

Marche Region

Energy Context Assessment

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Further information available in the report:



European regions promoting
renewable energy self-
sufficiency

EXPRESS

Energy Context Assessment

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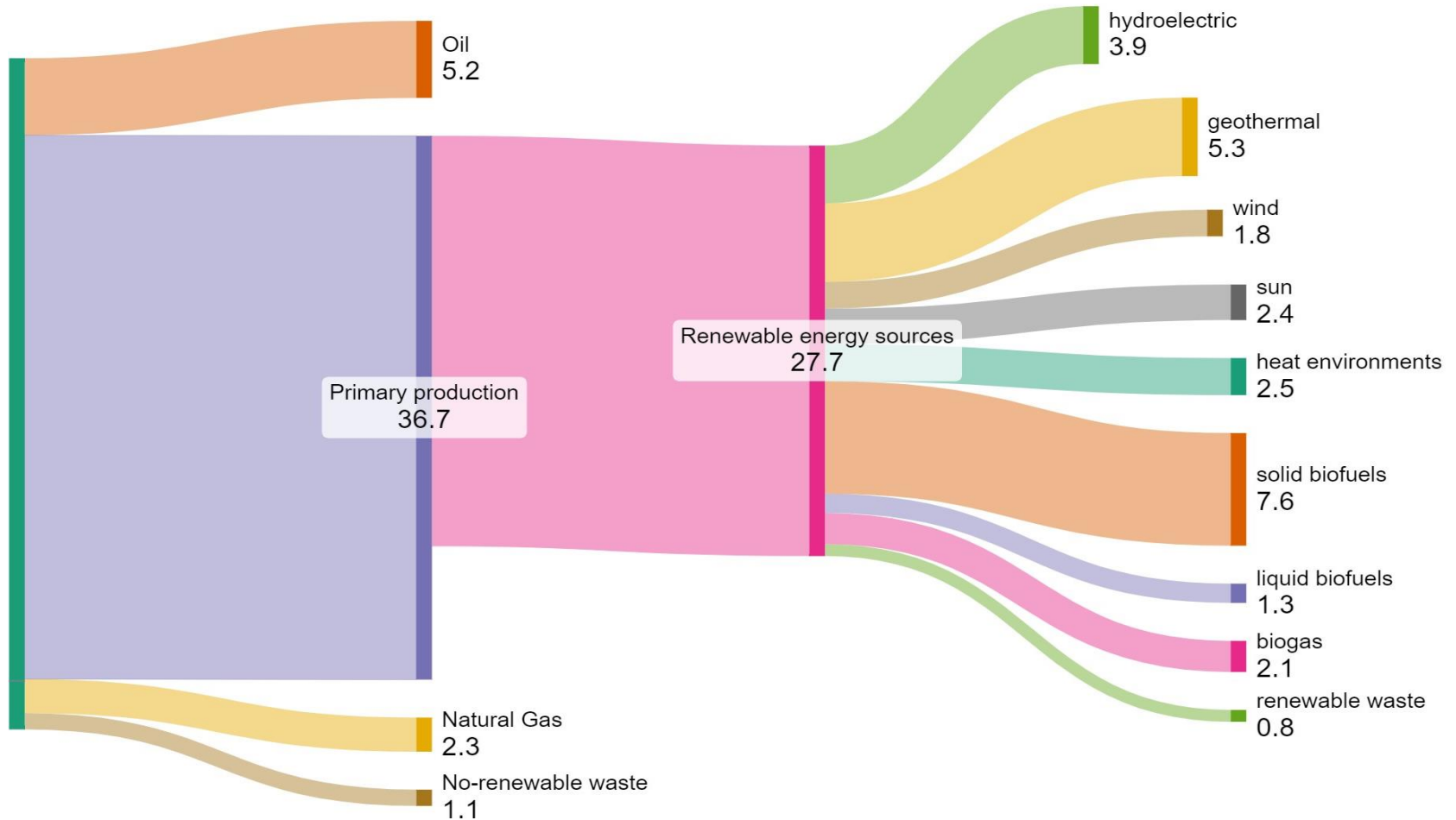
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Outline

- 1) **Summary energy balance** for Italy and for the Marche Region
- 2) **Electric energy balance** in Italy and in the Marche Region
- 3) **Power plants capacity** in Italy and in the Marche Region
- 4) **Energy self-sufficiency** level in Italy and in the Marche Region
- 5) **Prospects and trends**: energy rating of **buildings** and yearly virtual rate of requalification in the Marche Region

