IEO ec brec
Institute for Renewable Energy

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Photovoltaic technologies in aspect of EU and Polish market

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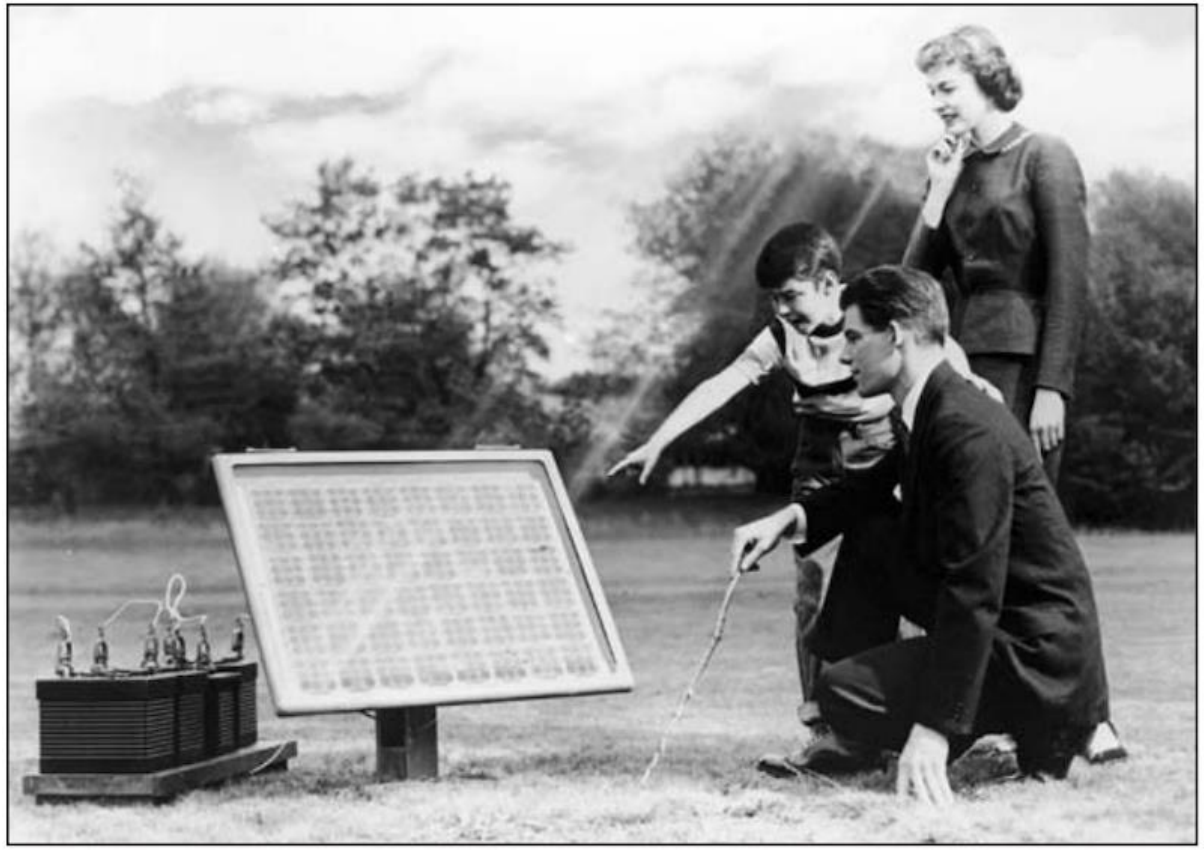
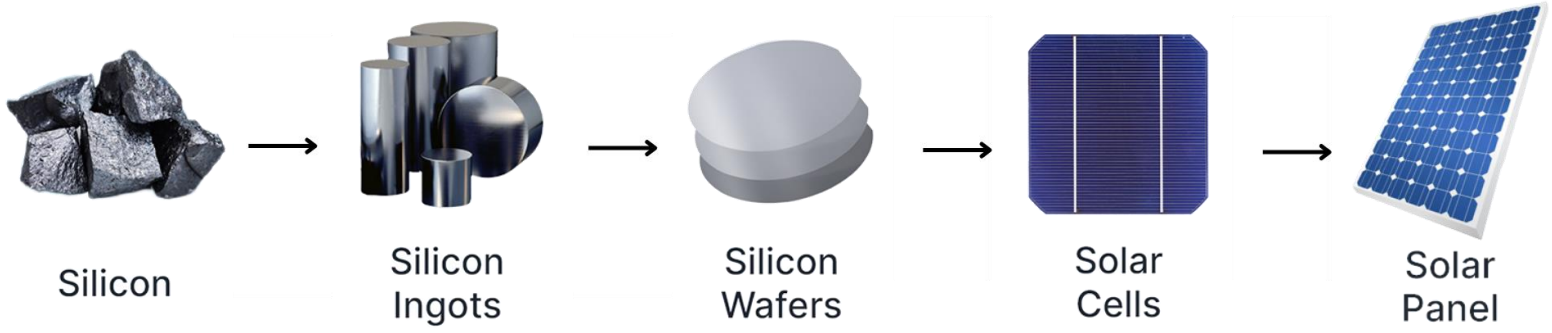
History of photovoltaic technologies



