Mediterranean Energy Perspectives 2023

COP28 UAE

omec
Organisation Méditerranéenne de l'Energie et du Climat

COP28 UAE

Optimistic Tunisia 3

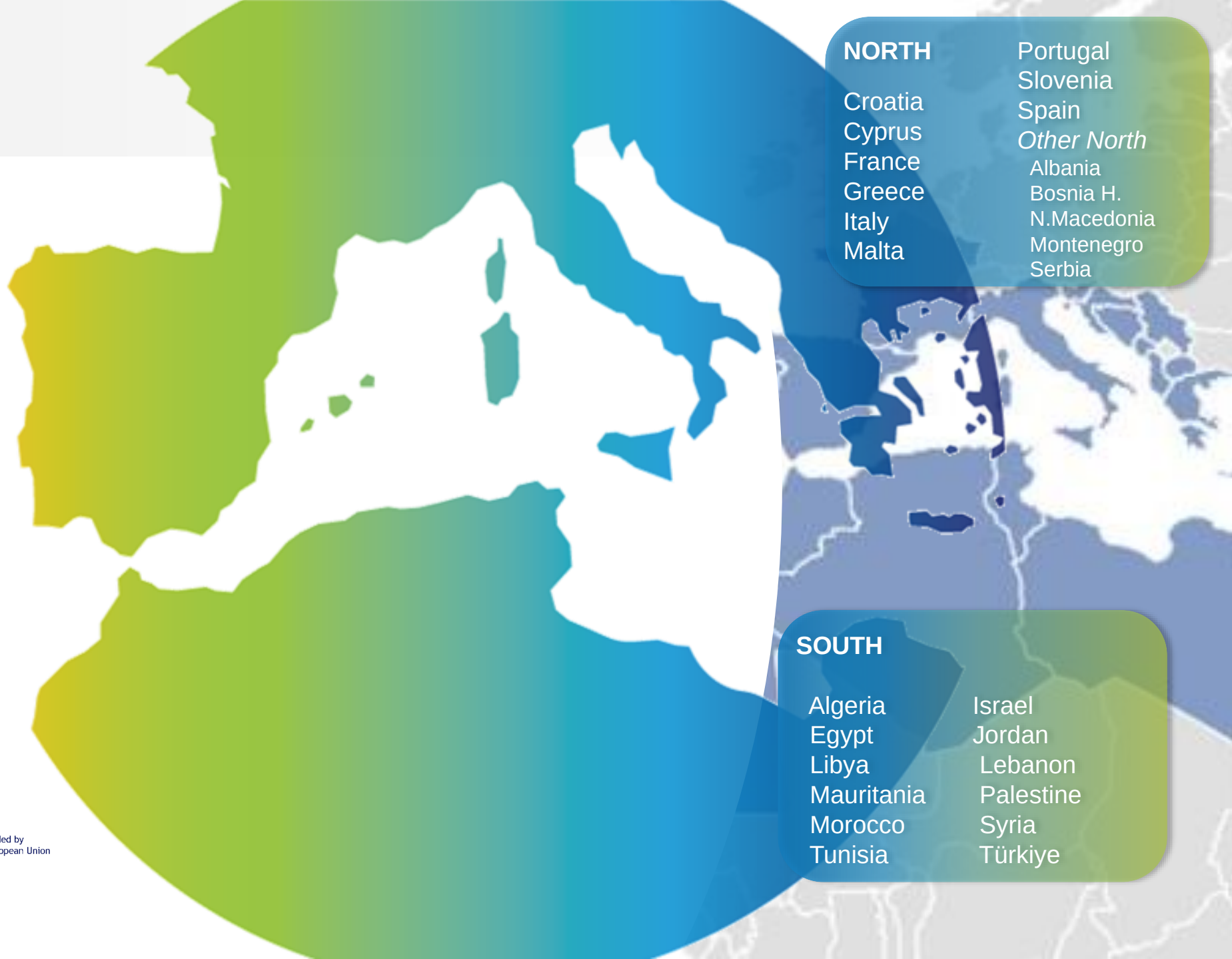
Houda BEN JANNET
OMEC – General Director

3rd December 2023
Tunisia Pavilion COP28, UAE

Mediterranean Energy Perspectives 2023

COP28 UAE

- OMEC's Energy Perspectives for supply and demand up to 2050
- Two demand scenarios:
  - The Reference Scenario
  - A net-zero carbon scenario, the ProMED



NORTH

Croatia
Cyprus
France
Greece
Italy
Malta
Portugal
Slovenia
Spain
Other North
Albania
Bosnia H.
N.Macedonia
Montenegro
Serbia

SOUTH

Algeria
Egypt
Libya
Mauritania
Morocco
Tunisia
Israel
Jordan
Lebanon
Palestine
Syria
Türkiye