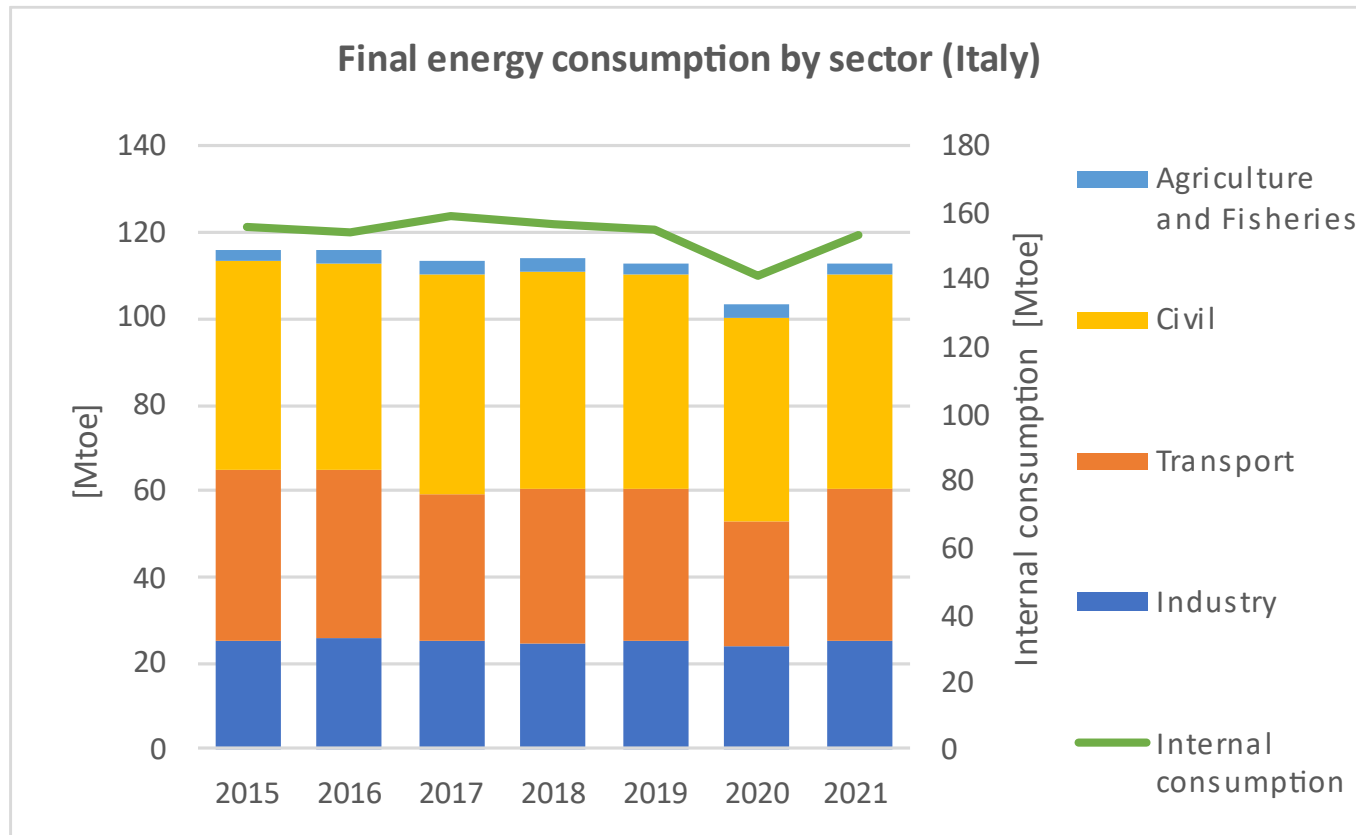
1) Summary energy balance for Italy



Primary energy production in Italy (2021, Mtoe)

- Oil and natural gas cover 33% and 41% of the primary production
- Renewable energy sources cover 19% of the production (it was 4% in 1990)

