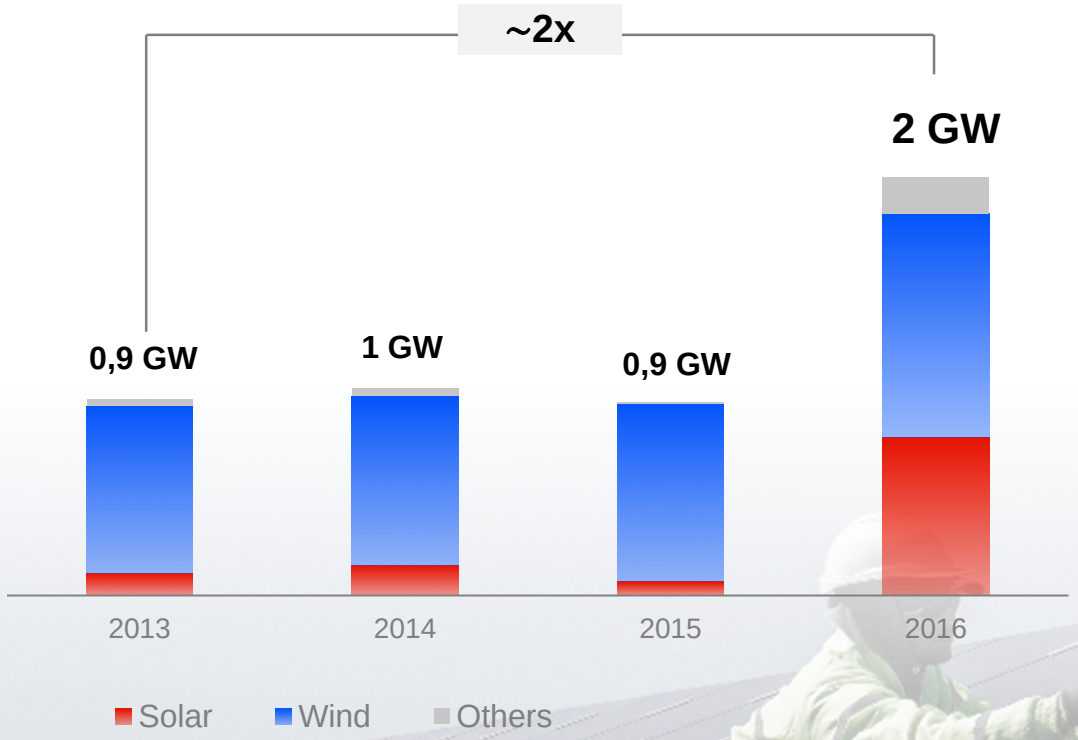
Administration, Finance & Control Renewable