Co-funded by the European Union

omec
Organisation Méditerranéenne de l'Energie et du Climat

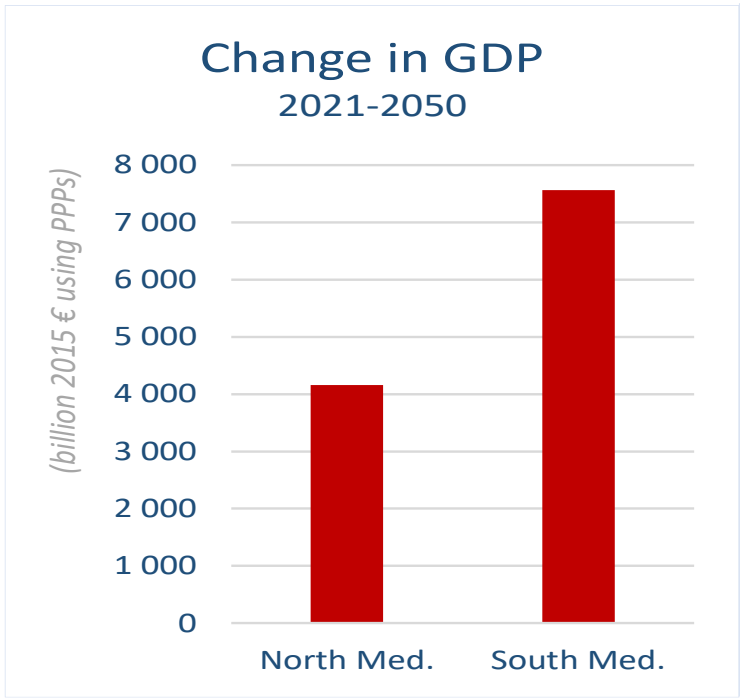
Mediterranean Energy Perspectives 2023

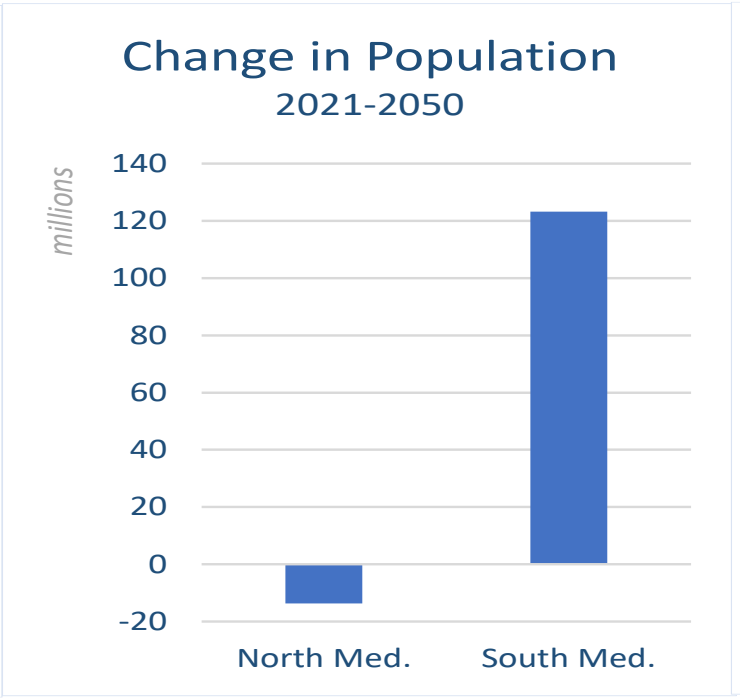
COP28 UAE

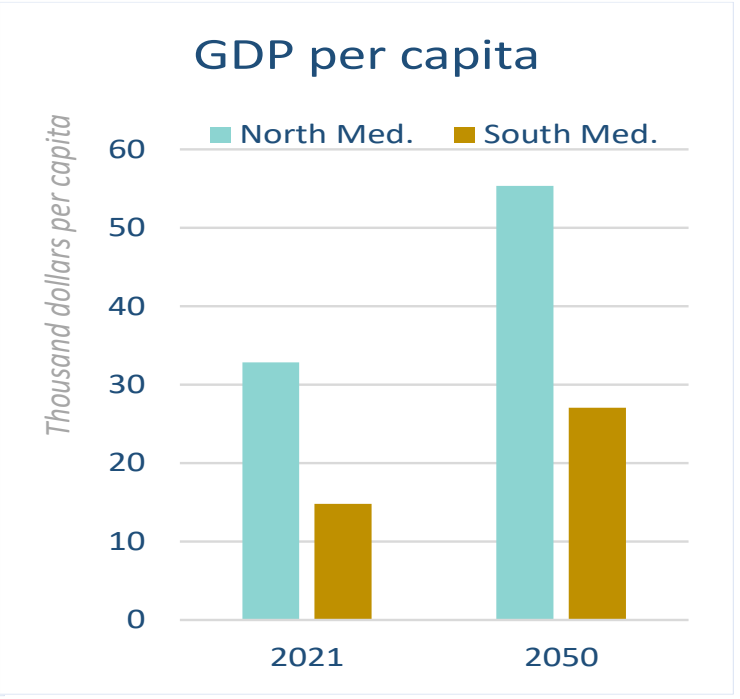
The Mediterranean Context

The North at 60% of Med for GDP and energy demand while South population overtakes that of the North and CO_2 emissions are evenly shared.

All population increase to occur in the South and GDP to increase more in the South. However, by 2050, GDP per capita in the South will not have reached that of current North level.







Tunisia: to 2050 -> population to increase by 16% (+1,8 million); GDP to double

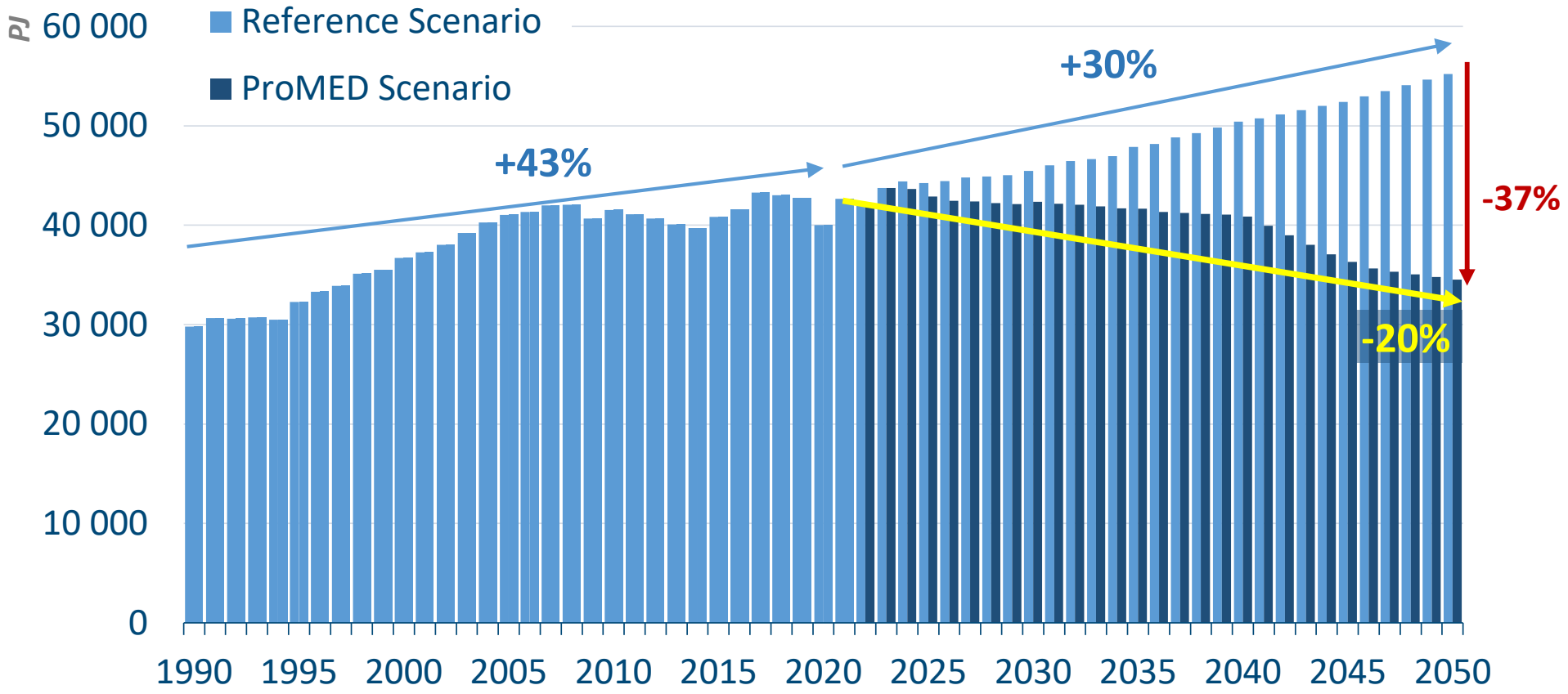
omec
Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

2 Scenarios for Energy Demand with Different Trends



Despite unconditional NDCs, Med energy demand to increase by 30%, against a 20% decrease in the ProMED. 37% reduction to stir away from current trends.