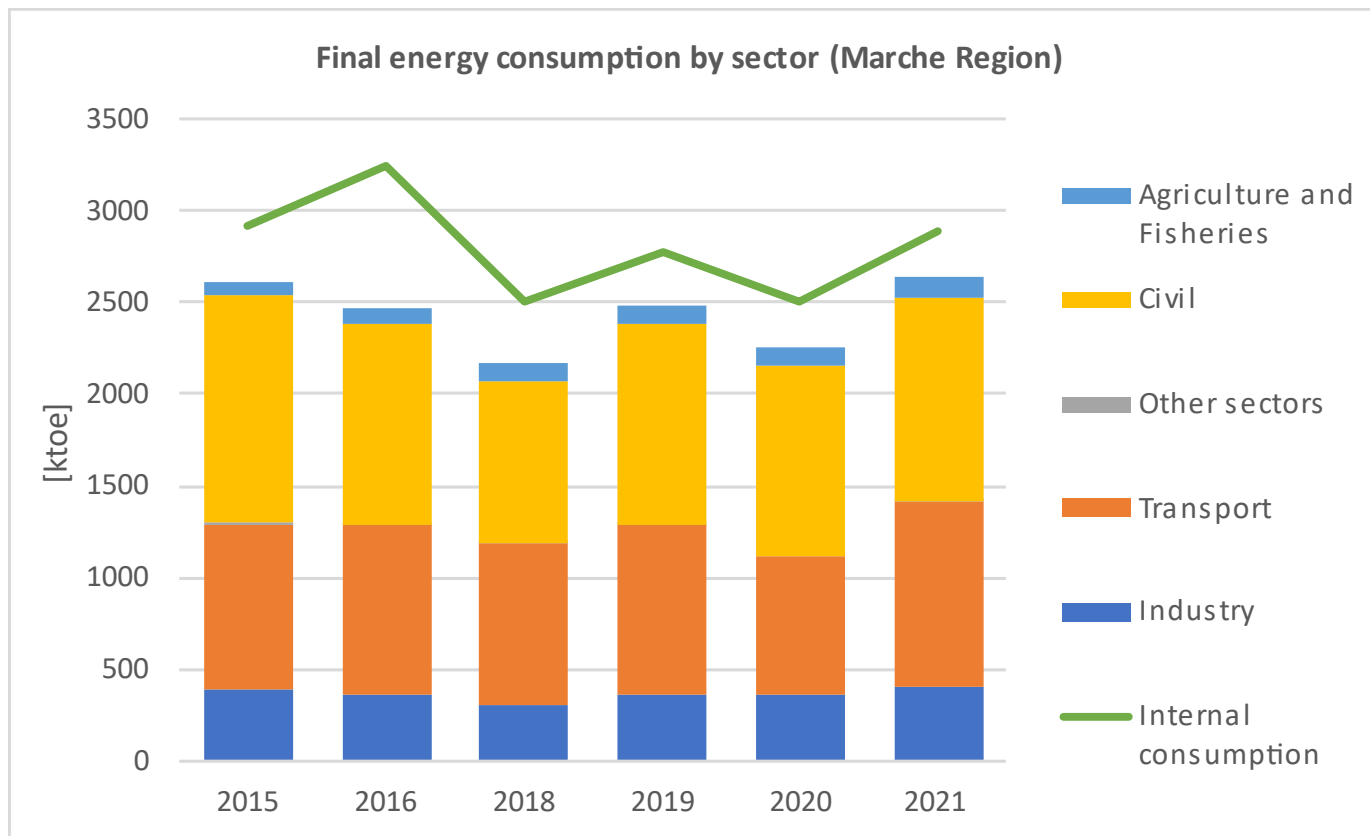
1) Summary energy balance for Italy



Primary energy consumption in Italy by sector

- Transport sector: significant decline in 2020 due to the COVID-19 pandemic

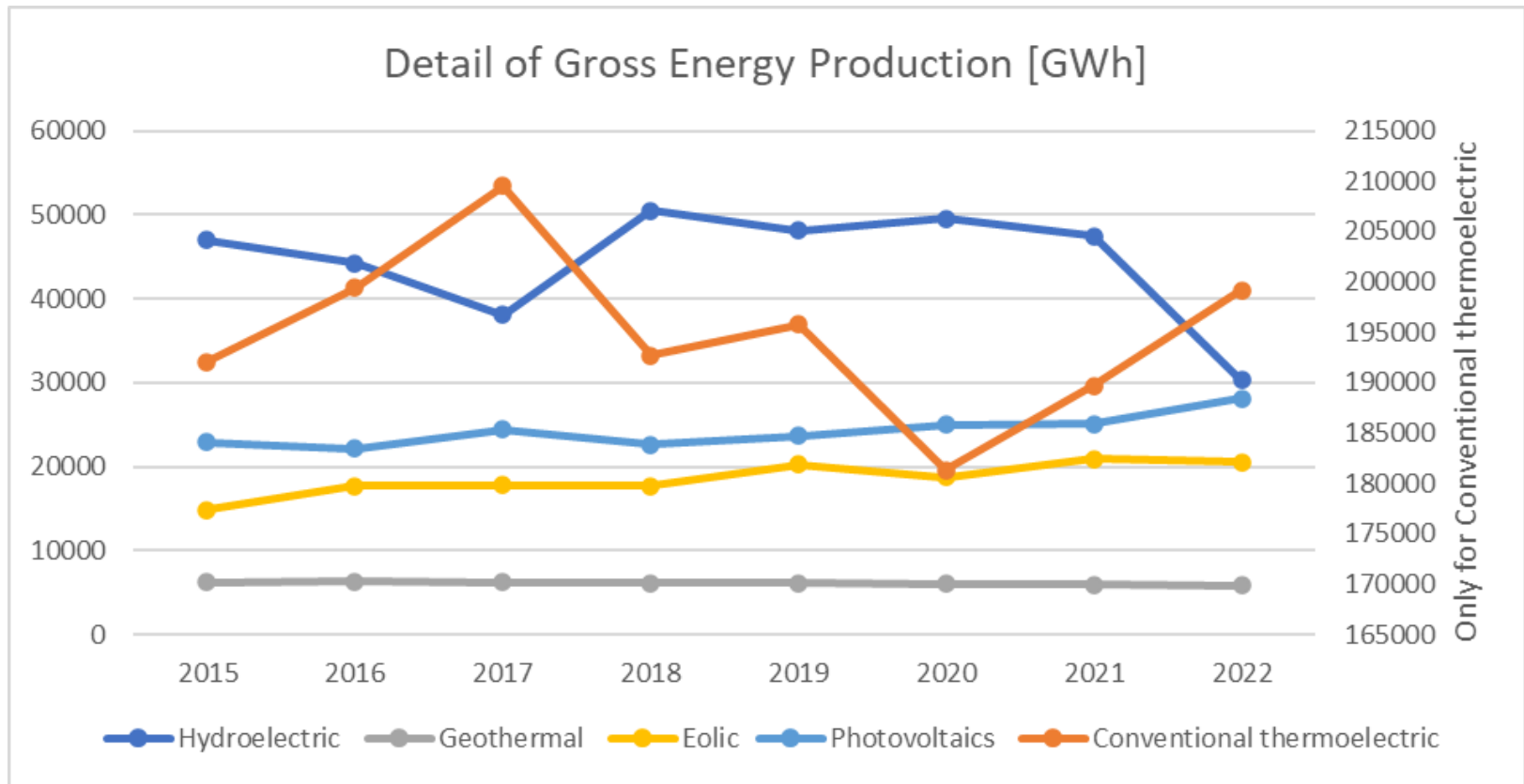
1) Summary energy balance for the Marche Region



Primary energy consumption in the Marche Region by sector

- Transport sector: significant decline in 2020 due to the COVID-19 pandemic

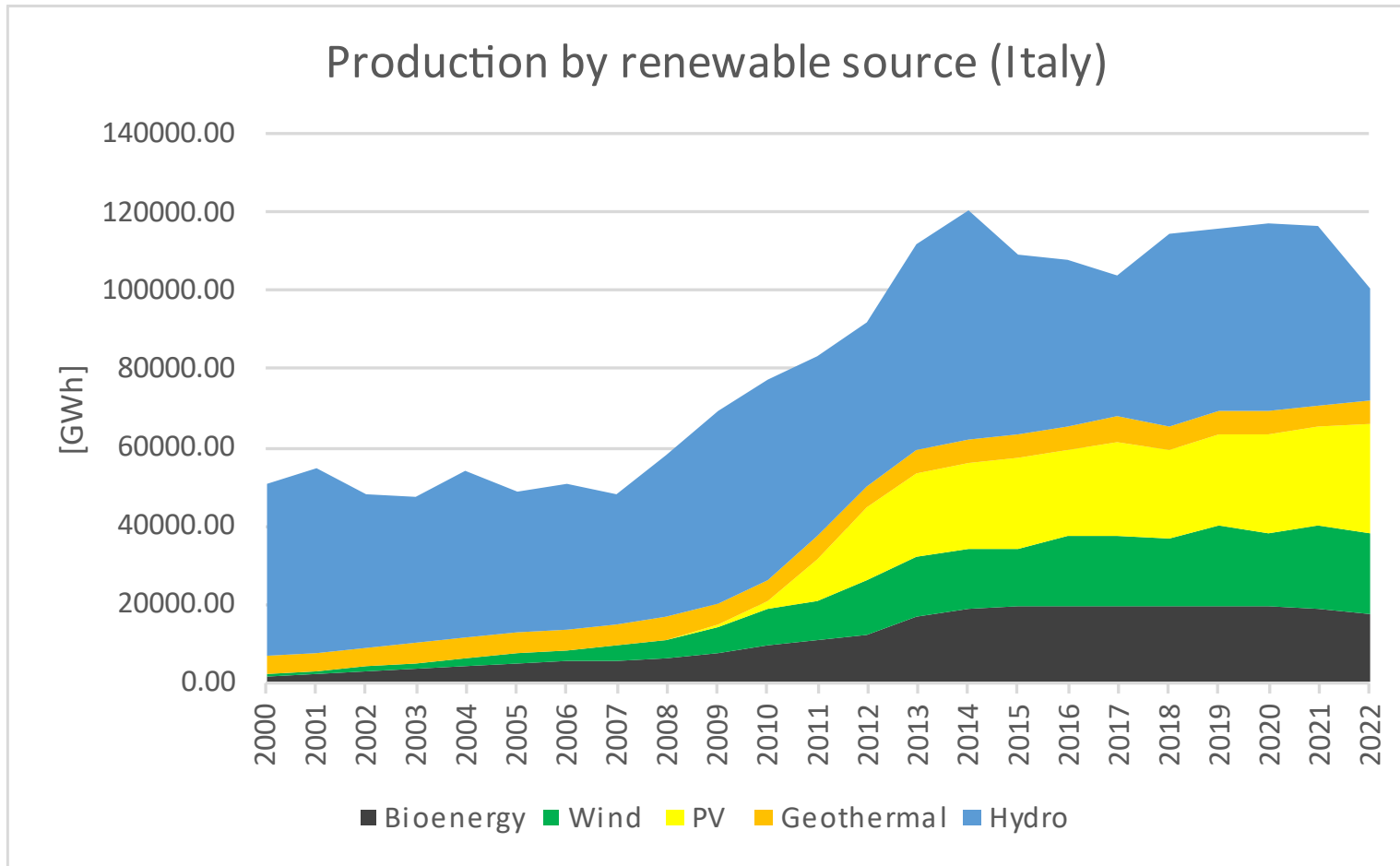
2) Electric energy balance in Italy



Electric energy production in Italy

- Most of electric energy in Italy is produced from traditional (mainly natural gas) thermoelectric systems (70% in 2022)
- PV and eolic production are increasing slowly

