

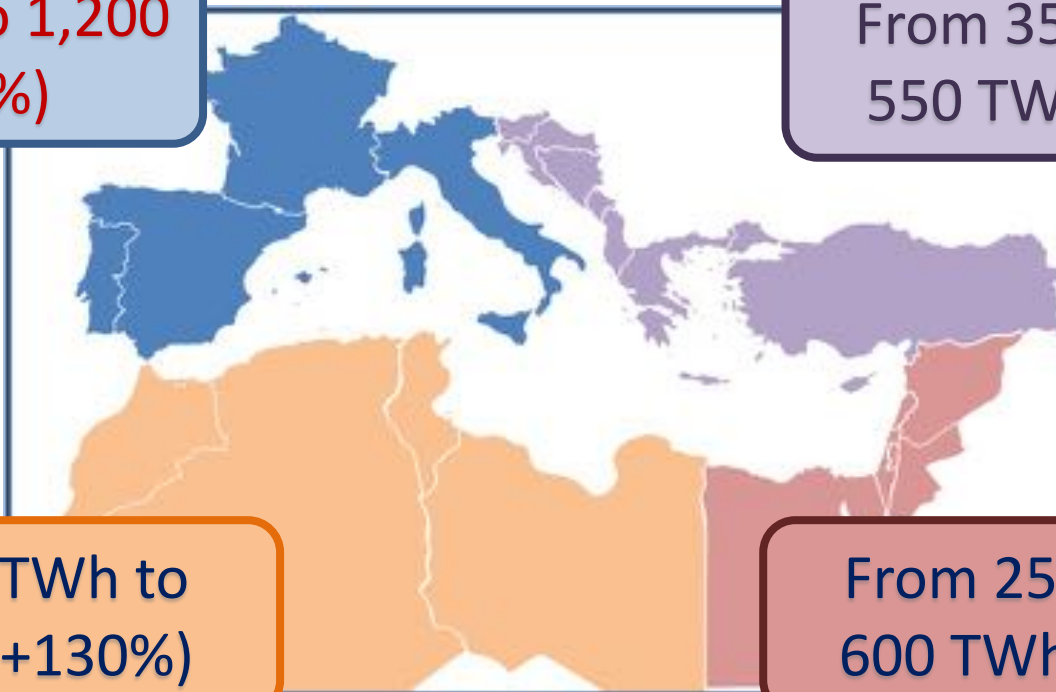
Spotlight: Innovation in RES integration in the Mediterranean region - lessons learned

Angelo Ferrante
Secretary General

Demand growth rates strongly contrasted

From 1,100 to 1,200 TWh (+9%)

From 350 TWh to 550 TWh (+55%)



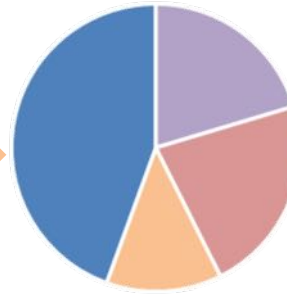
From 150 TWh to 350 TWh (+130%)

From 250 TWh to 600 TWh (+140%)