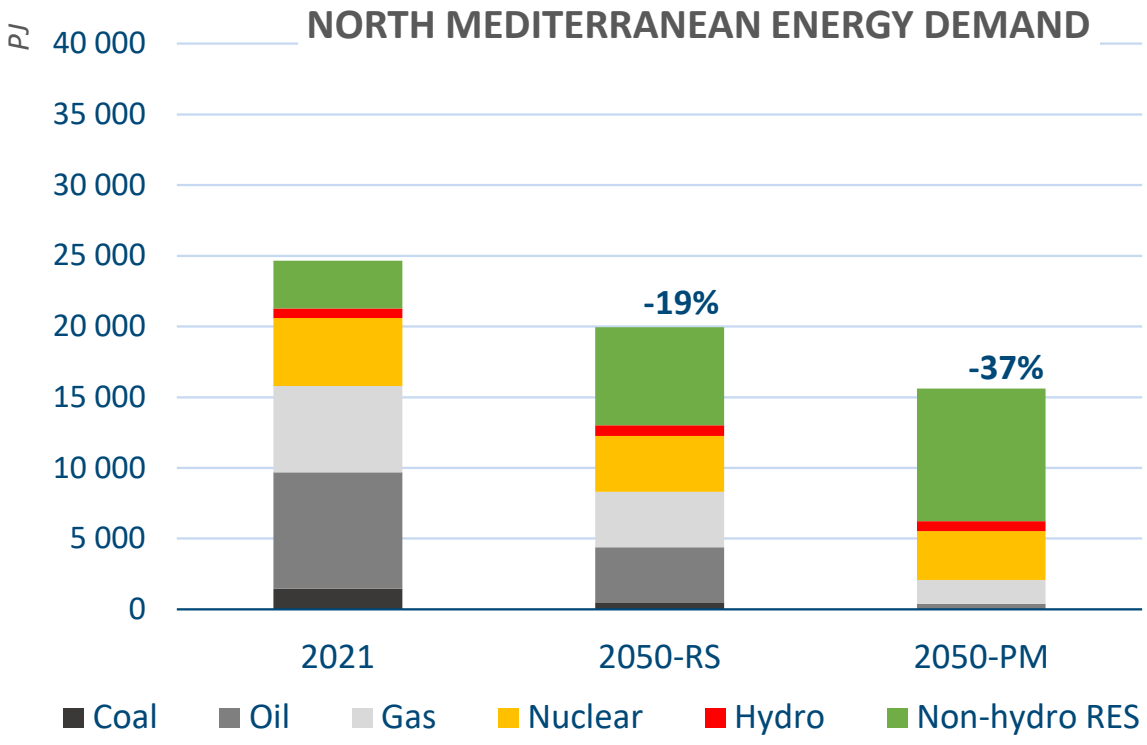
omec Organisation Méditerranéenne de l'Energie et du Climat

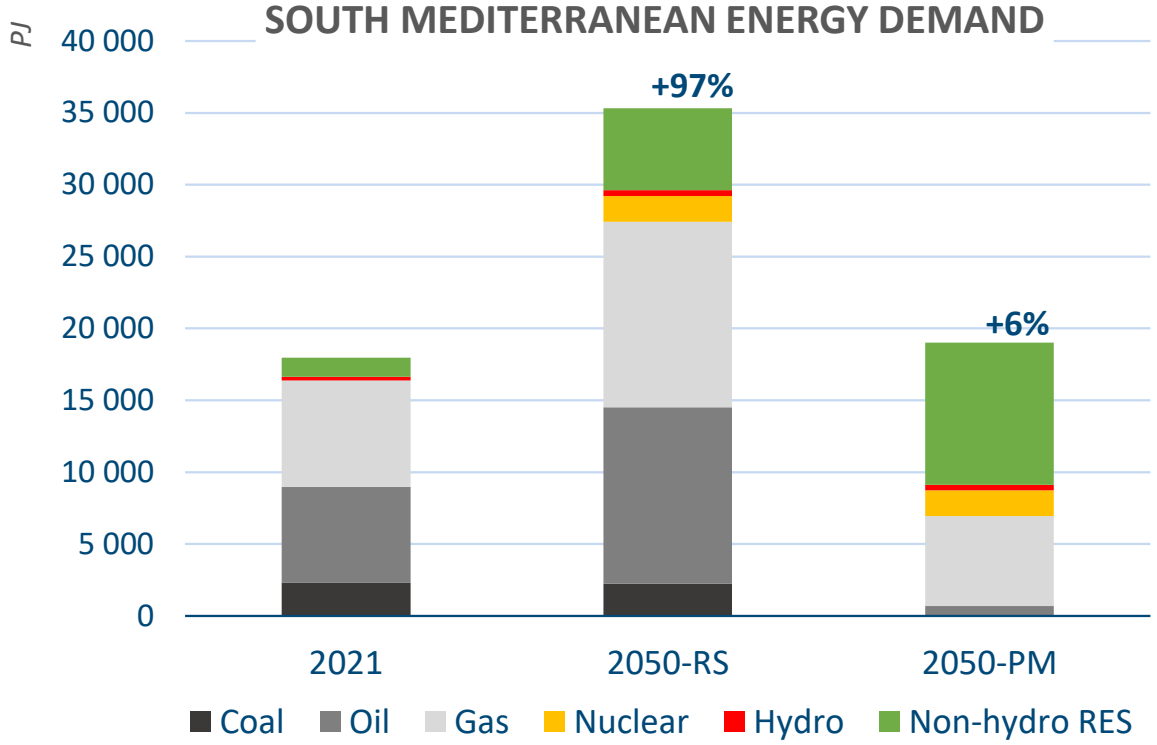
Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

Fossil fuels dominate today but future share will vary significantly in the Scenarios





Fossil fuels today = 75% of the mix (North:64% - South:91%).

Fossil fuels to remain the larger share of demand in the RS with 65% (N:42% - S:78%) down to 26% (N:13% - S:37%) in the ProMed in 2050.