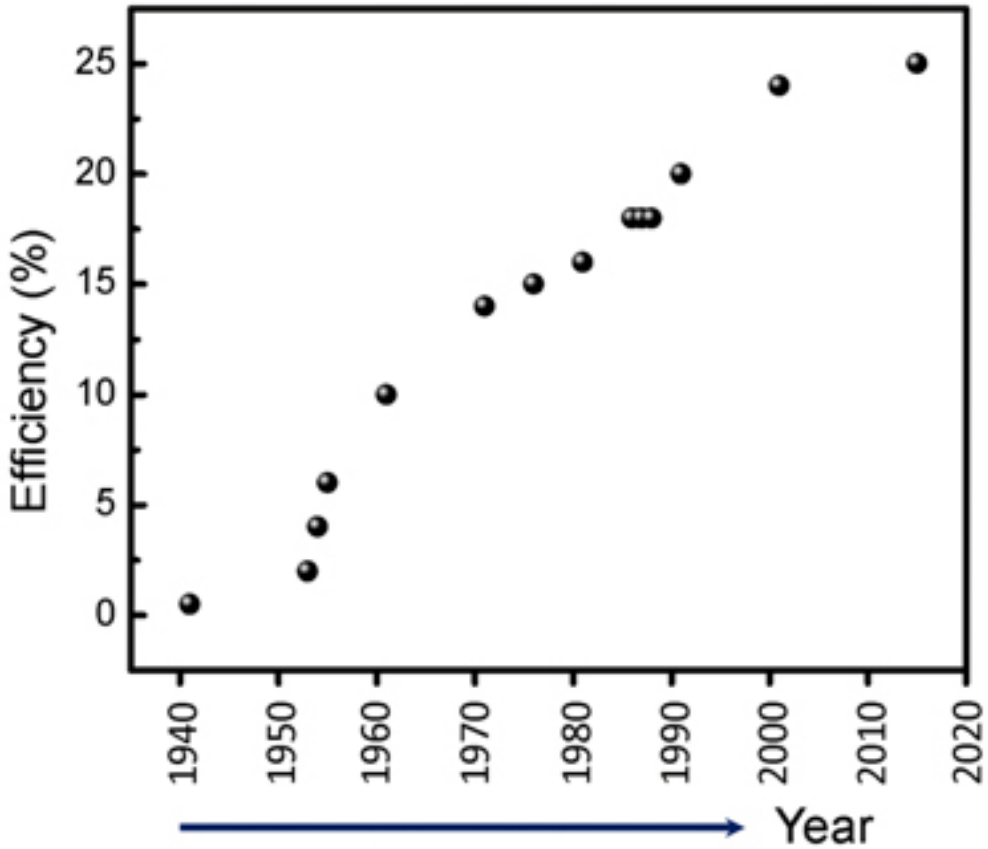
Pic. 1. „Bell Solar Battery" advertisement; *Source: ae-solar.com*

Pic. 2. Contemporary photovoltaic panel; Source: bbpv.pl

History of photovoltaic technologies



Historical survey of the efficiency of c-Si based solar cells.; Source: oatext.com



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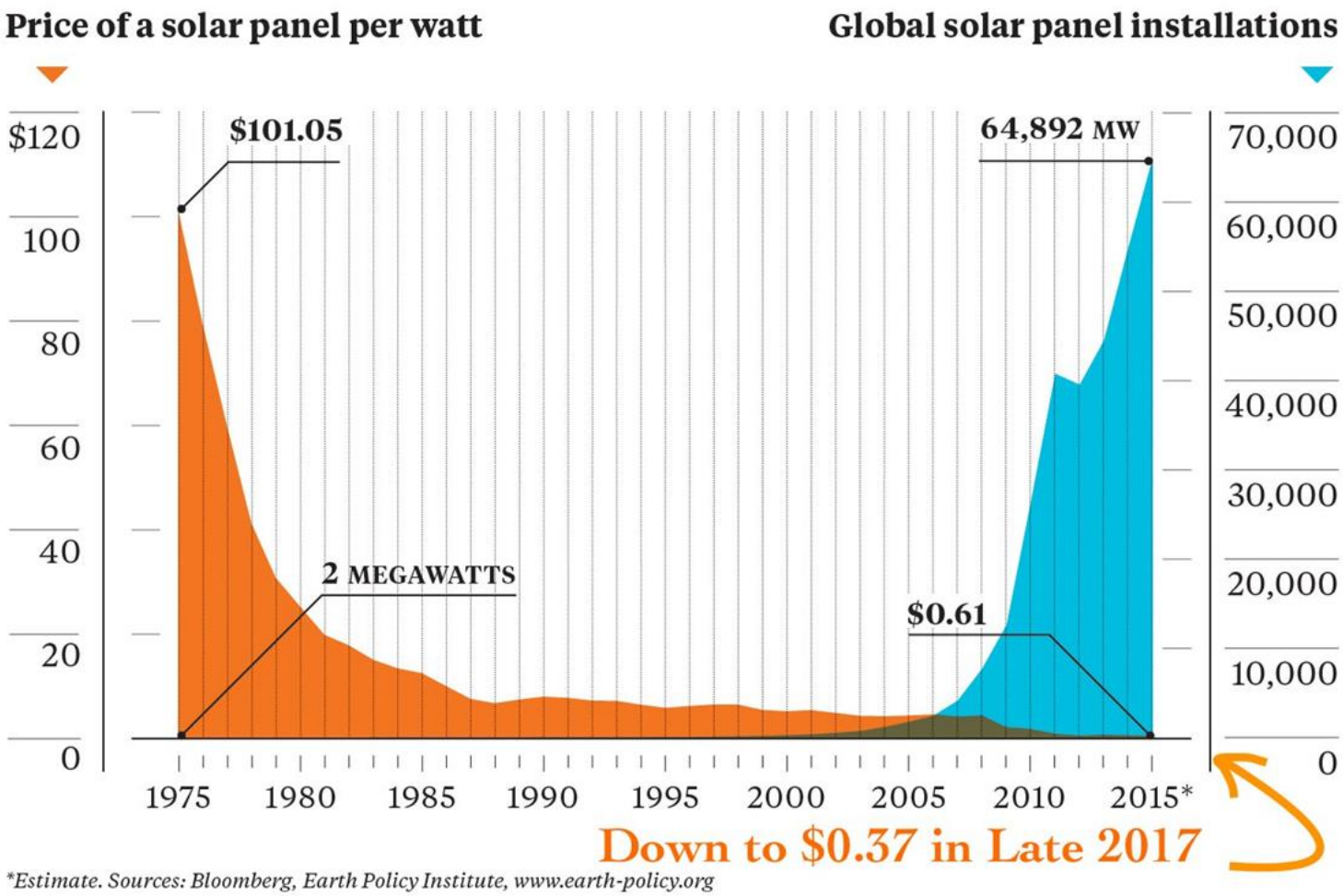
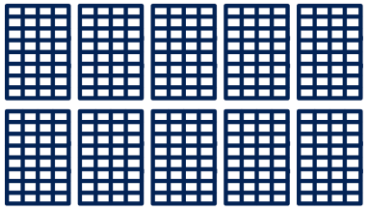


