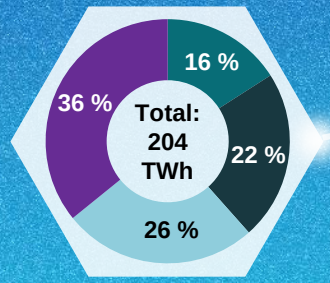
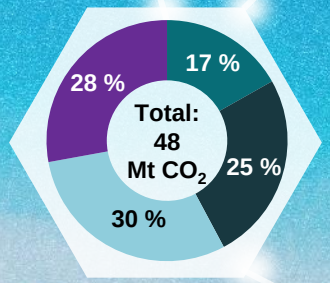
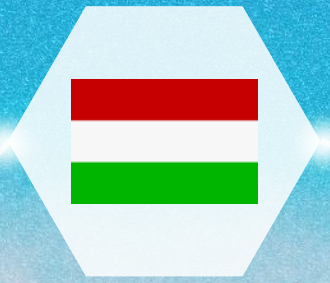






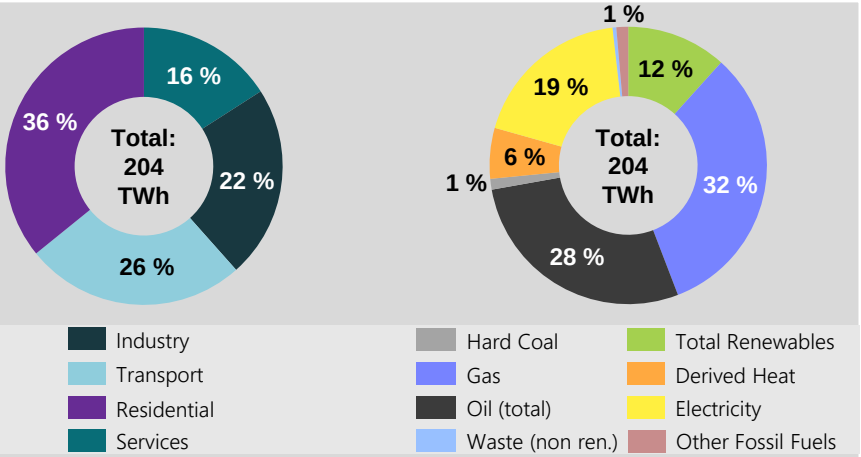
FfE

Energy Country Profile Hungary

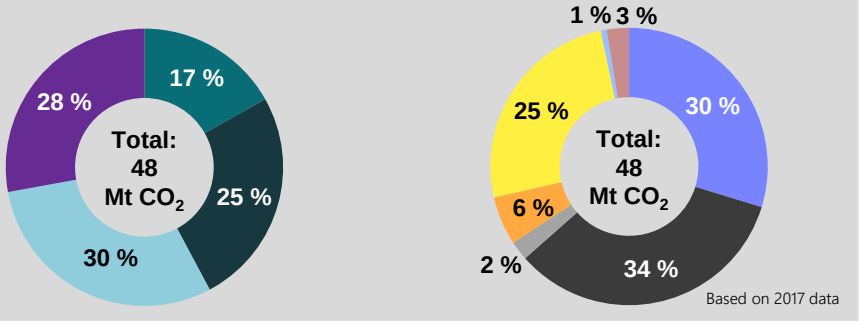
2020

Hungary at a Glance

Final Energy Consumption



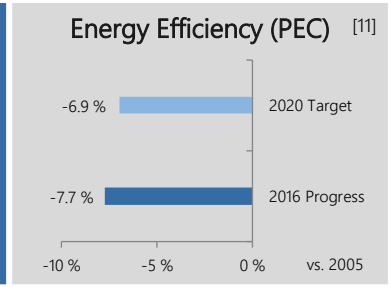
CO_2-Emissions

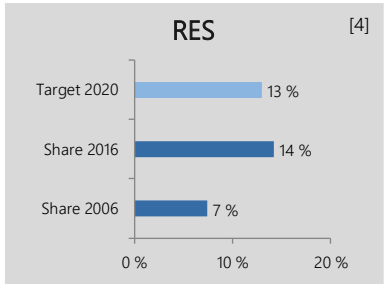


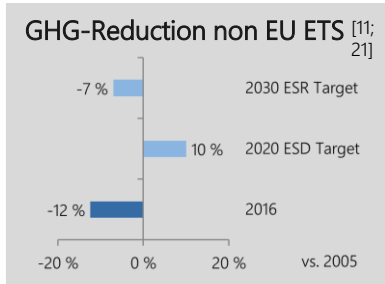
Key-Indicators

Population[2016,5]:	9.8 million	Size[5]:	93 030 km^2
Net El. Consumption[2016,9]:	37.5 TWh_{el}	Peak-Load[8]:	6.4 GW_{el}
Trade-Balance[8]:	-12.9 TWh_{el}	RES-Share El.[2016,9]:	7.2 %
GDP per Capita[5]:	$14 225	GDP per Capita-Ranking[5]:	55/185