Giulio Carone

Global Renewable Energies

From small to big

Construction capacity[1] 2013-16



Working on big volumes to secure margins

Quantum leap in the total capacity under construction

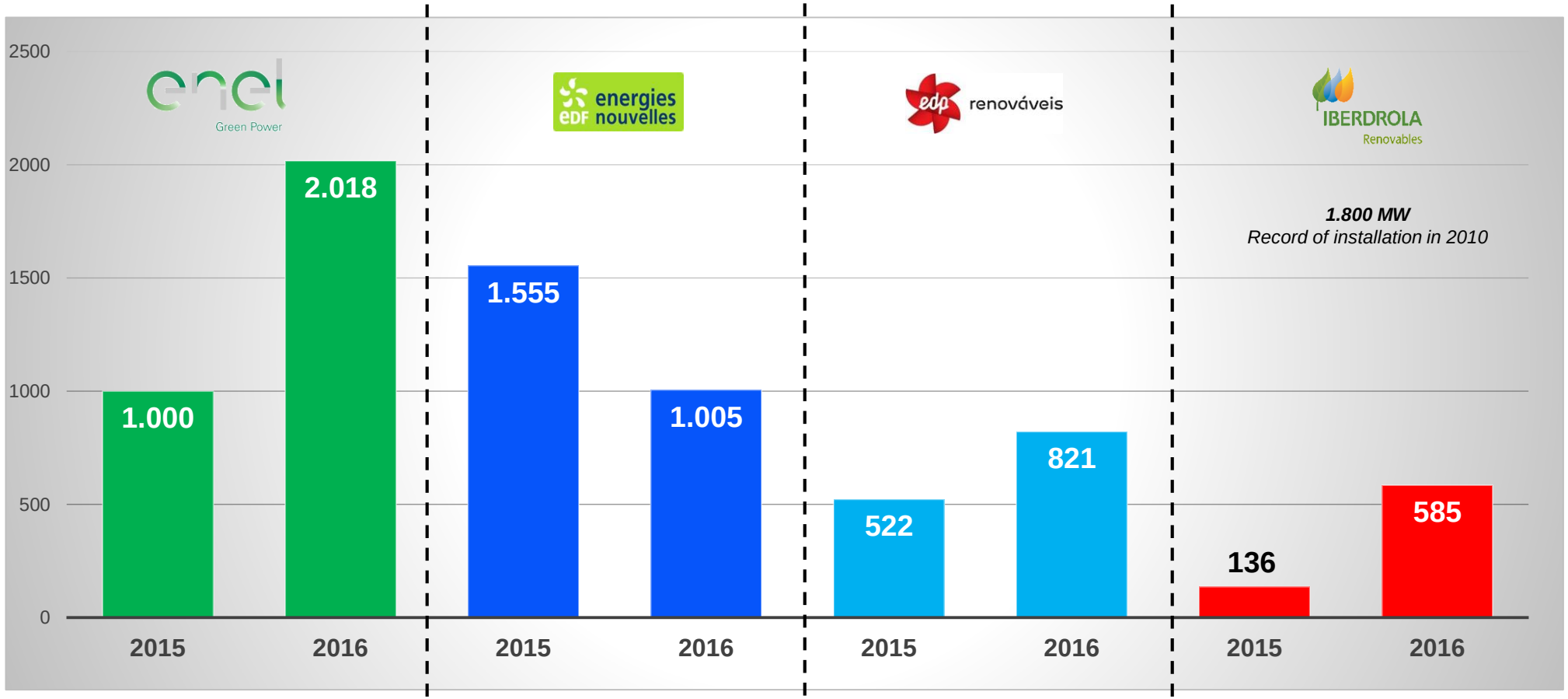
Large presence of solar technology

2016: Western world record of 2 GW of capacity built in one single year

* 2GW refers to new capacity built during 2016 and does not take into consideration acquisition or disposals. Others category indicates Geothermal, Hydro and Biomass