PV installation for households

PV installation capacity: 4÷6 kW (average: 5 000 W)

Solar PV module peak power: 500 W



PV installation: 10 solar panels
Surface: 25 m²

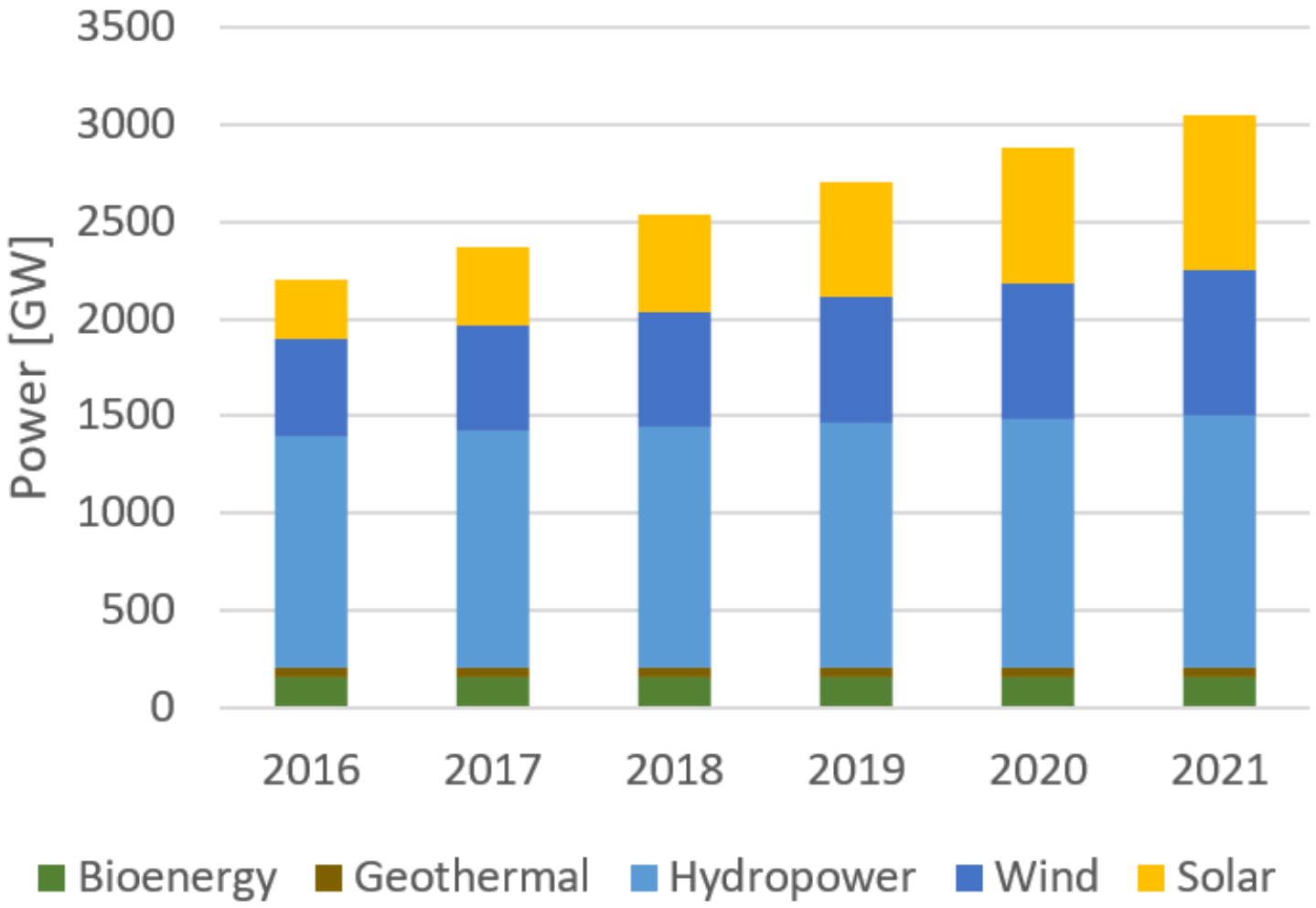
Optimal direction: South or East-West
Optimal angle: 30° (from 0° to 45°)
No shading

