

Investment in challenging times

EDP experiences in different countries

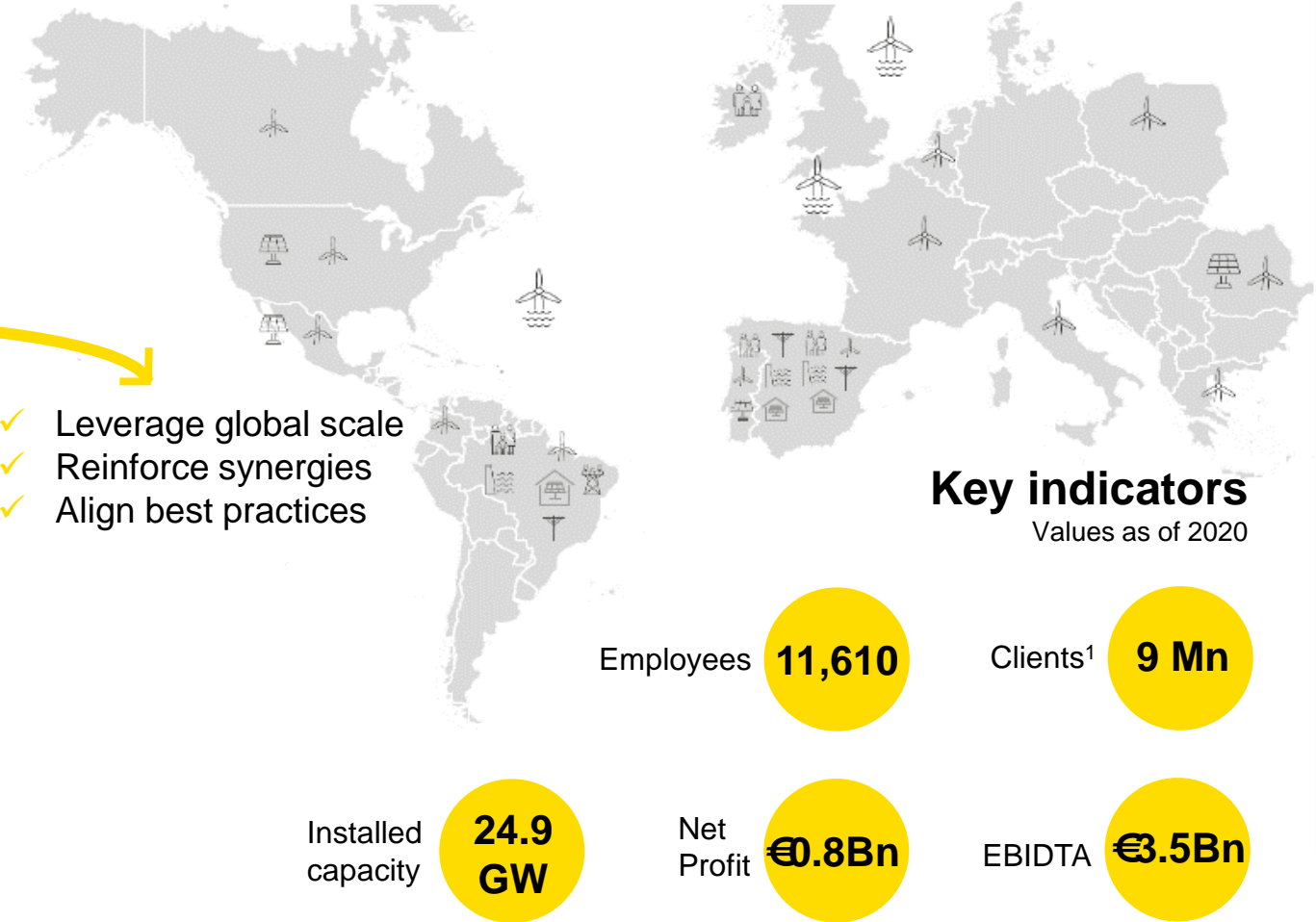