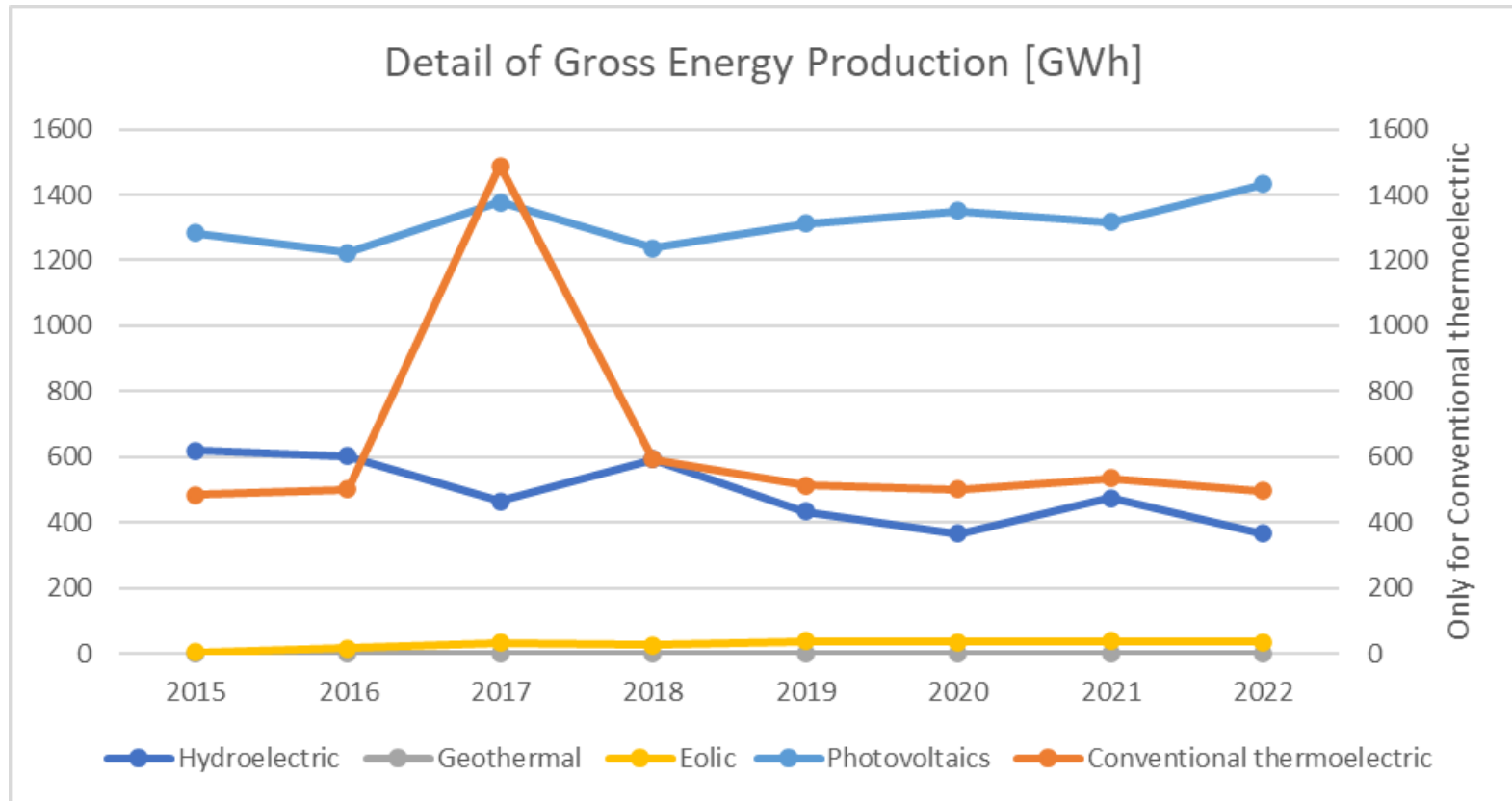
2) Electric energy balance in Italy



Electric energy production in Italy from renewable sources

- From 2008: increase of PV source due to the Italian «Conto Energia» incentive mechanism
- «Conto Energia» ended in 2013, with a corresponding flattening of electricity production

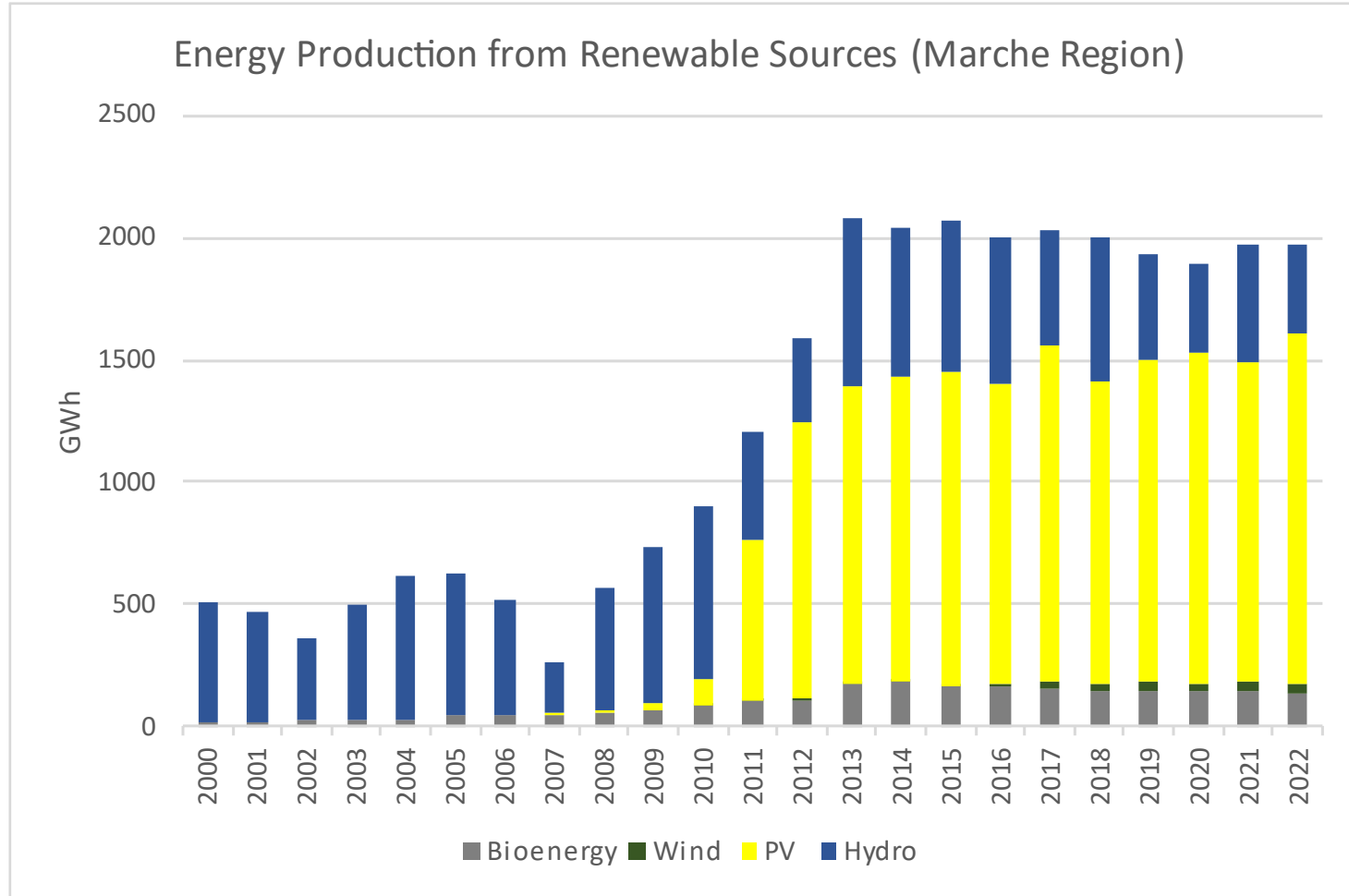
2) Electric energy balance in the Marche Region