Inverter
Smart meter
Construction
Wires

How photovoltaic installation works?

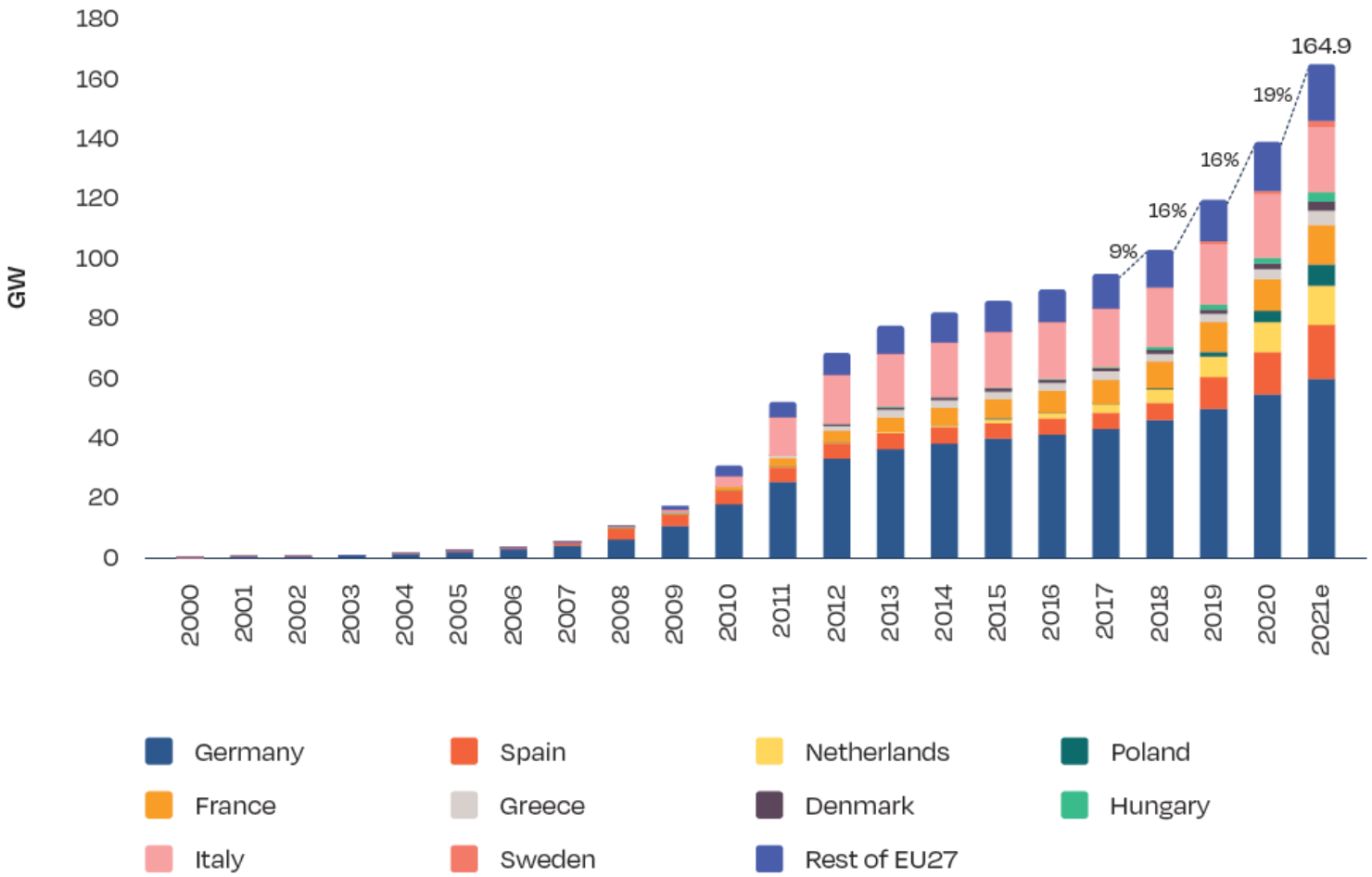
Source: Sanito

Renewable power capacity growth in the world