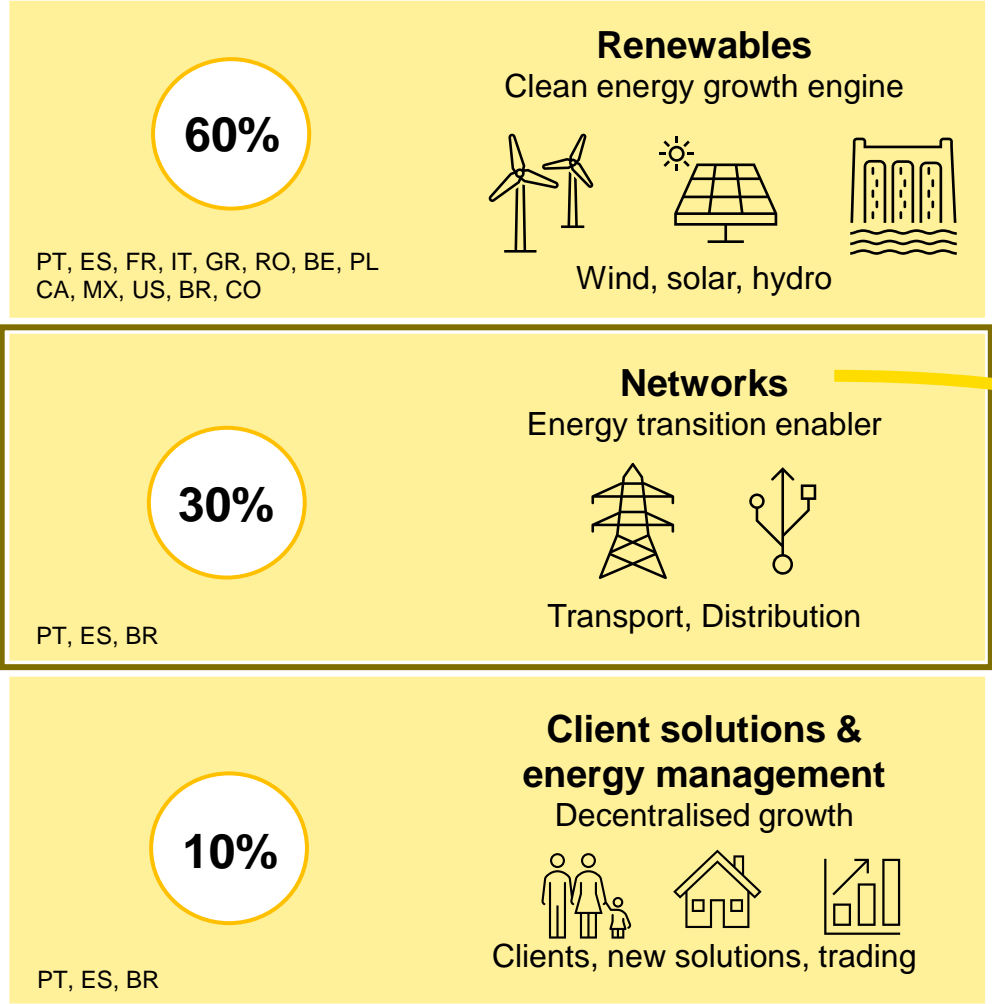
José Ferrari Careto, Vice-Chair, E.DSO; CEO, E-REDES