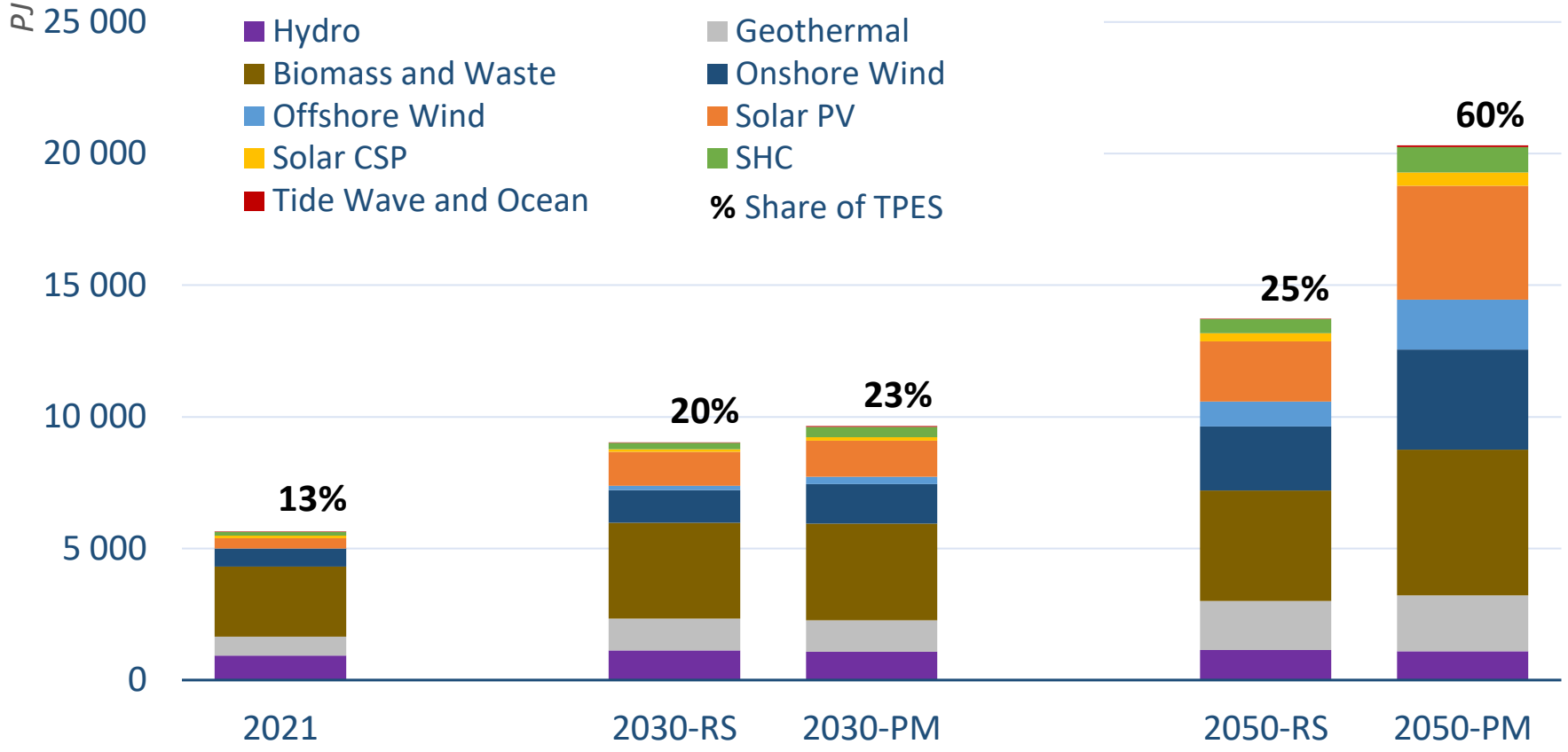
omec
Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

Renewables need to double by 2030 and quadruple by 2050



Current levels of renewable energy demand will have to double by 2030 and quadruple by 2050 to achieve climate mitigation and SD policies.

Mostly all from wind and solar technologies. To account for 60% of demand by 2050

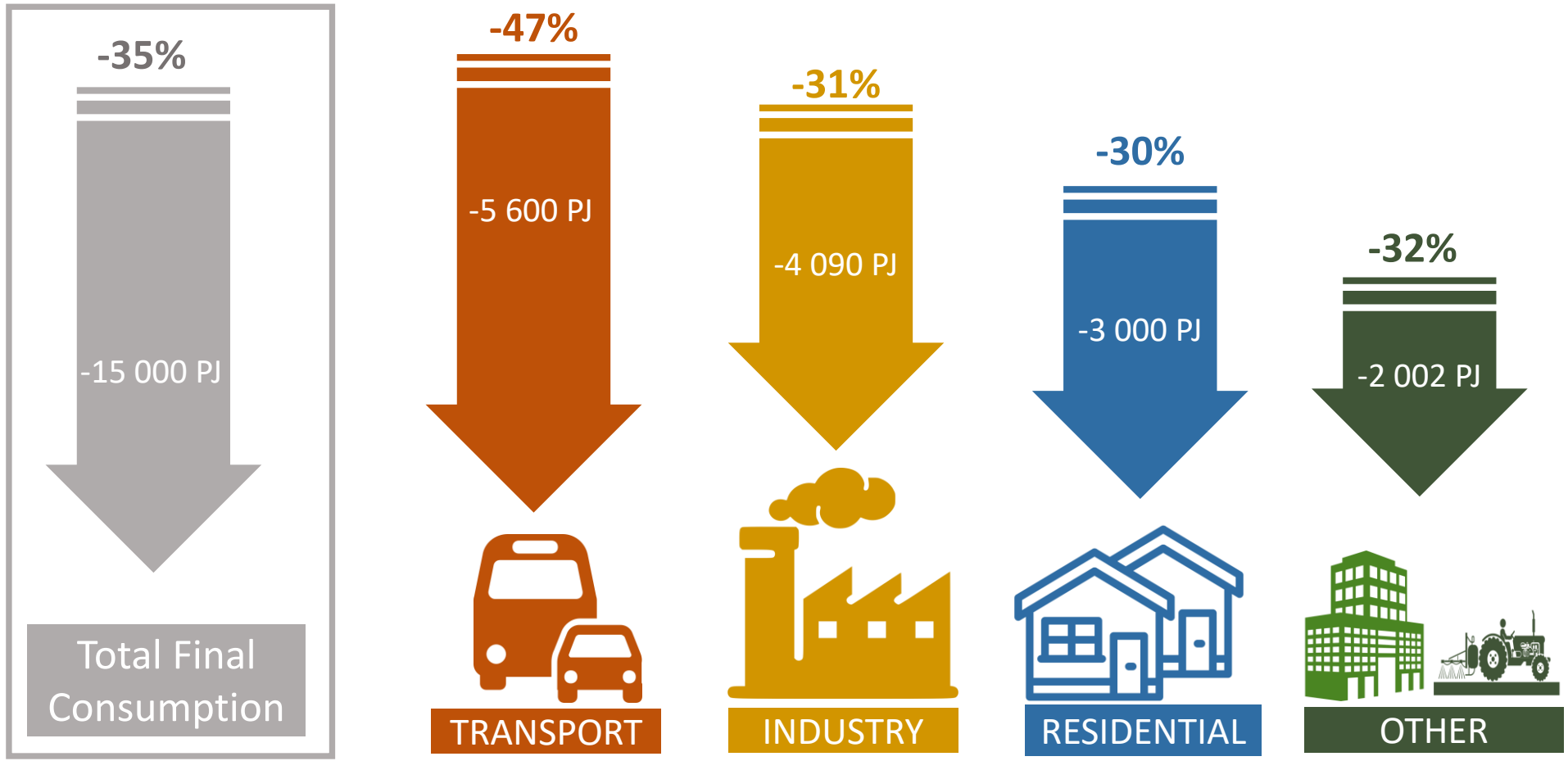
omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

Energy Efficiency by Sector



All sectors to contribute– a 35% reduction in demand with transport halved.