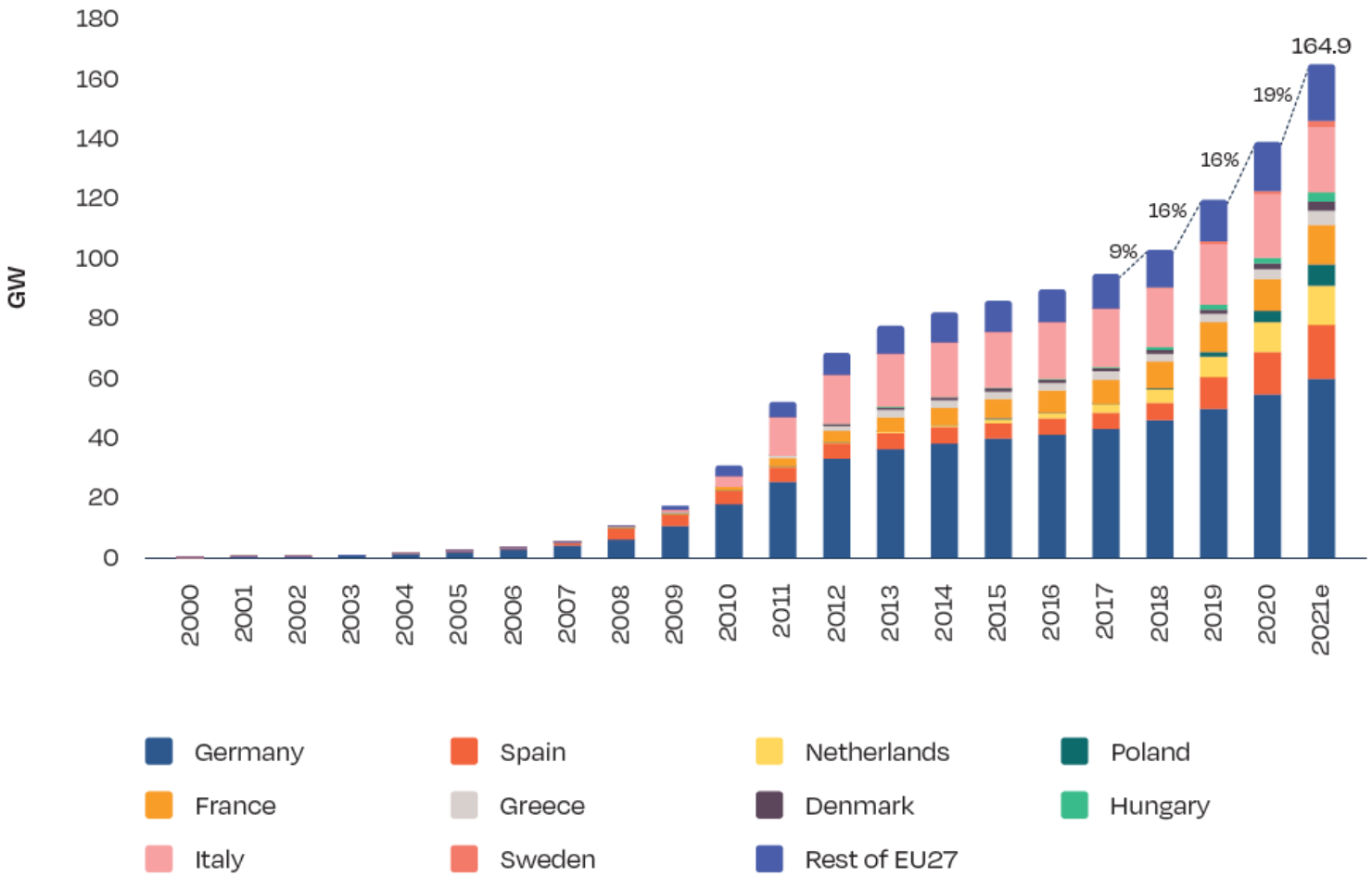
Source: IRENA

Installed photovoltaic capacity in EU



Source: Solar Power Europe

Installed photovoltaic capacity in EU