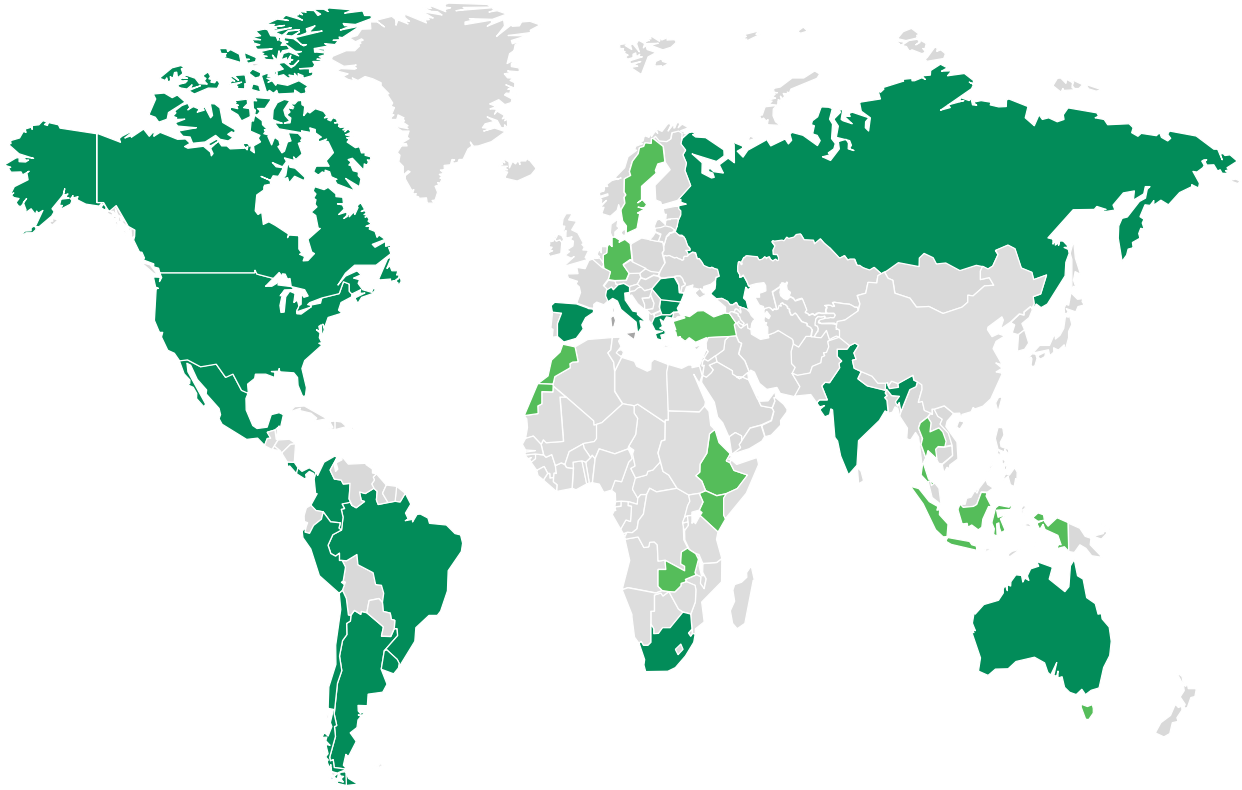
EGP Peers Overview

Western peer analysis: installed capacity [MW] in 2015 - 2016



Global Renewable Energies

Positioning and key figures



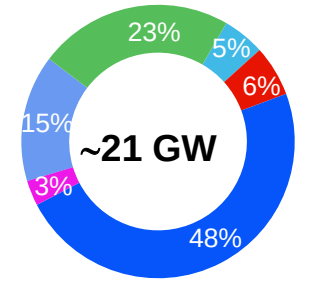
Countries of presence

Countries of interest

Net installed capacity[1] (GW)	Wind	Solar	Hydro	Geo	Biomass	Large hydro
	6.4	1.2	2.5	0.8	0.1	24.8