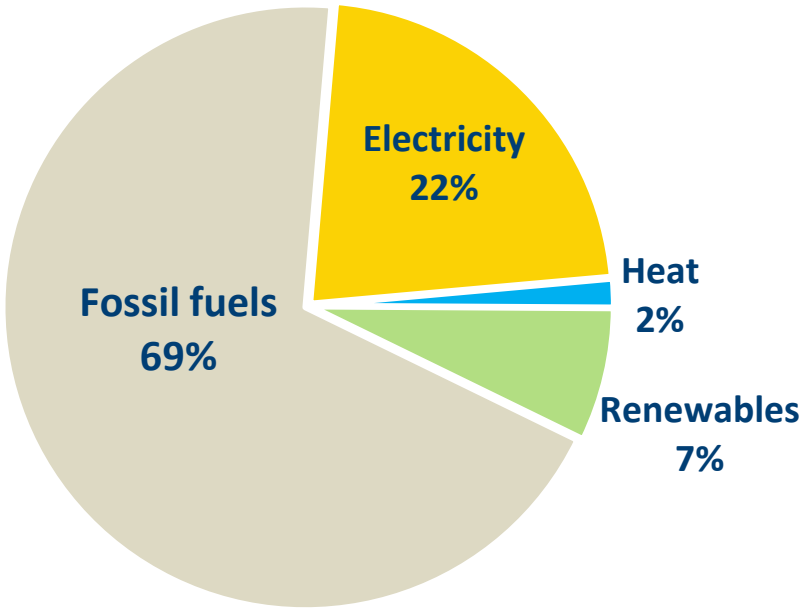
omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

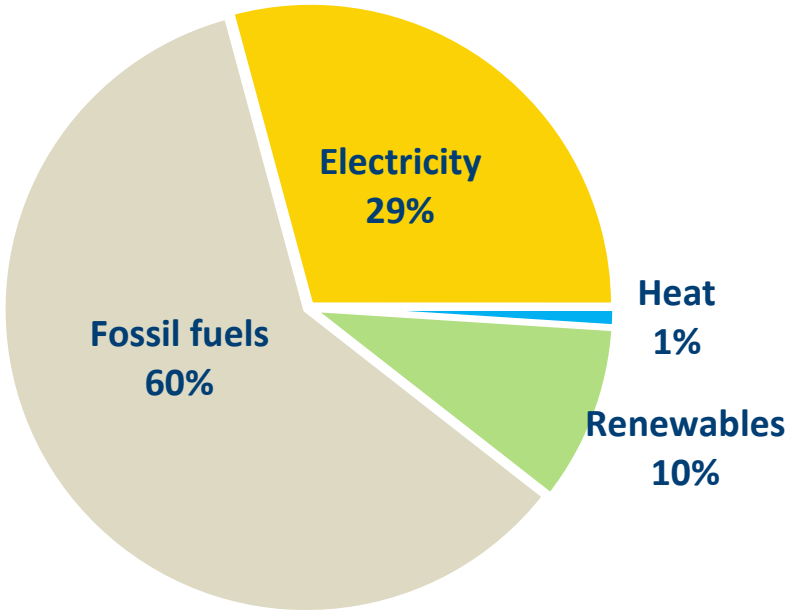
Electrification of End-Uses

2021



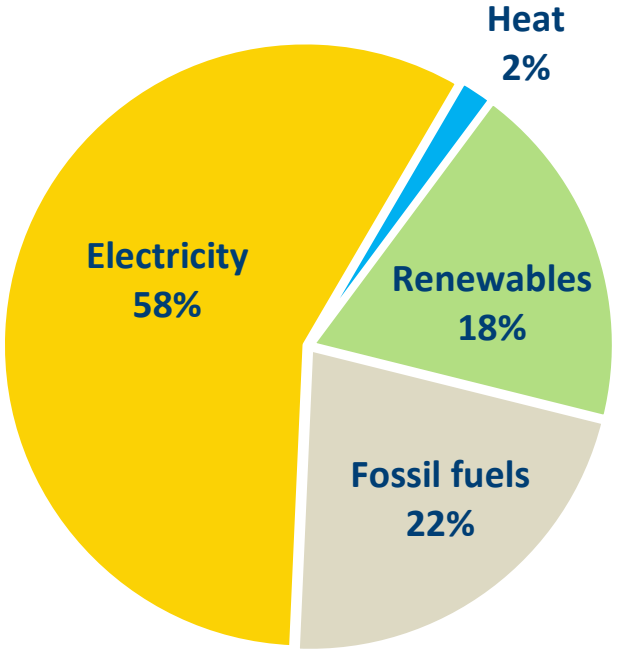
30 107 PJ

2050 - RS



42 270 PJ

2050 - PM



27 384 PJ

A major shift towards electricity with electrification of the end-usages in all sectors and more reliance on biofuels.

Over 2/3 of final consumption is renewable by 2050 in the PM (compared to 14% currently).

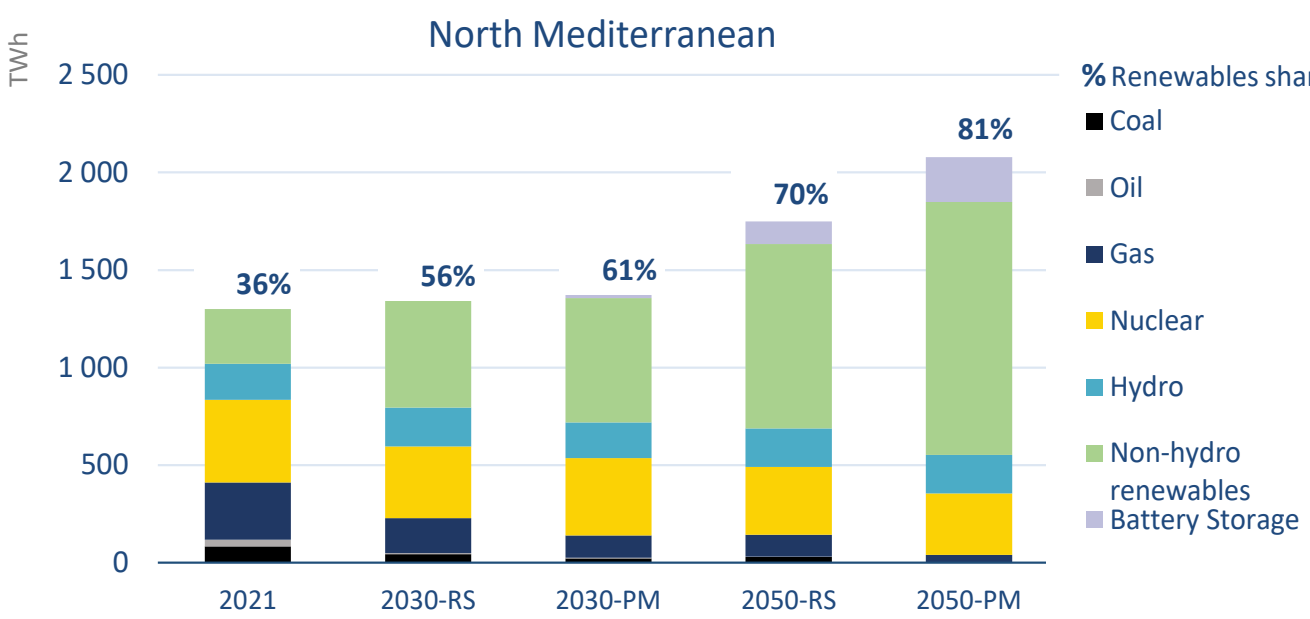
omec Organisation Méditerranéenne de l'Energie et du Climat