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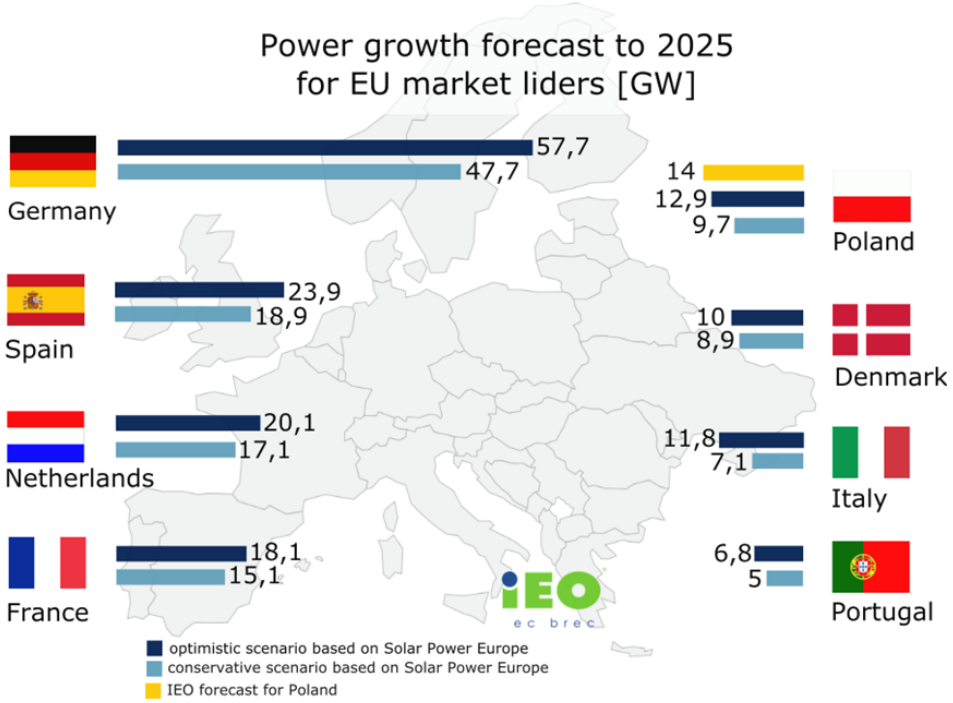
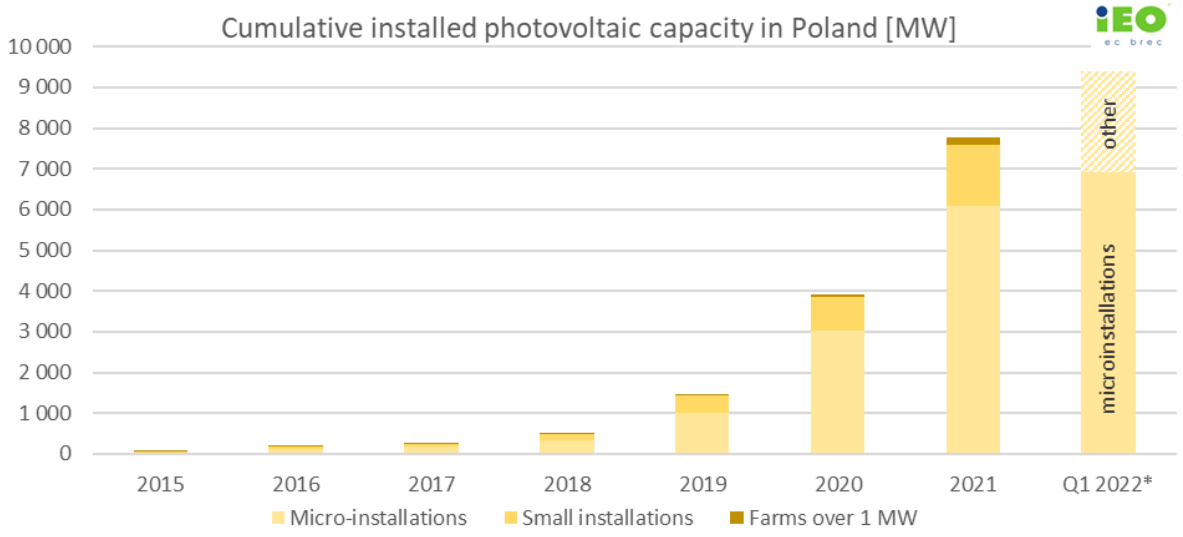
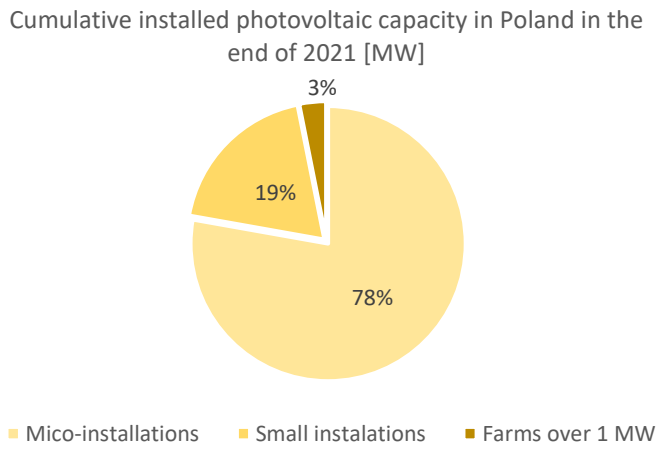