Electric energy production in the Marche Region

- The trend is similar to the national context

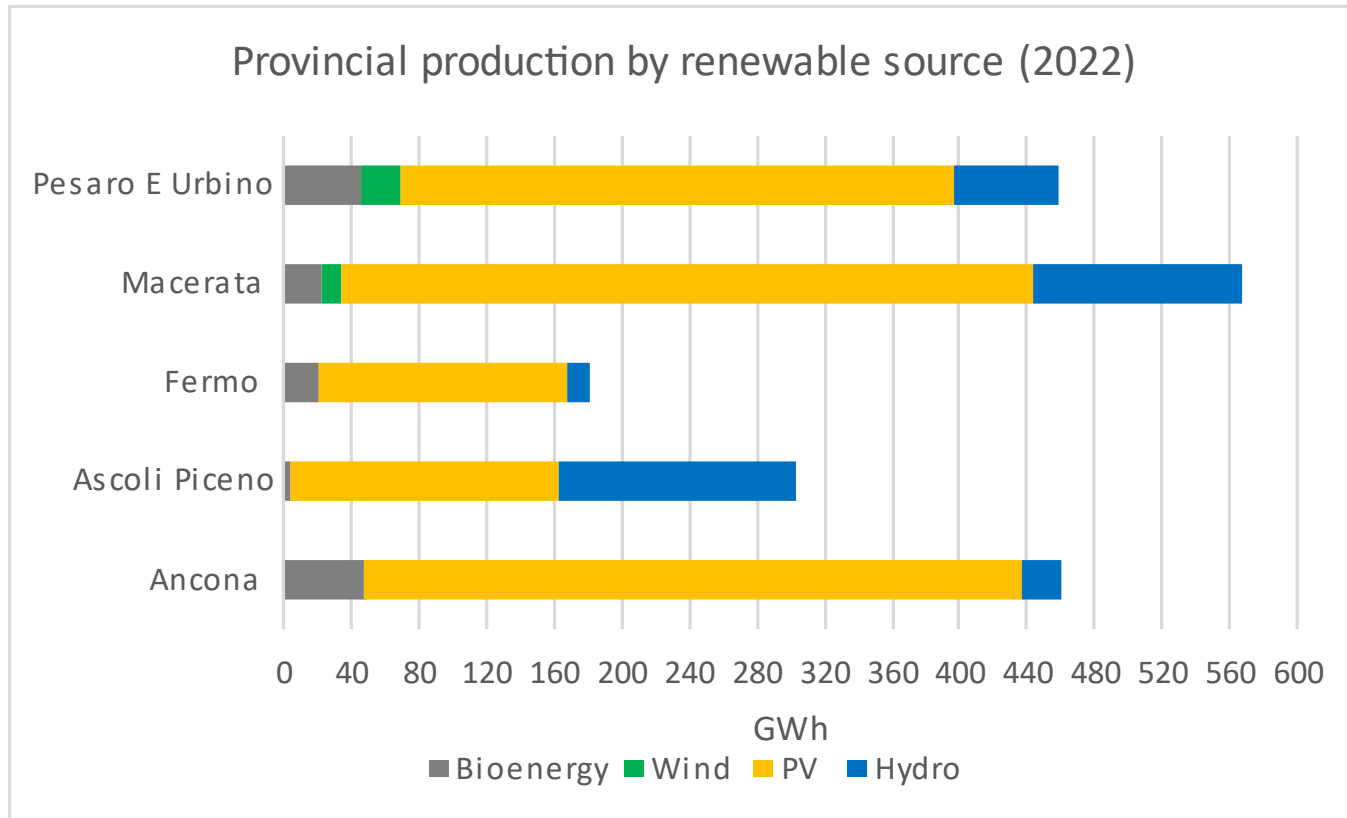
2) Electric energy balance in the Marche Region



Electric energy production in the Marche Region from renewable sources

- From 2008: same PV trend seen for the Italian context («Conto Energia»)
- Hydro energy production is stable
- Very limited production of eolic energy

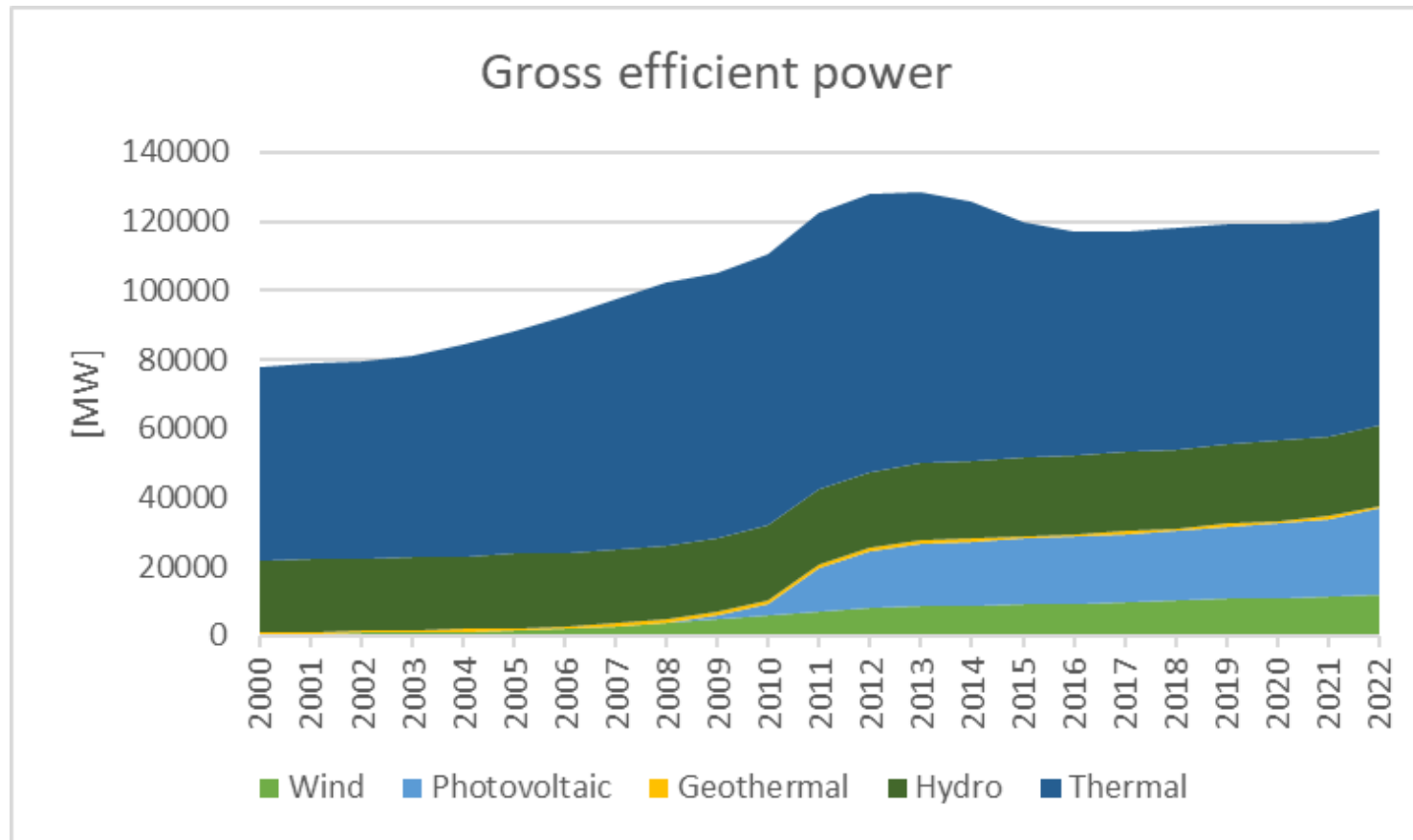
2) Electric energy balance in the Marche Region