Key figures	2016
Capacity[1] (GW)	35.7
Production (TWh)	92.4

Pipeline by geography

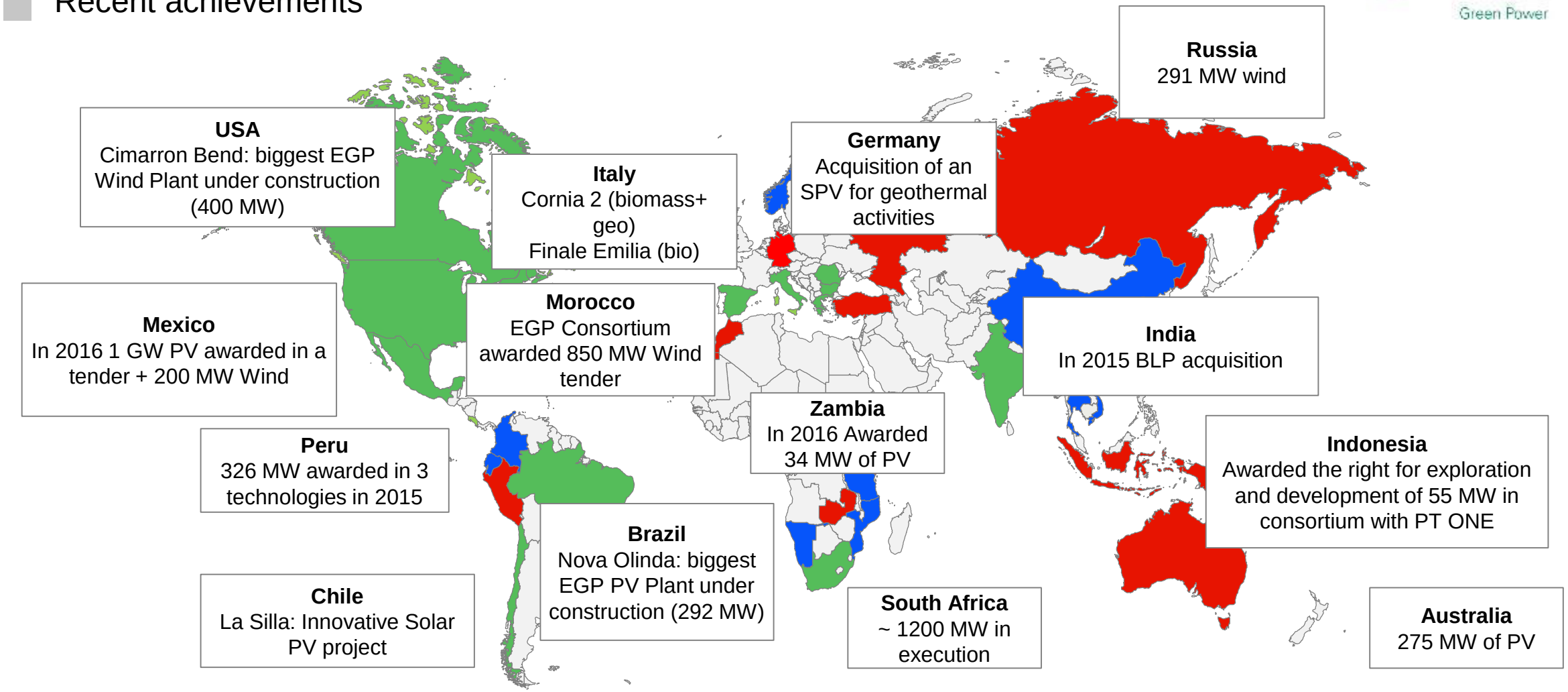


Italy
Iberia
Latam
Europe
America
Africa/Asia

1. Old perimeter capacity and growth capex not including USA projects managed through BSO model (Build Sell and Operate)

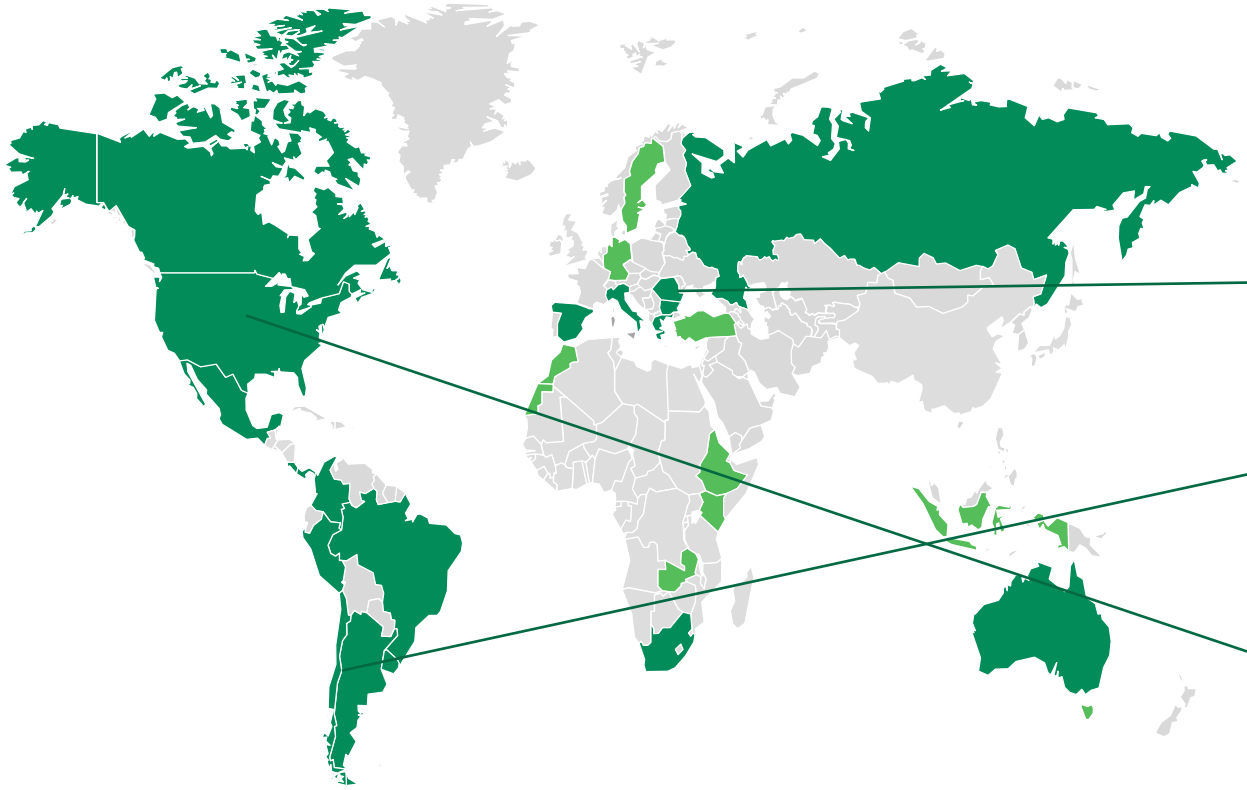
Enel Green Power

Recent achievements



Plants

Geographical Experience



Plant	MW	Country
Colibasi	6,5	Romania
Lalackama	60	Chile
Lalackama II	18	Chile
Pampa Norte	80	Chile
Finis Terrae	160	Chile
Aurora	150	U.S.A.

Plants

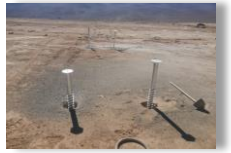
Lalackama I – II, Antofagasta Region, Taltal, Chile