2015
1,850 TWh



+45%



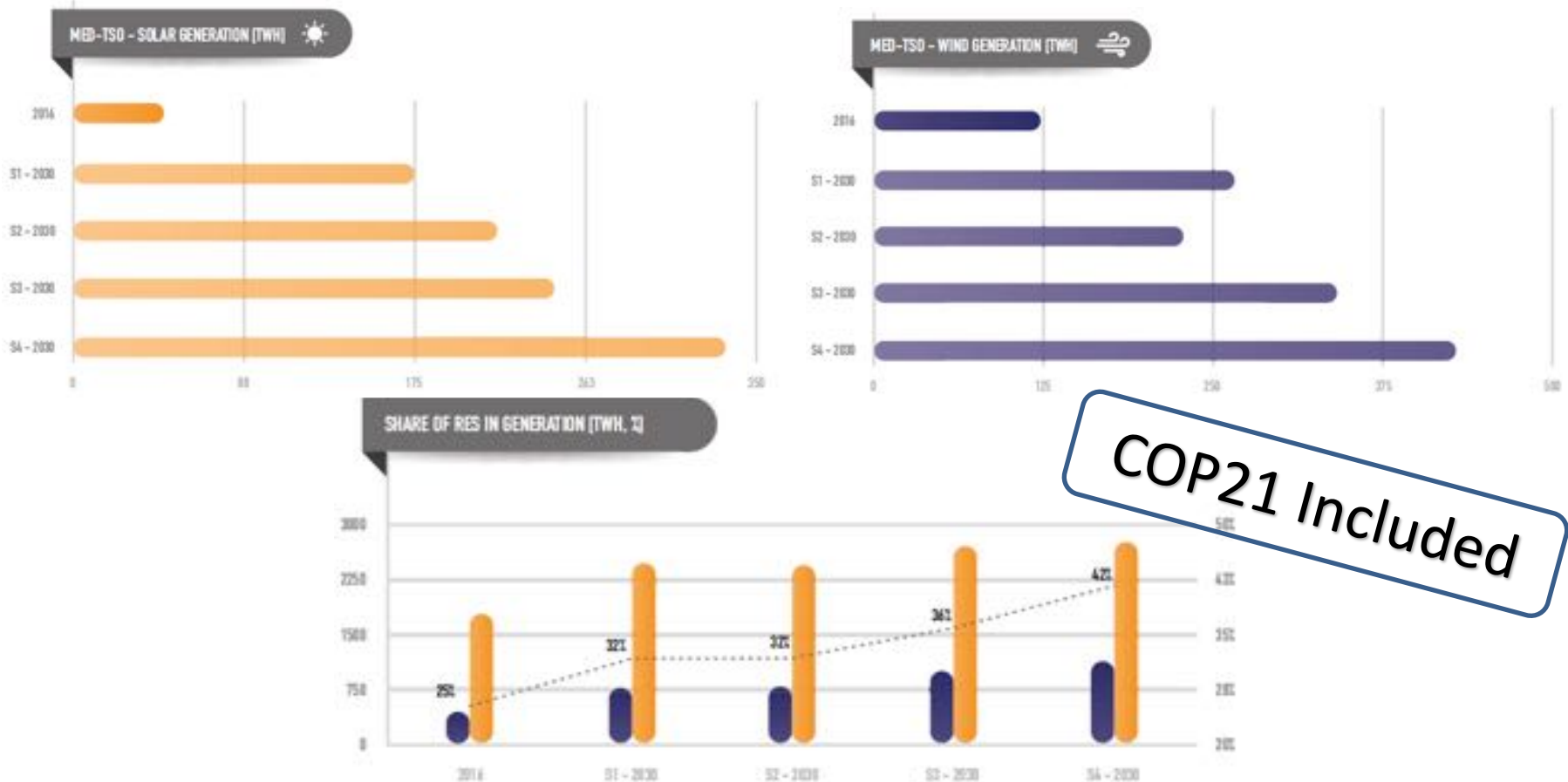
2030
2,700 TWh



2030 Generation scenarios(*)



During the 2016-2030 period, the Med-TSO Scenarios foresee an increase in the generation capacity of approximately **250 GW to 400 GW** in the Mediterranean area, of which **40% to 60% from renewable energy sources**



(*) source Med-TSO

1. **Common technical rules** (Mediterranean Grid Code) for PS interoperability: optimizing existing interconnections and support investments to favor new ones
2. **Coordinated planning** for the Mediterranean HV transmission system development
3. **Capacity building** and knowledge sharing programs

Bottom-up approach based on TSOs' perspectives

EU support: Mediterranean Project 1 (MP1) and 2 (MP2), for harmonization and strengthening of electricity markets in the Mediterranean region

18 Reports^(*)

7 Workshops

DBMED

ENTSO-E
Med-TSO Map

**Roadmap for a
Med Grid Code**

Common Target
Regulatory
Framework (CTRF)

CTRF Time to
implementation

**Mediterranean
Masterplan**

14 interconnection
projects identified
and assessed

18.000 MW
new interc.
capacity

2.200 Km
internal
reinforc.

16.000
MEUR
investments

- Network studies evaluate the **technical feasibility of new interconnection capacity** (as from the market studies), verifying that the increased flows maintain the system in security conditions
- 14 clusters(*)** grouped in 3 corridors (West, Central and East)
- Approach “by corridor” for “decoupling” the studies



(*)A cluster is a set of investments necessary to allow an increase of interconnection capacity across two countries or grid portions

Promoting interconnectors and rules for sharing resources: two basic “ingredients” for supporting RES development in the Mediterranean

Supporting investments in the grids

- 2030 scenarios consider RES growth
- CBA for new projects includes evaluation of their impact (CO2 reduction, RES integration level, environmental analysis)

Increasing reliability and flexibility of the HV grids

- a technical grid code
- cooperation for sharing ancillary services

Sharing ancillary services can be enhanced by market mechanisms, if they exist, but it can be also achieved by specific TSOs agreements even where there is no market

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