Electric energy production in the Marche Region from renewable sources (2022)

- Most of PV energy production is located in the northern Provinces, which have the largest extensions (Pesaro-Urbino, Ancona, Macerata)
- Most of hydro energy production is located in the Provinces of Ascoli Piceno and Macerata

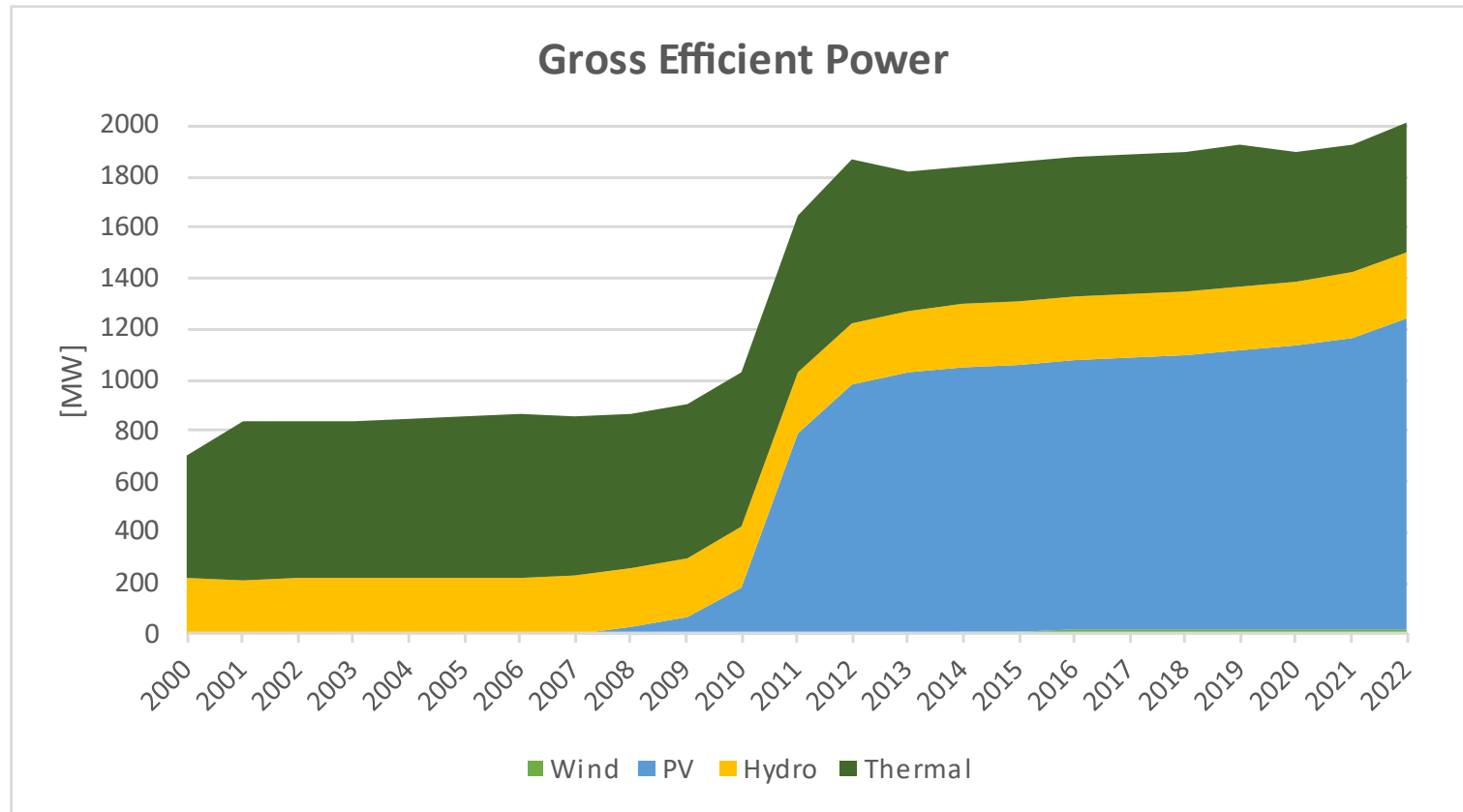
3) Power plants capacity in Italy



Power plants capacity in Italy

- From 2008: «Conto Energia» for PV installations
- Even in 2022, there are still many conventional thermoelectric plants mainly based on the natural gas source

3) Power plants capacity in the Marche Region



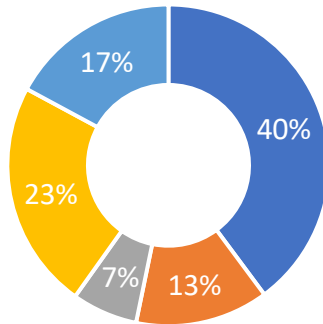
Power plants capacity in the Marche Region

- The trend is specular to the Italian context
- Wind power plants are limited: Marche Region has many unsuitable areas of installations, but many projects have also been stopped due to denied landscaping authorizations