Source: Photovoltaic market in Poland 2022, IEO

Installed photovoltaic capacity in Poland



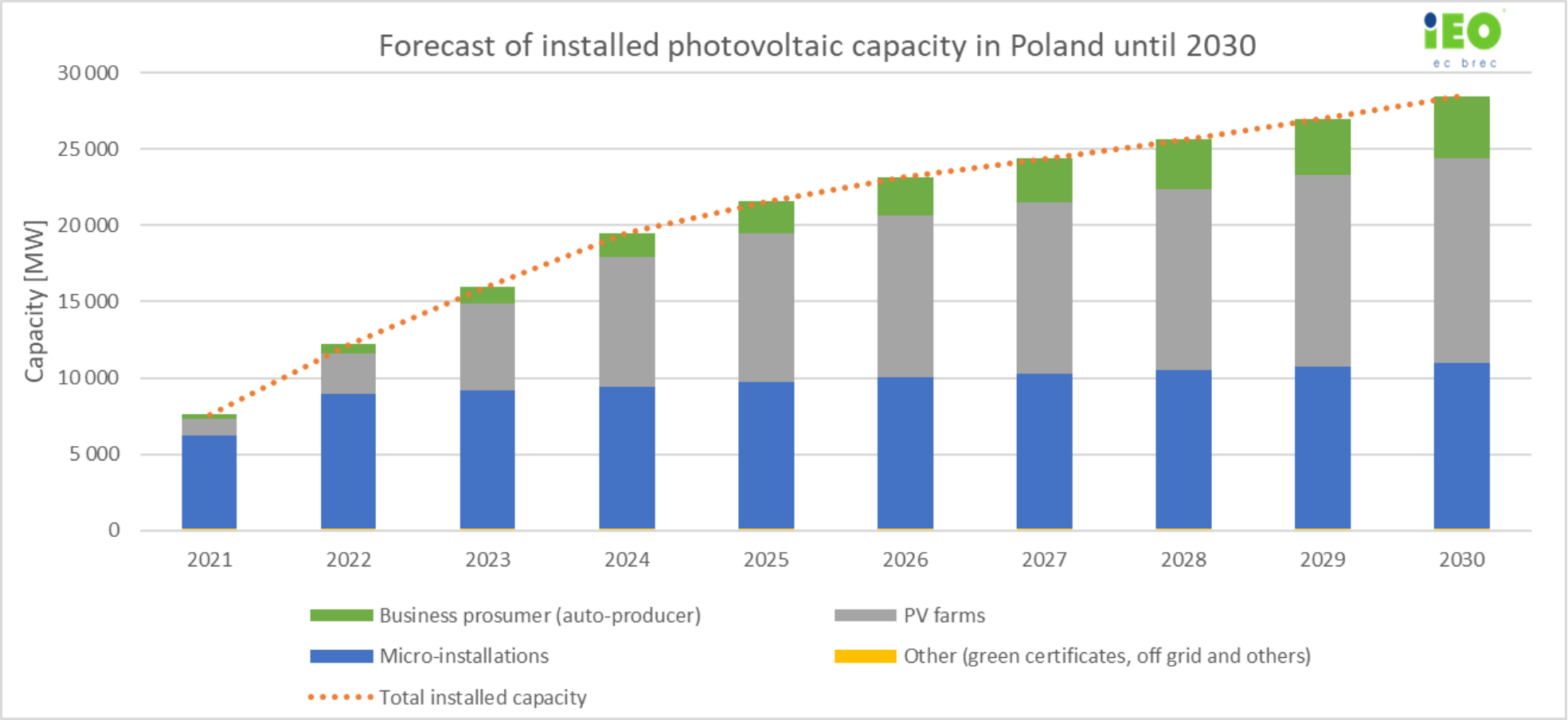


Source: Photovoltaic market in Poland 2022, IEO

7 MW (microistallations)

Over 1 mln households and small companies (prosumers)