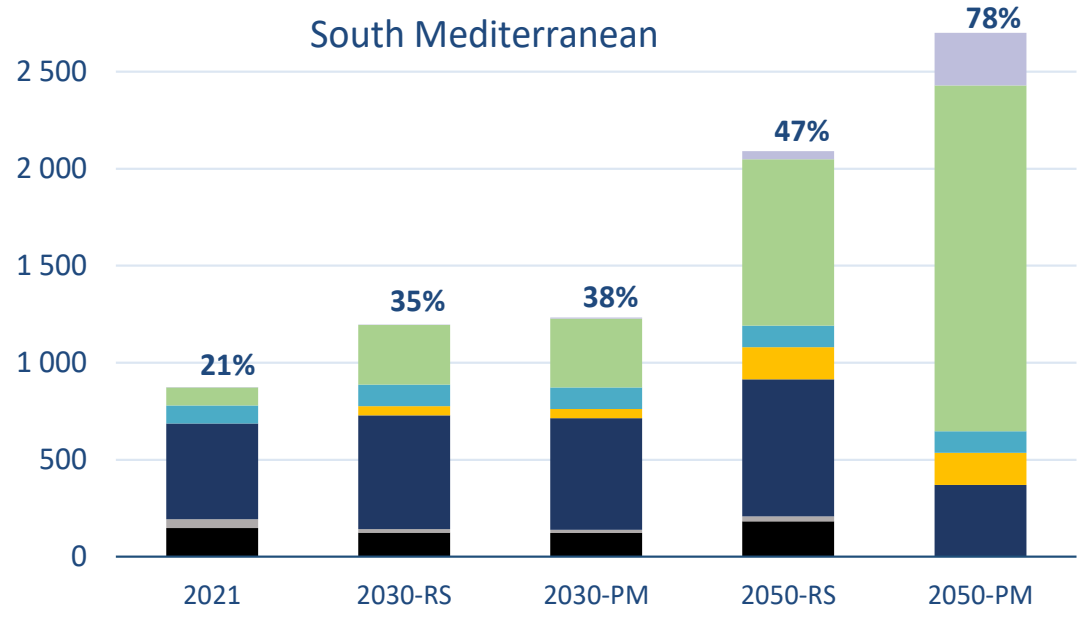
Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

Power Generation





Renewables to fuel power generation in both scenarios – A 65% increase in the North and a more than tripling of generation in the South Med exclusively matched with RES in the ProMED.

Gas to still to play a role in generation in the South Med by 2050.

Electricity storage to play a pivotal role in a decarbonized future (around 10%-15% of installed capacities and generation).

omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

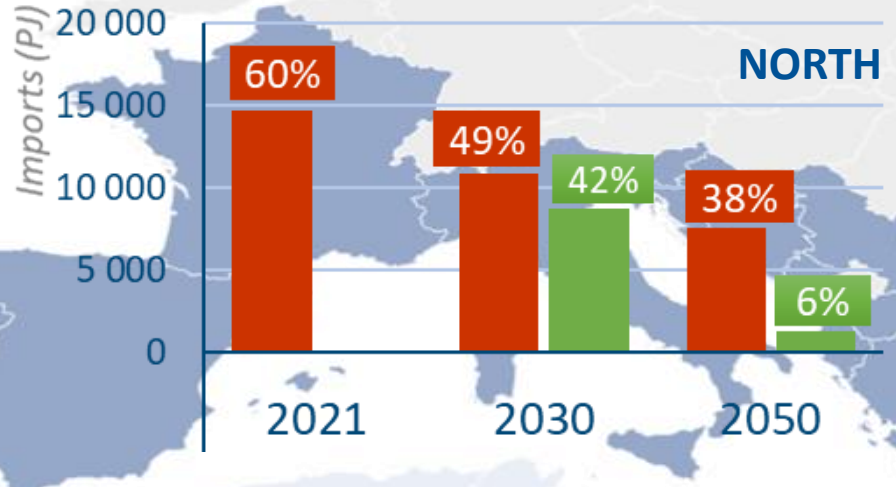
COP28 UAE

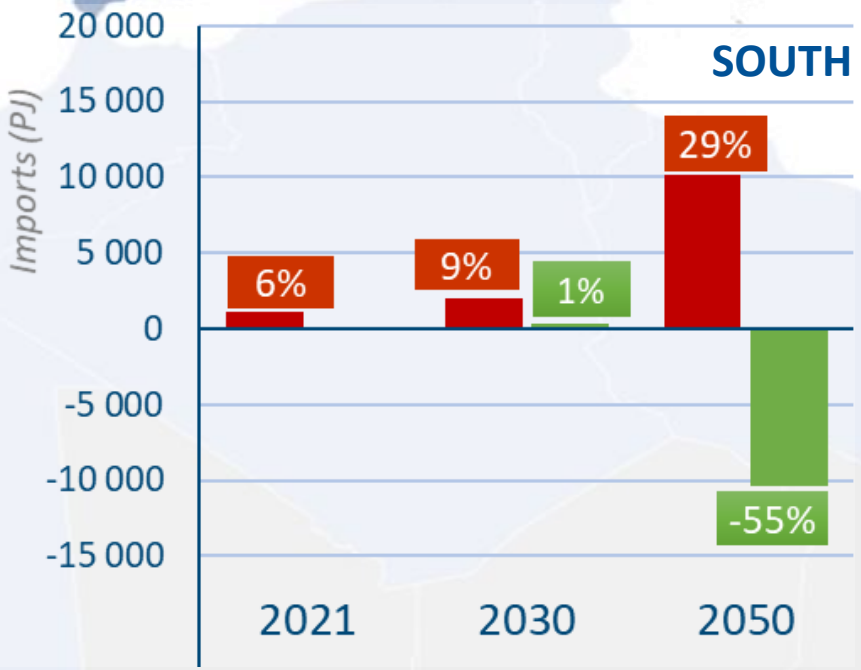
Energy Dependence

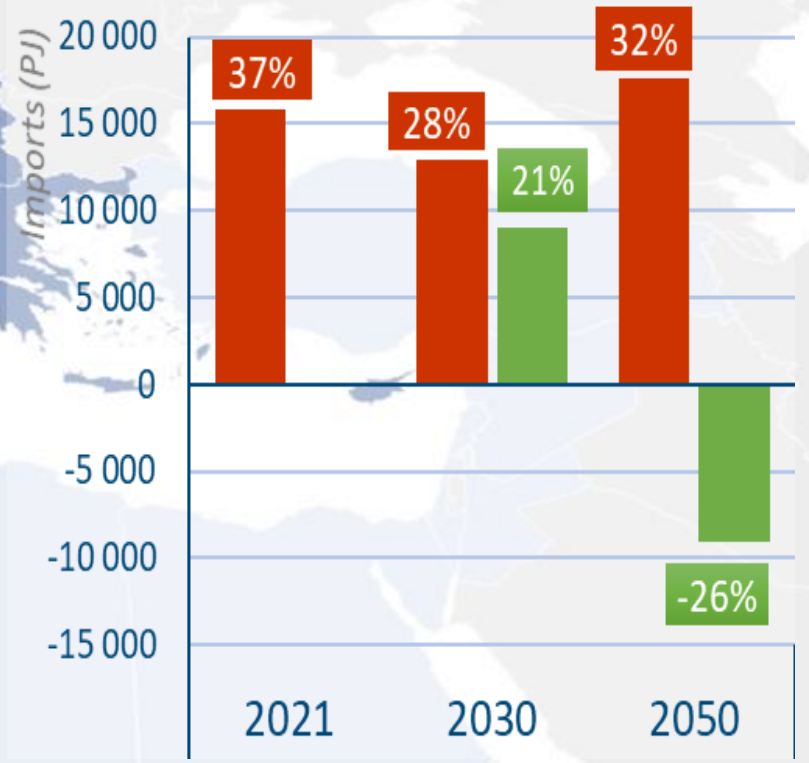
Energy dependence would improve drastically in the ProMED scenario.

In the North, measures undertaken in the RS would help curb dependence.

In the South, current trends would be utterly unsustainable.







Reference Scenario ProMED Scenario

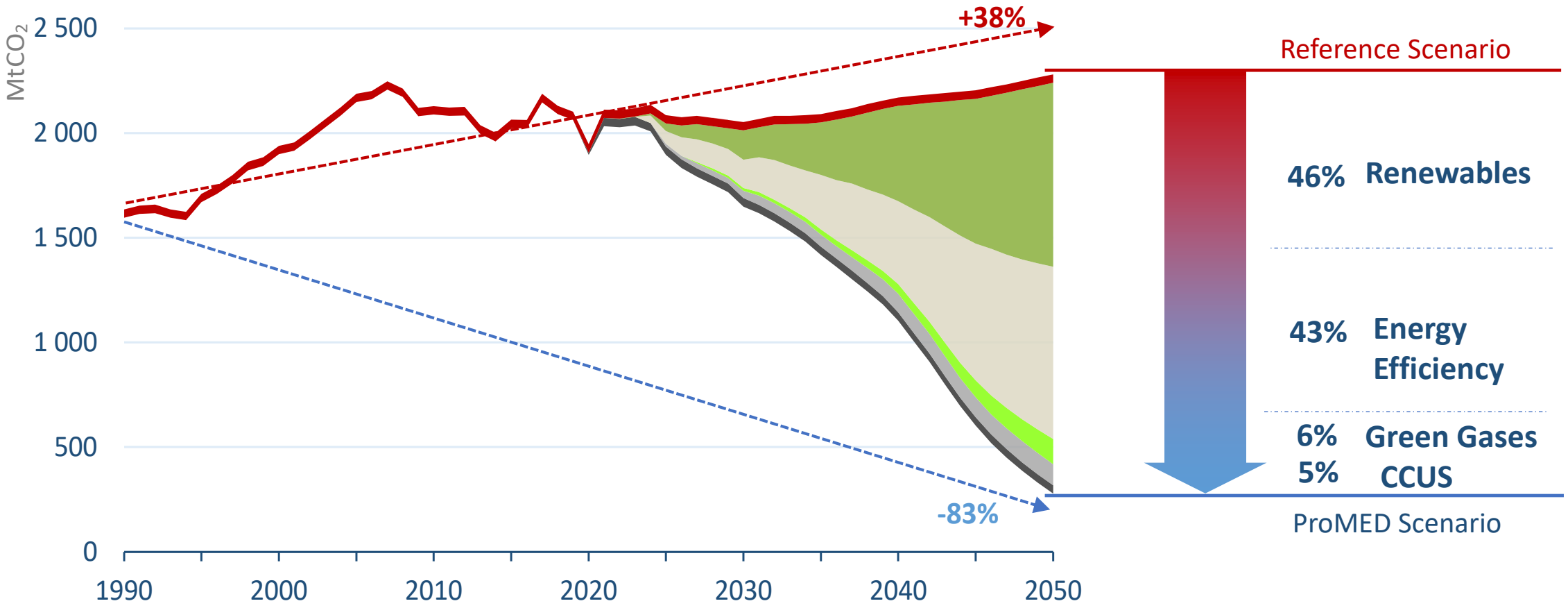
% Import dependence

omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

CO_2 Emissions



EE and RES to account for 89% emission reduction.

Emissions decrease already ongoing in the North to carry-on in both scenarios with 10 times less emissions in 2050 in PM compared to RS. South emissions to continue to soar in RS (+820Mt) – in PM 800Mt spared in the South alone compared to the RS (-82% from current levels).