Power
78.1 MW



Production
210.8 GW



Screws
61.843



Panels
256.140



Tracker Tables
4.771



9 towers



Conversion Units
25



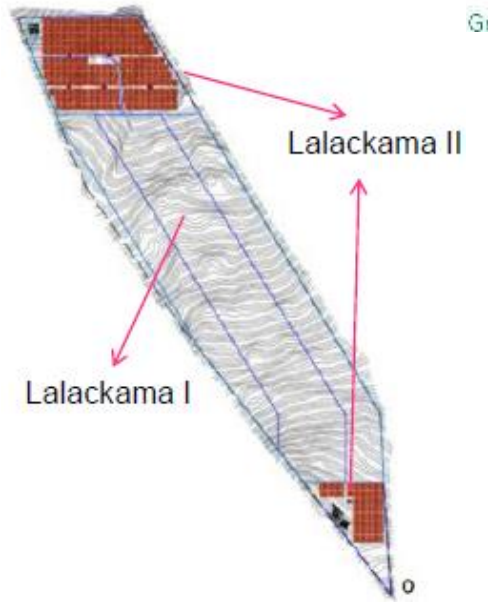
Campsite 250 beds

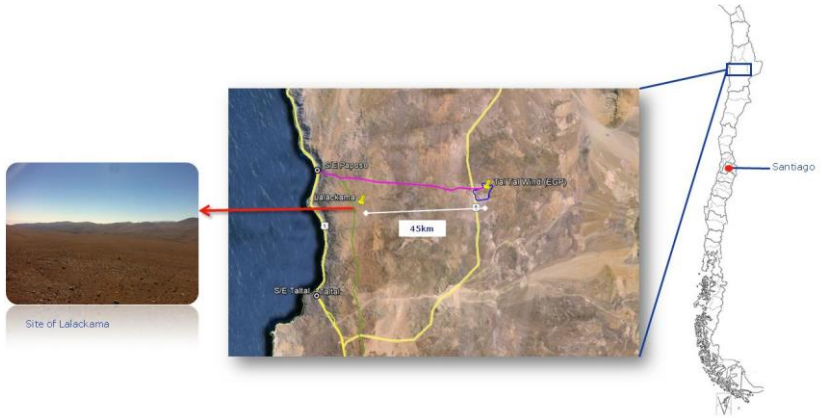


Canteen – 3 turns



Workforce – 700
peak





Plants

Lalackama I – II, Antofagasta Region, Taltal, Chile



Plants

Pampa Norte, Antofagasta Region, Taltal, Chile



Power
80 MW



Production
210.8 GW



Poles
27.168



Panels
256.098



Tracker Tables
4.771



33 towers



Conversion Units
22



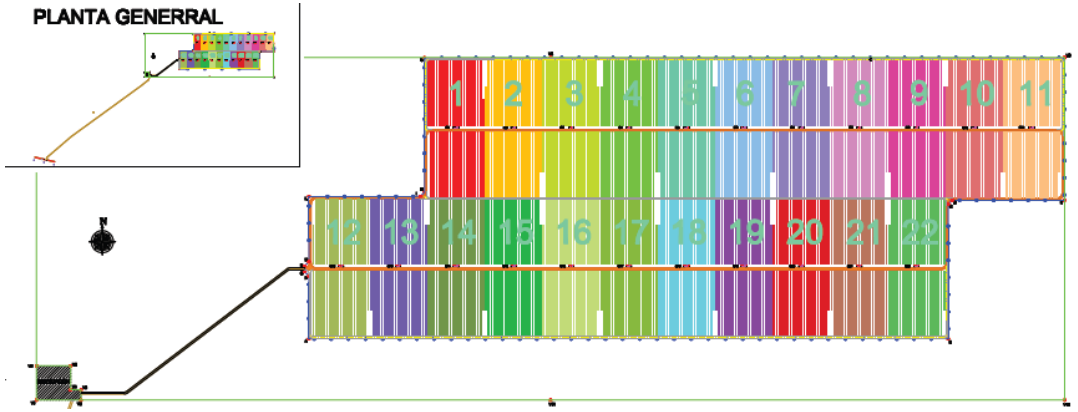
String Boxes 1011