Forecast of installed PV capacity in Poland



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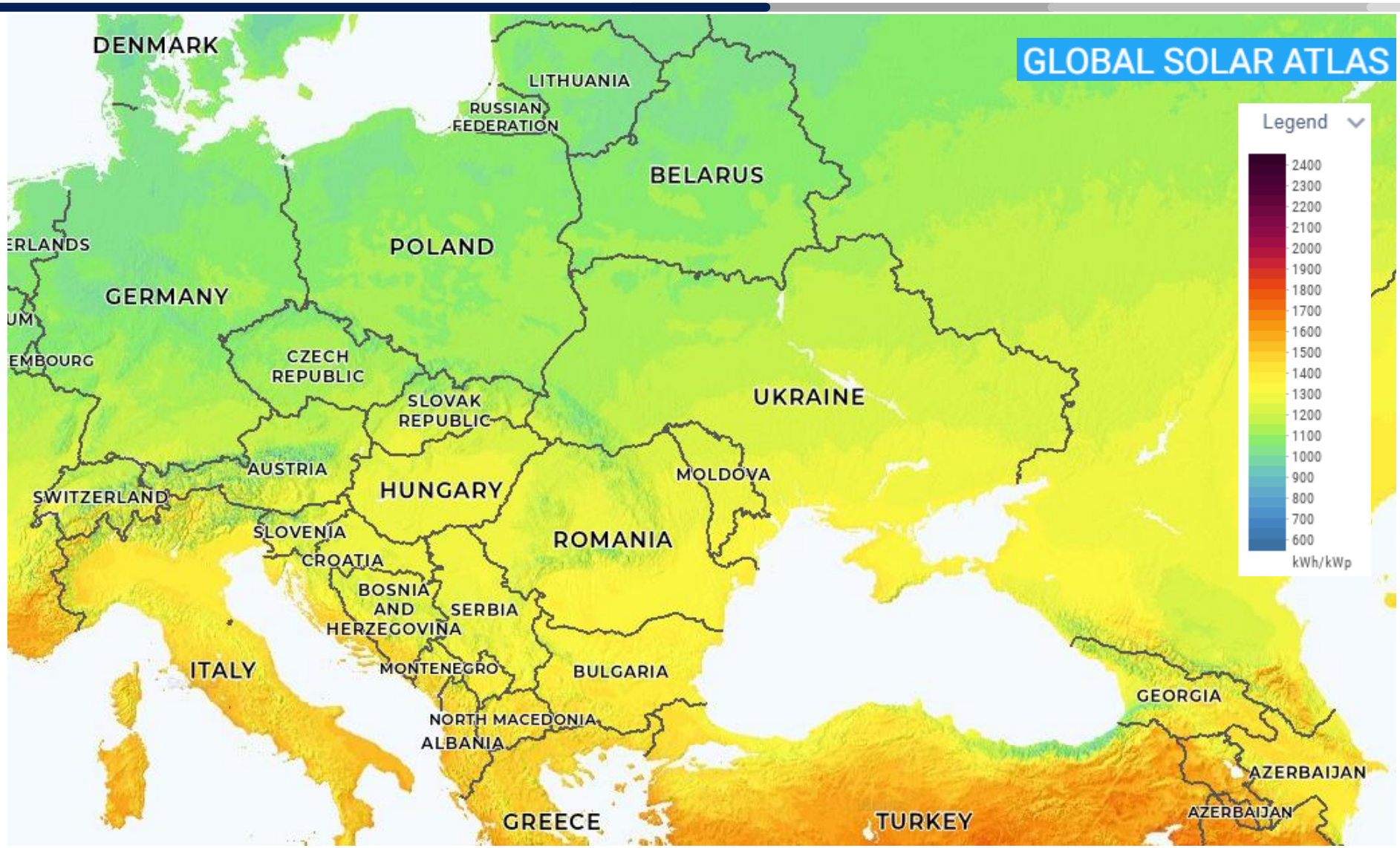
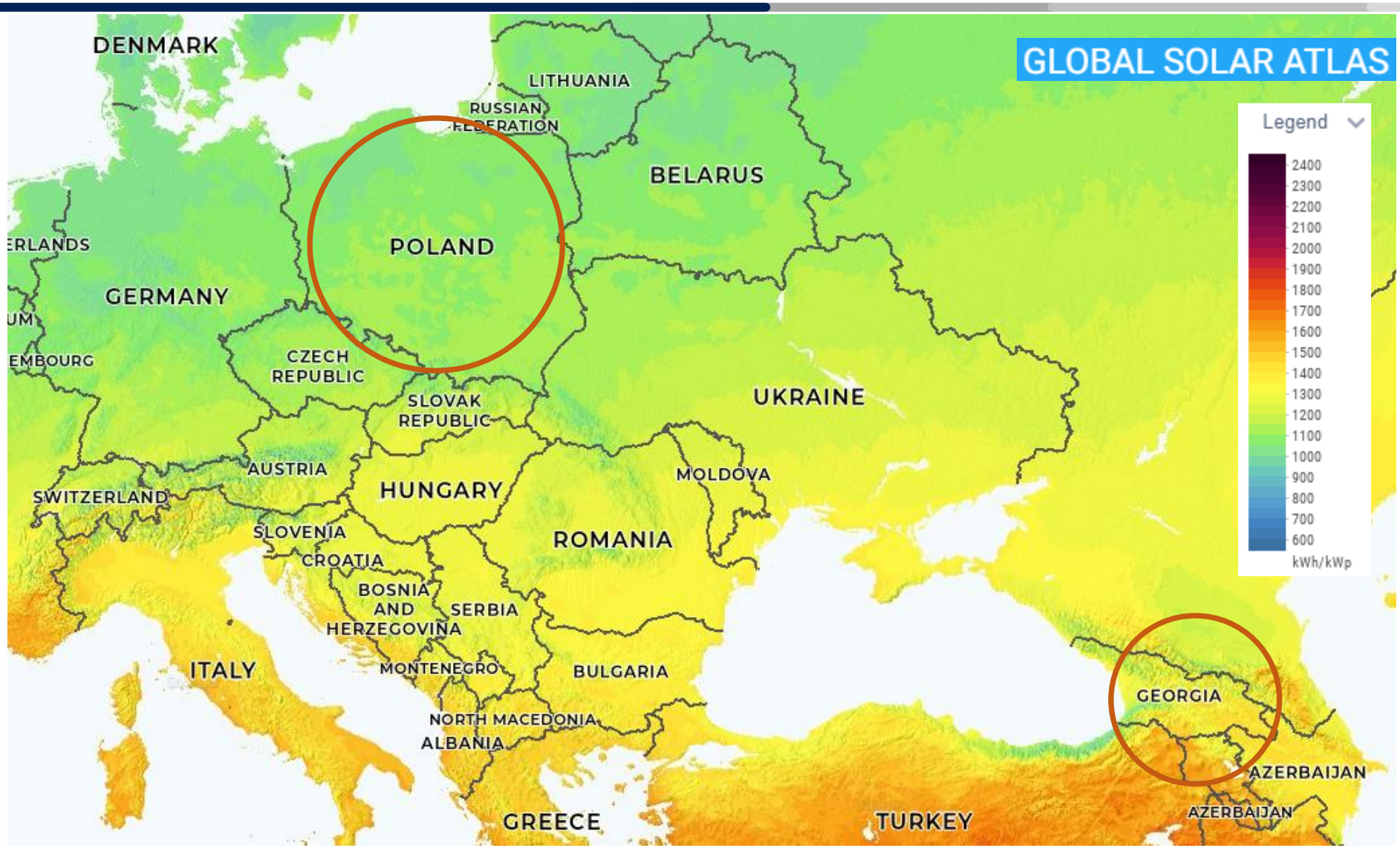
Solar power potential by country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