



Integrating Energy Efficiency and Renewable Energy: Least-cost solutions for a clean energy future

*September 6th, 2016
IEA Forum*

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Enel today

A global power business

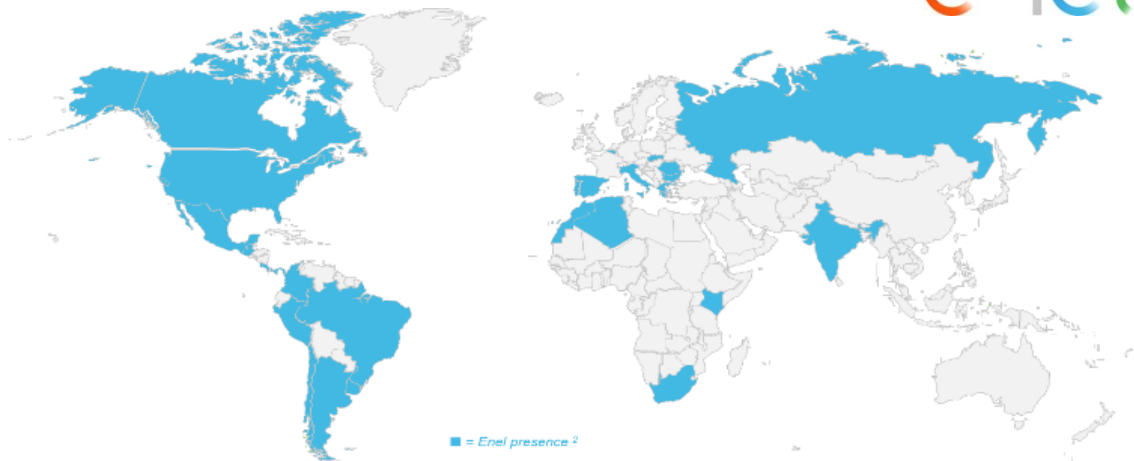


Capacity: 89.7 GW

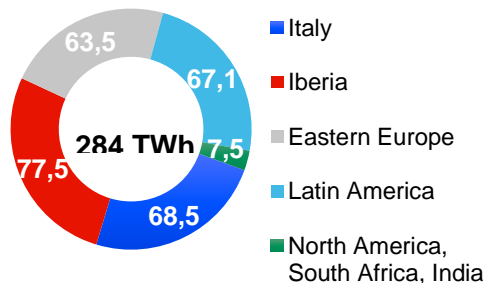
Networks: 1.9 mn km

End users: 61.2 mn

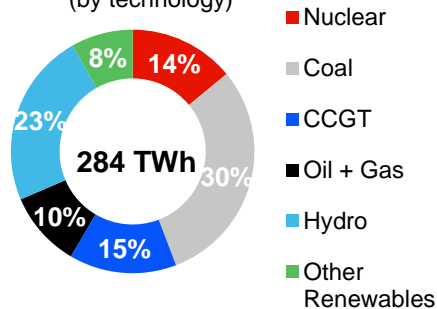
Free customers: 22.8 mn



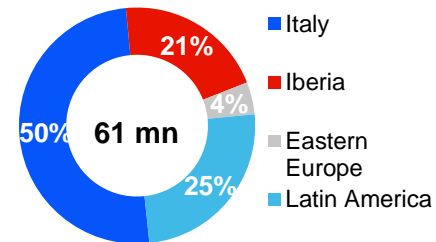
Production mix
(by geography)



Production mix
(by technology)



Customers
(power + gas)



Enel's strategy (1/2)

Capturing growth opportunities



What we have

What we are going to have



RES development

11 GW installed capacity in 16 countries (and five continents)

Around 40 countries of presence and interest in the world



New RES technologies

Hybrid plants:

- Stillwater facility (Nevada, USA) combining generation from geothermal, solar PV and solar thermal
- Cornia 2, integration of geothermal and biomass (Tuscany, Italy)
- PV, small-wind, diesel and battery (Ollagüe, Chile)
- Fontes, first hybrid solar and wind plant in Brazil
- Cove Fort, integrating geothermal and hydro

- Optimization of the first hybrid solutions investigated and their application to other RES power plants (retrofitting of existing plants/new plants construction)
- Development of new hybrid solutions (e.g. based on PV floating), taking advantage from the combination of different renewable energy sources
- Transportable systems for events and communities (Formula-E, etc.)



Isolated/offgrid systems

- Partnership with Powerhive for the development of 1 MW portfolio of mini-grids in south-west of Kenya
- PV, small-wind, diesel and battery (Ollagüe, Chile)

- Experiments to test minigridd business models in India and East Sub-Sahara African countries with the target to define a financially sustainable model to be scaled-up
- New rural electrification projects in Africa/India
- Hybrid systems for ESCO model (mines, communities, small industries)

Enel's strategy (2/2)

Capturing growth opportunities



What we have

What we are going to have



Grid digitalization

- 38 million installed first generation smart meters and Pilot project for 85000 new meters in Latin America
- Automatic and intelligent management of grids
- Smart city projects in Italy, Spain, Chile and Brazil
- Smart grids projects

- 32 million of second generation (2.0) smart meter in Italy, 13 million meters in Spain
- Ultra Broadband



Storage

- Global partnerships with major companies on residential and grid scale applications (Tesla, LG, BYD). First commercial launch of "storage + PV" in South Africa on January 2016
- Running "storage + RES plants" projects and stand alone storage

- Renewable integration as commercial viable solution for Ancillary service or obligation (German Cremzow project, Indian Tender for PV+storage)
- Generation microgrids for C&I/ Real Estate for advanced countries, eventually aggregated for providing grid services
- Removable storage systems for events and microgrids (Formula-E, etc.)



E-mobility

- Global Partnerships with EVs market leaders BYD, Nissan and Tesla
- V2G market tests running in Denmark and UK jointly with Nissan
- More than 2500 charging infrastructures installed in Europe

Market expansion of Veichle2Grid to different EU countries



Retail energy services

- *GoodLife* kit (smart equipment) for consumption control and monitoring
- *ENEL OK* services for maintenance of energy appliances
- E-shop of efficient electric appliances and e-bikes
- *EnelDrive* offers for electric car private and public recharging
- ENELPREMIA on promotion of energy good practices

Future developments will be based on take-up of energy efficiency services