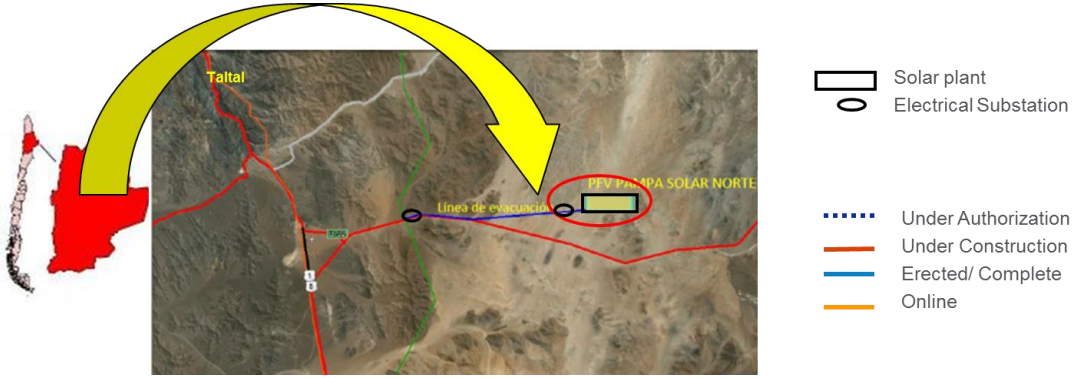


Motors 4.528



Workforce – 800 peak





Plants

Pampa Norte, Antofagasta Region, Taltal, Chile















Plants

Finis Terrae, Antofagasta Region, Maria Elena, Chile



Power
160 MW



Production
200 GW



Screws
82.000



Panels
520.000



Tracker Tables
6.820



20 towers



Conversion Units 55



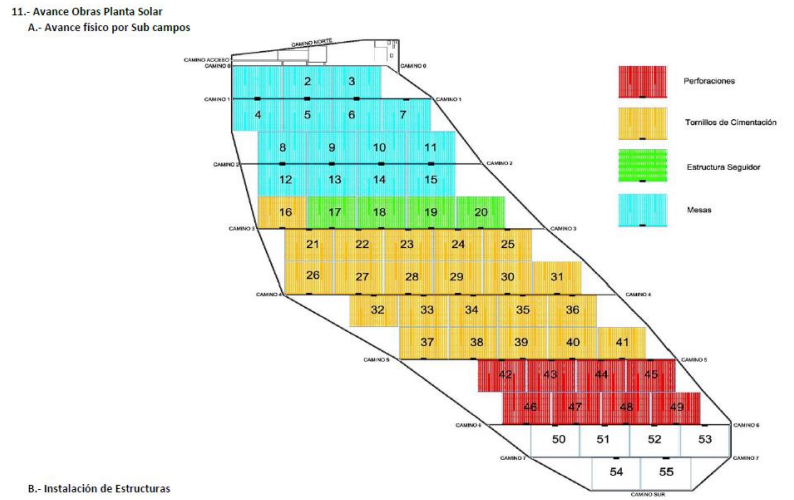
String Boxes 1.320

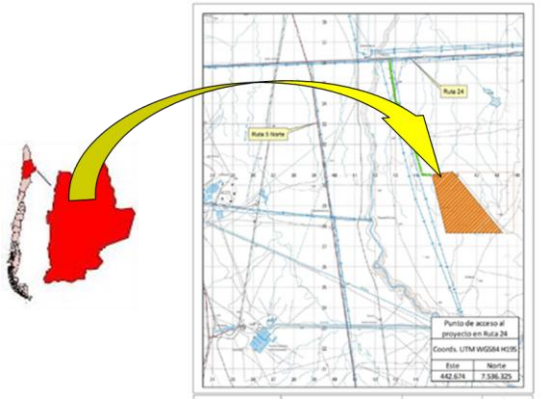


MV/HV Trafo 2



Workforce – 1.000
peak





Solar Farm
Electrical Substation
Line

Engineering phase
Under Authorization
Under Construction
Erected / Complete
Online