Targets







Location

Current Topics

[1;6]

- Wind energy: high increase in 2005-12; but since then standstill
- Since 2016 new regulations regarding boundary conditions to install wind power plants
  - 12 km distance to residential area
  - No land used for agriculture
  - Turbine capacity < 2 MW; Hub height < 100 m
- Plans to obtain gas imports from Romania to become more independent from Russia

Key Facts

[1;2]

- Imports account for 55 % of TPES
- Biofuels highest share of RE, primary way to lower emissions and import dependency of oil in transport sector
- Biofuels also used in heating sector which is mainly the way to reach EU 2020 targets
- 4/5 of gas demand imported from Russia. Primarily used for heating in the residential sector
- Nuclear energy will be maintained, current plants will phase out 2035-37 because of reaching their end of lifetime, new plants already planned with capacity of 1.2 GW_{el}, will feed into the grid by 2025-26
- Coal power plants will be maintained for reasons of security of supply

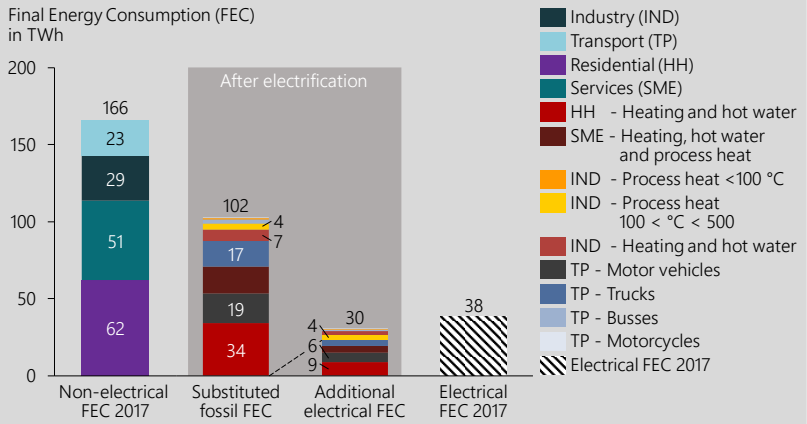
All evaluations based on the year 2017 if not mentioned otherwise.

Hungary's Electricity Sector

Electrification Potential

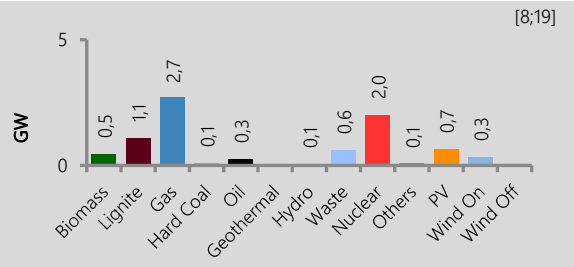
"Low hanging fruits" case

[22]



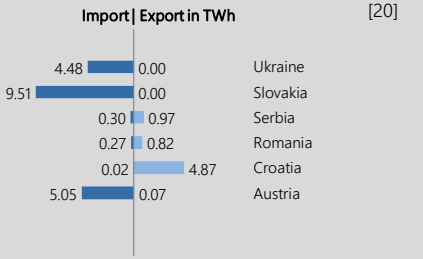
Installed Capacity

[8;19]



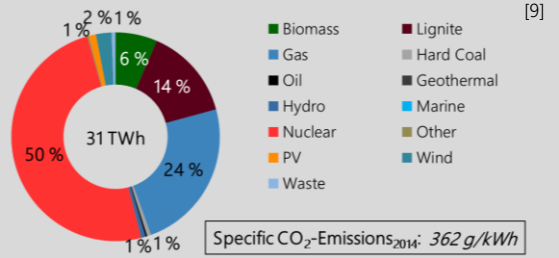
Import-Export

[20]



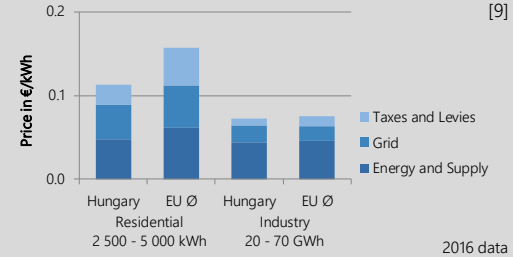
Net El. Generation

[9]