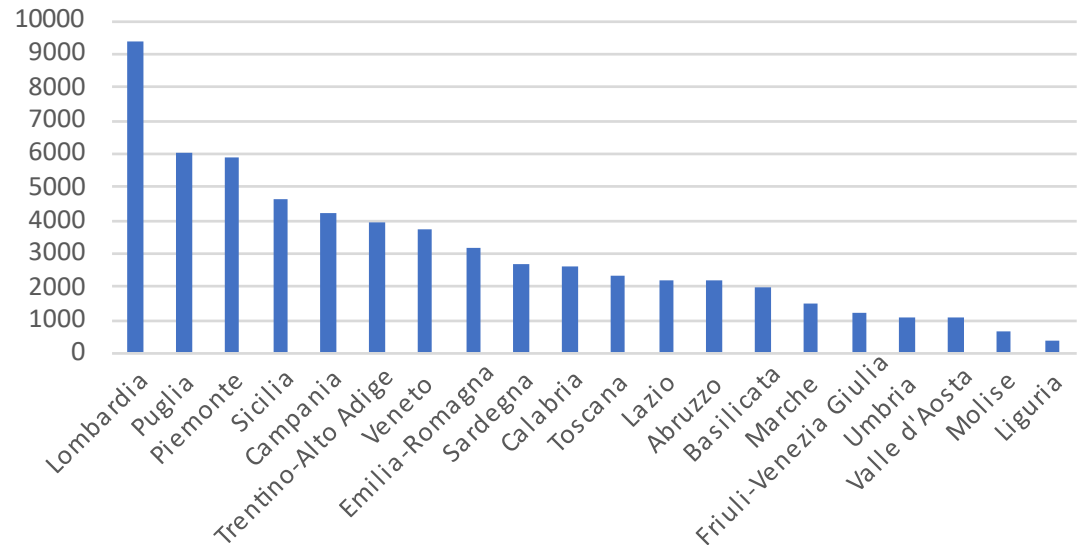
3) Power plants capacity in the Marche Region

Gross Efficient Power [MW]

■ Ancona ■ Ascoli Piceno ■ Fermo ■ Macerata ■ Pesaro



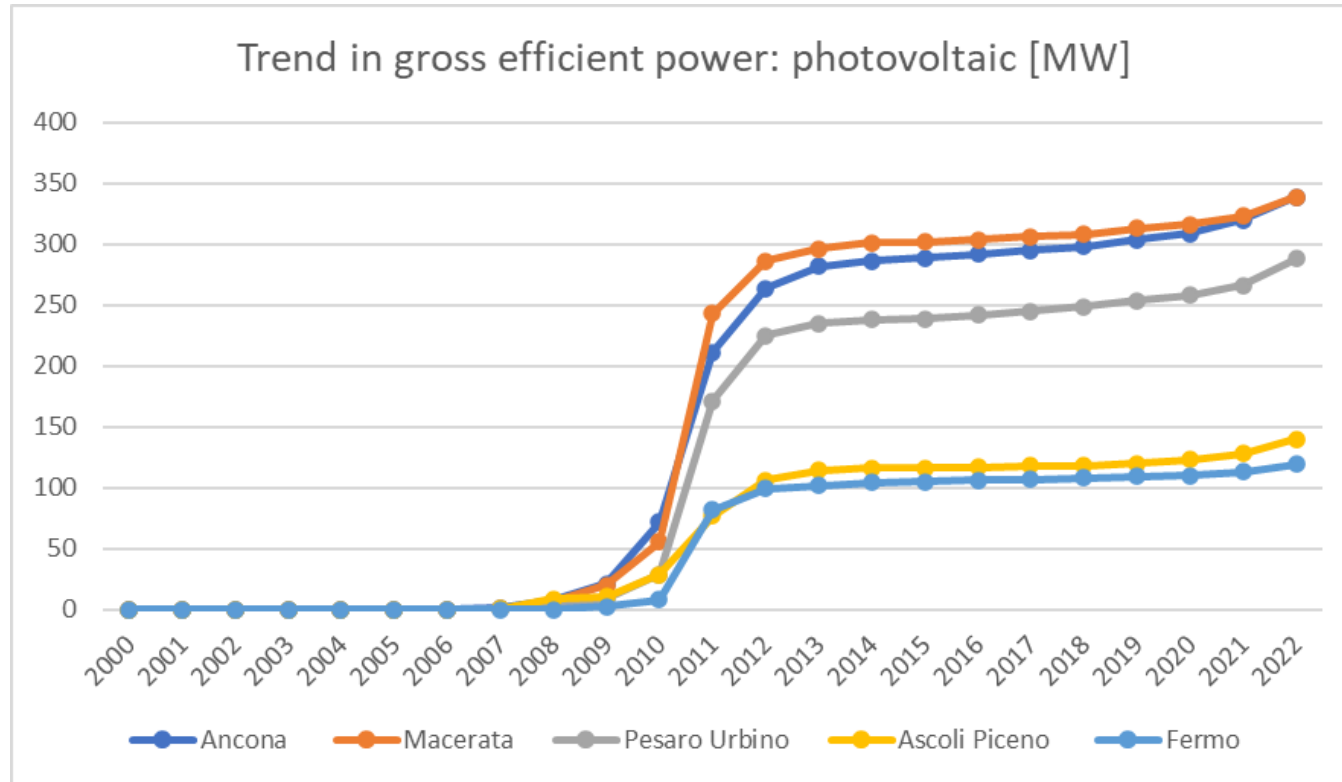
Total gross power [MW] from renewables, 2022



Renewable power plants capacity in the Marche Region (2022)

- Most of renewable power plants is located in the Province of Ancona
- The power capacity in the Marche Region is limited with respect to other Regions

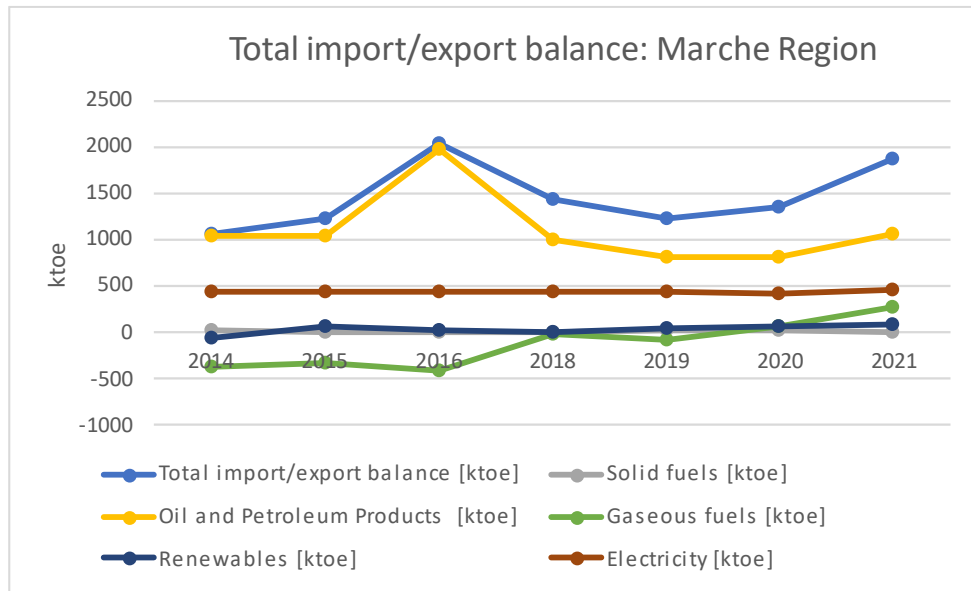
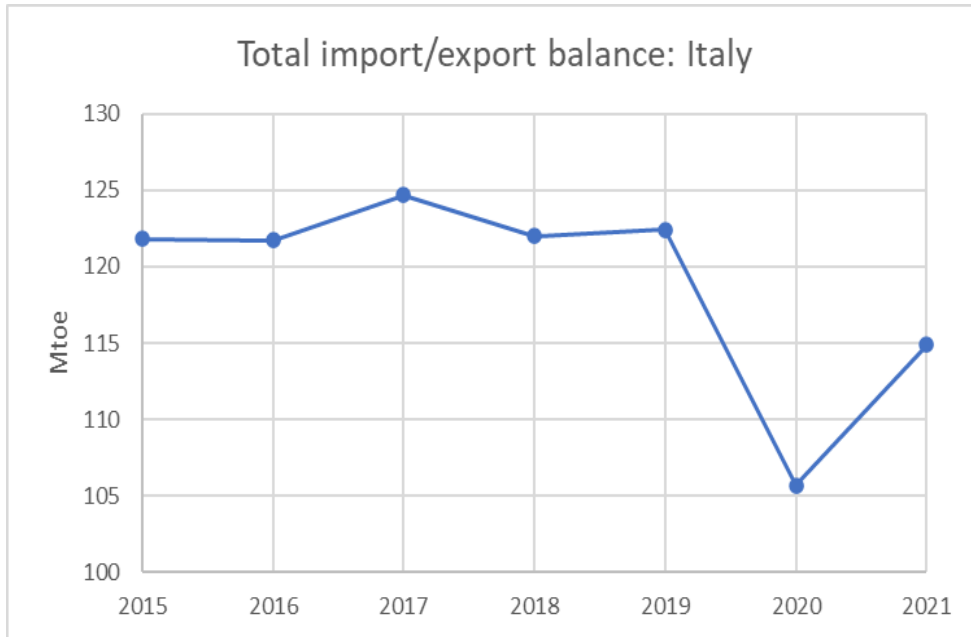
3) Power plants capacity in the Marche Region