Plants

Finis Terrae, Antofagasta Region, Maria Elena, Chile



Plants

Aurora, Minneapolis, Minnesota, USA

Experience

People's Skills









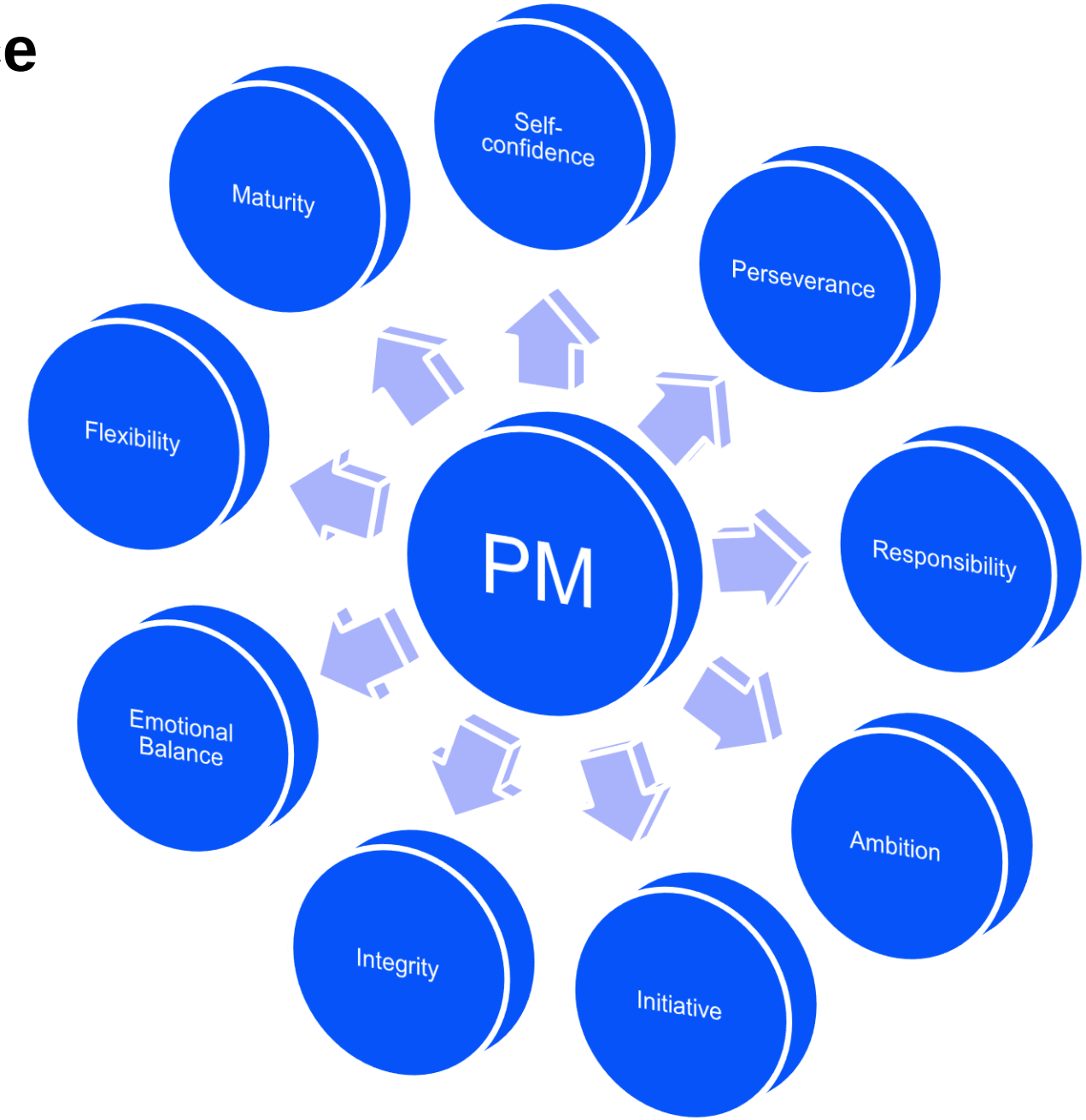
- **Listen and give voice**
- **Communication skills**
- **Cultural awareness**
- **Multicultural commitment**
- **Empathy and ability to relate to others**
- **Patience**
- **Teamwork and creative problem solving**

Experience

Personal Skills













We always need to be faster and effective

How?

The global organization to help local action. The solution is the local leadership

Only the Project Team can win the challenges: people

Open mind ….win to win approach …. every day and every decision you have to take..... having fun



Enel is Open Power