27 January 2022

**Global
DSO
Platform**

EDP Group

3 global business platforms fully aligned with the Energy transition



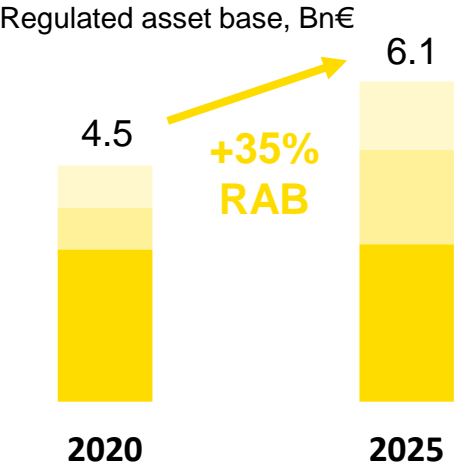
○ Weight on EBIDTA
2025

Distribution business

Some key figures (Portugal, Spain and Brazil)

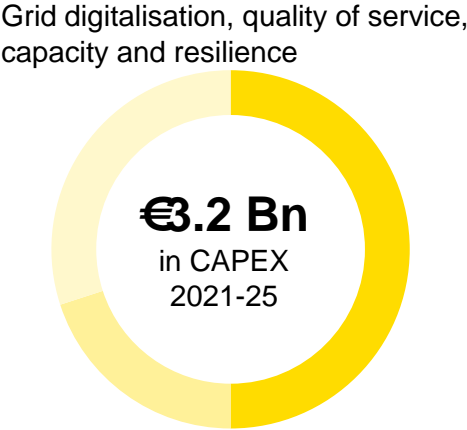
Investment data

Distribution asset base



● Portugal ● Spain ● Brazil

Investment plan



Maximise efficiencies

OPEX/Connection by 2025

-15%

Innovation and digitalisation

Investment in digitalisation (2021-25)

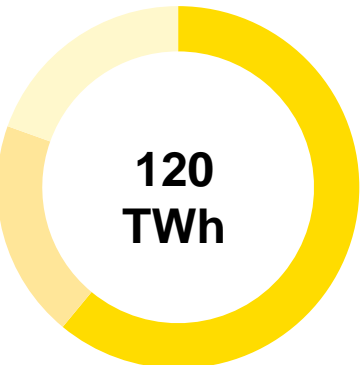
> €600M

Operational data

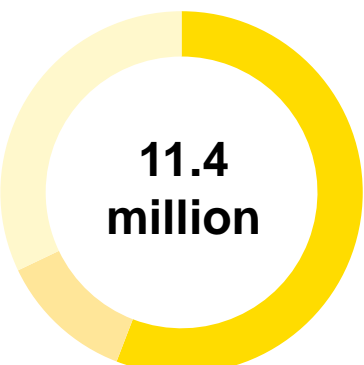
Network length



Electricity distributed



Customers connected



Enhance quality and resilience

Average SAIDI across concessions (min)

	2019	2025	
PT, ES:	~70	~60	-12%
BR:	~455	~375	-17%

Smart meters

Roll-out 2025

100%

smart meter penetration
in Iberia

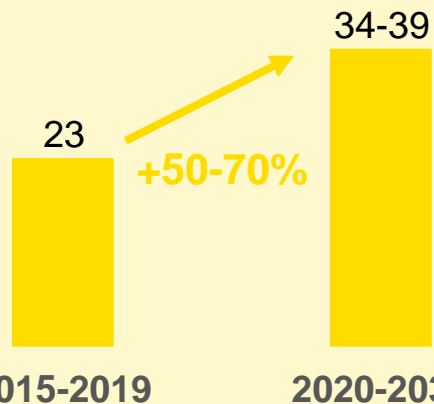
75%

remote metering energy
in Brazil

Investment

EU27+UK

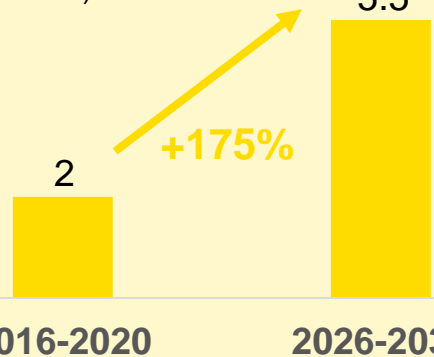
Annual investment in distribution grids (nominal €Bn)



Source: Monitor Deloitte (2021) Connecting the dots: Distribution grid investment to power the energy transition