PV power plants capacity in the Marche Region

- Most of installations is located in the northern provinces, which have the largest extensions (Pesaro-Urbino, Ancona, Macerata)

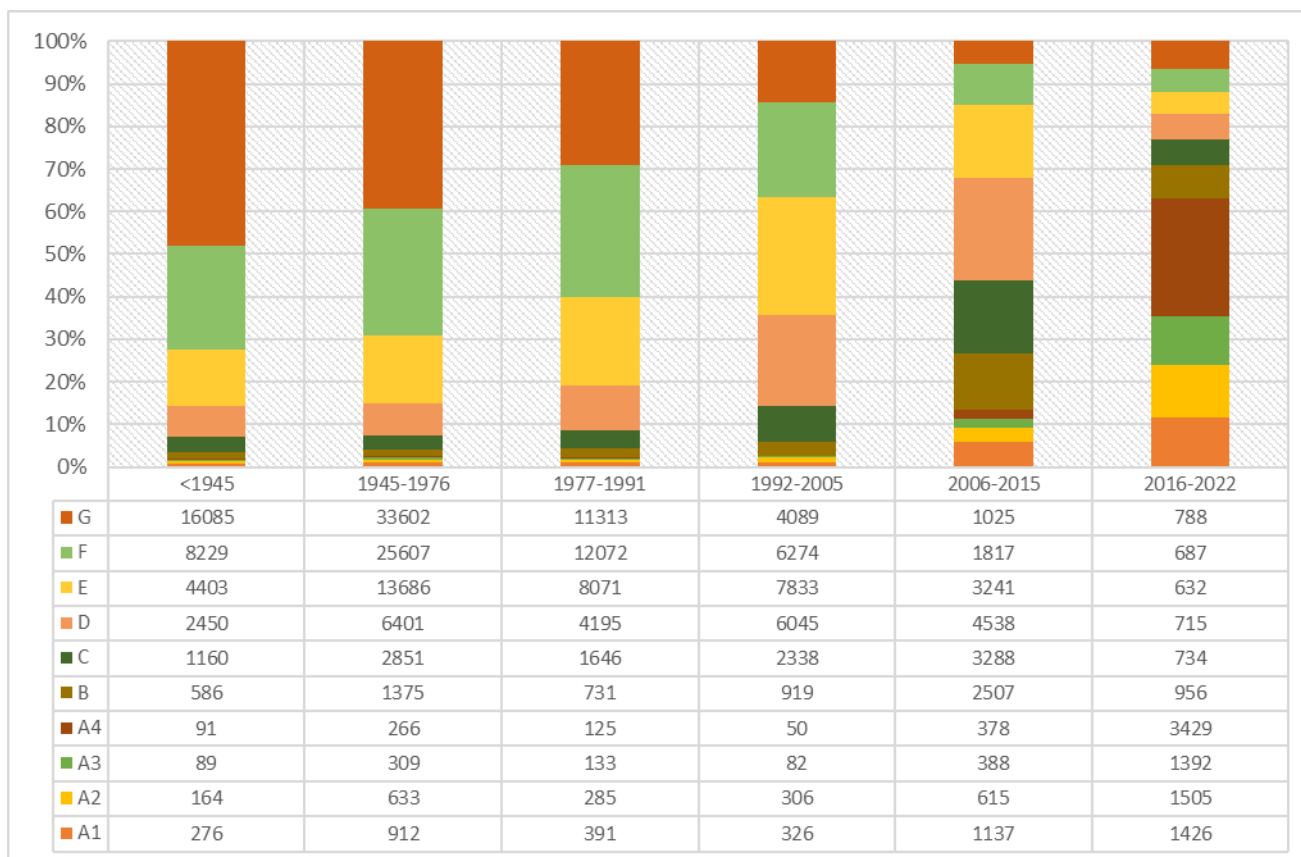
4) Energy self-sufficiency level in Italy



Energy self-sufficiency level in Italy and in the Marche Region

- The import-export balance is positive, this means that Italy imports much more energy than that it exports
- Italy mainly imports oil/petroleum products and natural gas
- Marche Region follows the same trend, and also imports primary energy from renewable sources

5) Prospects and trends: buildings in the Marche Region



Energy rating of buildings in the Marche Region

- Buildings built before 2005 have low energy rating (most is < D)
- nZEBs (nearly-Zero Energy Buildings, \geq A4) are more common after 2010, when the Directive 2010/31/EU (Energy Performance of Buildings Directive “Recast”) is implemented by Italy

5) Prospects and trends: buildings in the Marche Region

	Yearly virtual rate of requalification for major renovations (Marche Region)	Yearly virtual rate of requalification for minor renovations (Marche Region)	Yearly virtual rate of requalification (Italy)
Residential	0.15%	0.21%	1.90%
Non-residential	0.13%	0.33%	2.80%

Yearly virtual rate of requalification for real estate units

- Defined as the yearly ratio of real estate units that undergo an energy requalification and the overall number of real estate units
- The current rates (2020-2030 period) for the Italian context are too low to meet the 2050 requirements for buildings, and are even lower for the Marche Region