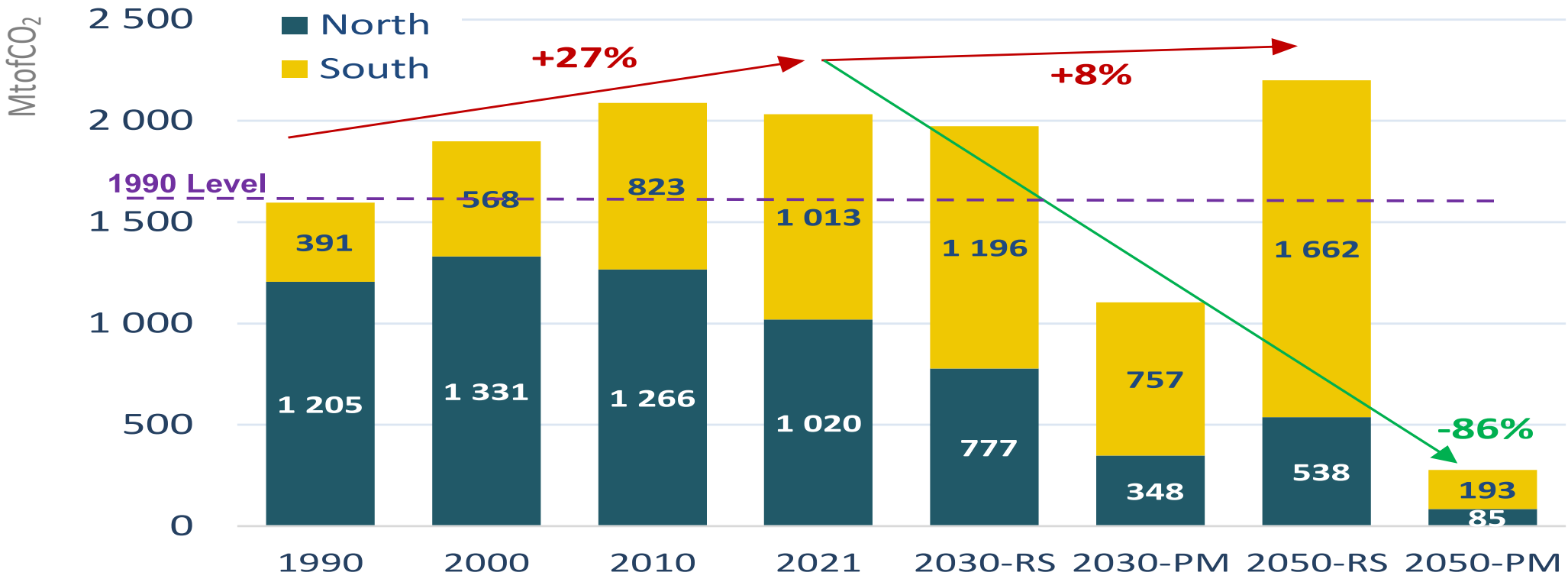
omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

CO_2 Emissions by region



80% of CO_2 reduced by EU countries in North-Med in the Net-Zero scenario will be cancelled by the increase of emissions in South-Med if only the Reference Scenario happens there.

Europe cannot go green alone. The speed of Europe's fight against climate change needs to be synchronised not only with US or China's energy policies but also with its closest neighbours.

omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

COP28 UAE

ACHIEVING THE GLOBAL PLEDGE

at the Mediterranean Level

The renewable energy industry to **scale up production** by adding 446 GW **in renewable energy capacity** by 2030 and 1400 GW by 2050

TRIPLING RENEWABLES in generation by 2030 5 TIMES more in 2050

Accelerating the rate of energy efficiency improvements to **2030** and **2050**

DOUBLING THE RATE OF ENERGY EFFICIENCY IMPROVEMENTS BY 2030 REDUCING ENERGY DEMAND BY 20% by 2050

Cut cumulative greenhouse gas emissions by up to **1 billion tonnes of CO_2 by 2030 and 1.8Bn by 2050**

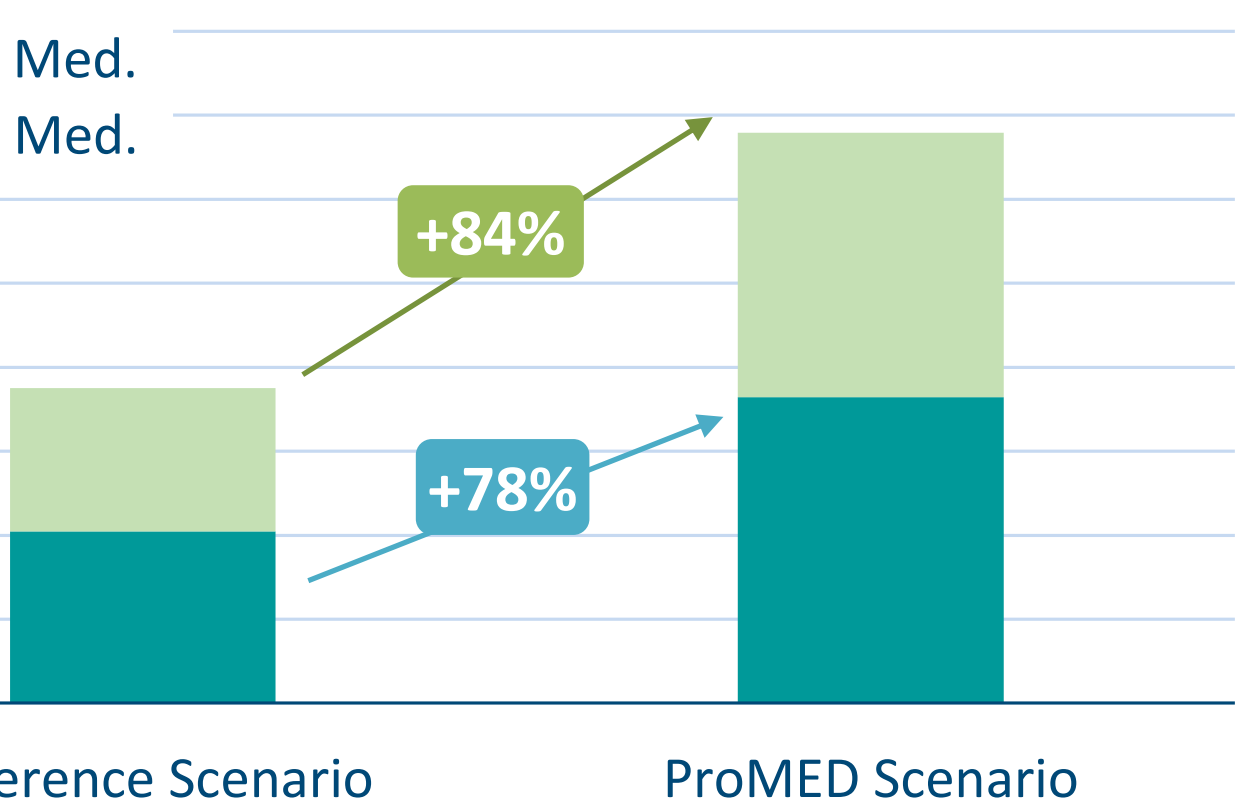
7 times less CO_2 emissions by 2050

omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

Mediterranean Energy Perspectives 2023

Investments, 2024-2050



Investments 80% higher in PM vs RS. To reach just under 7 trillion euros.

More investment needed in the North (54% in the PM)

omec Organisation Méditerranéenne de l'Energie et du Climat

Co-funded by the European Union

MAIN CONCLUSIONS

- The deployment of RES will be essential with wind and solar as pillars of decarbonation
- Energy efficiency is at the core of the net-zero carbon process
- Electrification of the energy systems is key to ensure that the transition is fair, acceptable and sustainable
- Recent technologies need to be scaled-up: hydrogen, offshore wind, electricity storage, electric mobility etc.
- Interconnections will be fundamental. T&D networks to be deployed
- Cooperation amongst both shores and within each sub-region is crucial

THANK YOU

omec
Organisation Méditerranéenne
de l Energie 'et du Climat

Tel.: + 33 (0) 170 169 120
Fax: + 33 (0) 170 169 119
Email: ome@ome.org
www.ome.org