Latin America

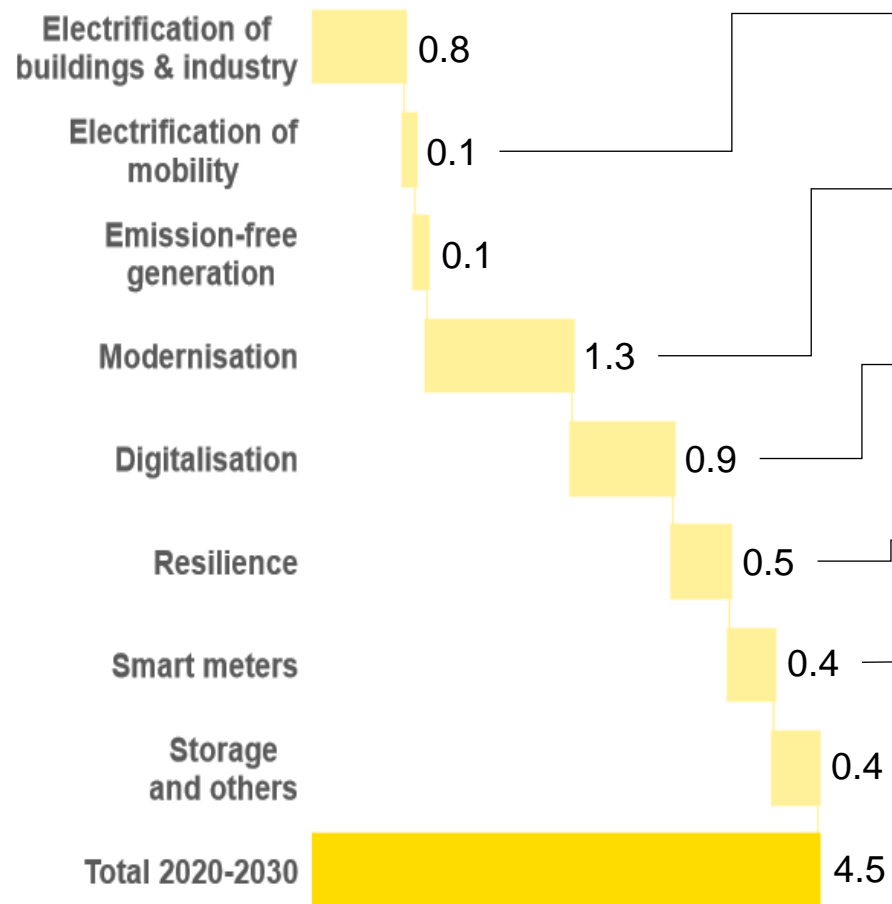
Annual investment in electricity grids and storage (2019 USD Bn)



Adapted from: IEA (2021) World Energy Investment 2021 Special Report

Portugal

Overall investment needs in power distribution grids (nominal €bn, 2020-2030)



Key insights

- The grid has capacity to integrate the majority of the charging needs by 2030
- 50% of EVs smart charge during off-peak hours

- Programmes of grid rehabilitation and replacement

- Automation improvement in substations
- Implementation of automation/digitalisation in secondary substations
- Digital assets for grid management

- Increasing frequency of extreme climate events and current low share of underground lines

- Full deployment of smart meters

- Network integrated components
- Includes the investment in public lighting

Adapted from: Monitor Deloitte (2021) Connecting the dots: Distribution grid investment to power the energy transition

Investment

A period of major investment effort, under challenging conditions

Challenging period

- Ageing infrastructure
- Increased electrification
- Distributed generation
- Demand for new connections
- Climate-related impacts

Paradigm shift impacting investment options

- Consumer empowerment
- Distributed Energy Resources
- Consumer behaviour
- Flexibility solutions
- Demand-side response
- E-mobility
- Storage
- System services
- Digital and smart grids
- Cross-sector integration

The challenges...

Fair remuneration

revenues adjusted
to investment needs



HR Capacity

resources availability
and skills enhancement



Smart meters

roll-out, data exchange
and remuneration



Investment approval

public scrutiny



Digitalisation

growing share of
investment capacity



Investment test

alternatives to traditional
investments



Investment

South America vs Europe