Customer Prices

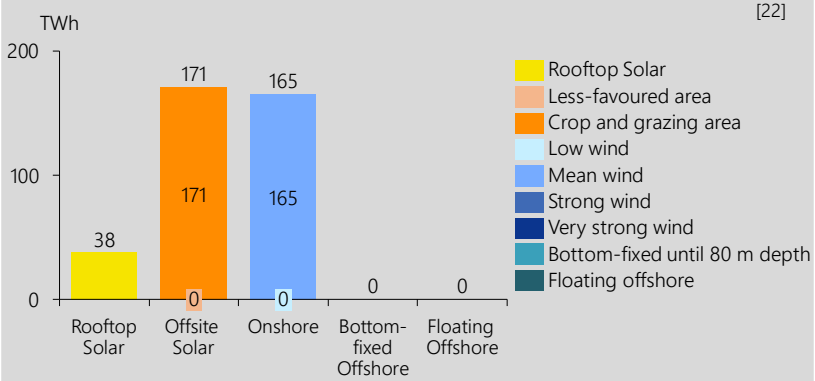
[9]



vRES Potential

Renewable Energies

[22]



Wholesale Market

[1;10]

- **Main Exchange**: Hungarian Power Exchange Company (HUPX)
- **Additional CO_2-Pricing**: No

Day-Ahead-Market (HUPX):

2017	HUPX
Volume	18.6 TWh
Avg. Price	50.35 €/MWh

Support Schemes

[3]

Costs

- All RE except wind energy are eligible for the feed-in tariff, if their capacity does not exceed 0.5 MW
- For plants up to 0.5 MW or less, depending on peak/valley period: *4.2-11.52 €ct/kWh*

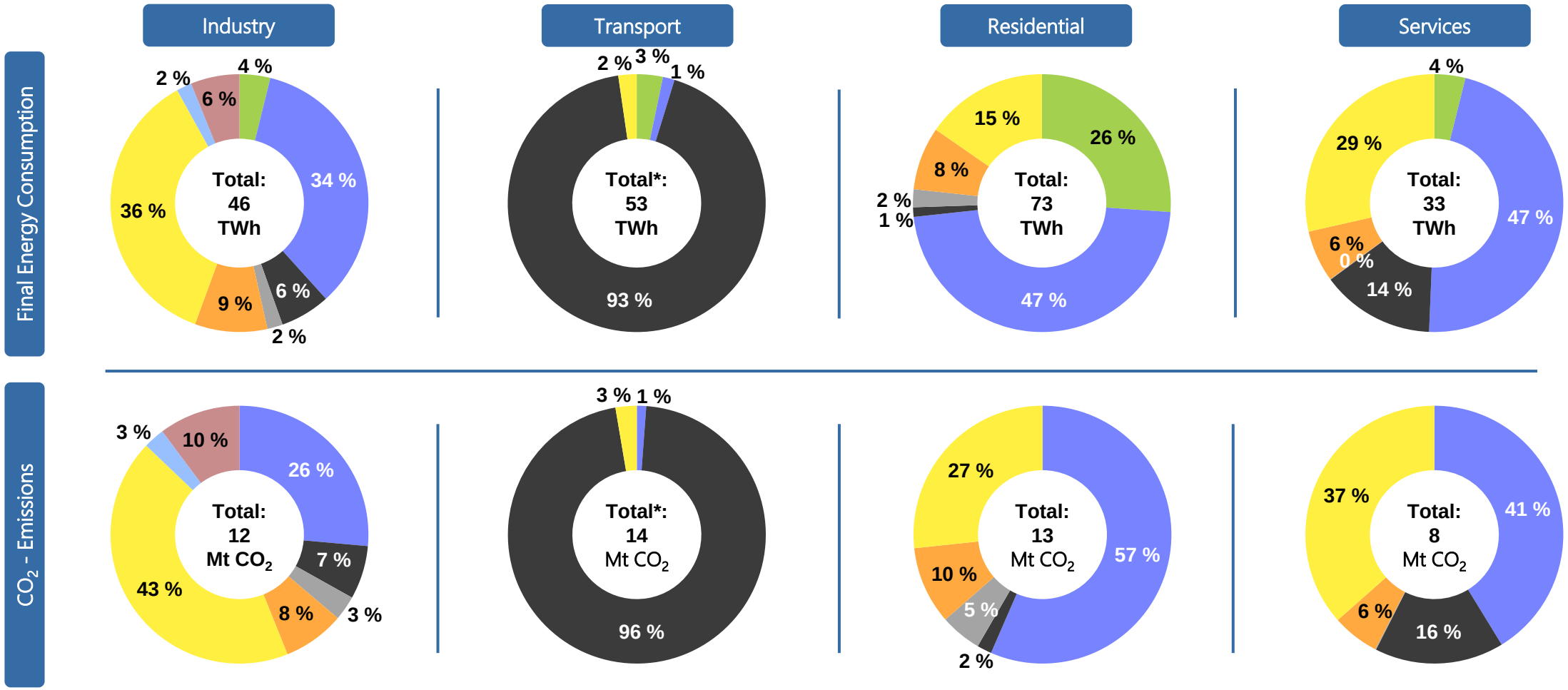
[3]

Policies

- No level for RES-H building obligations defined. However, for new building projects it is recommended to use renewable energy sources for decentralized energy supply in the planning process. But obligation to satisfy at least 25% of the buildings' energy needs with RES after 31 December 2020.

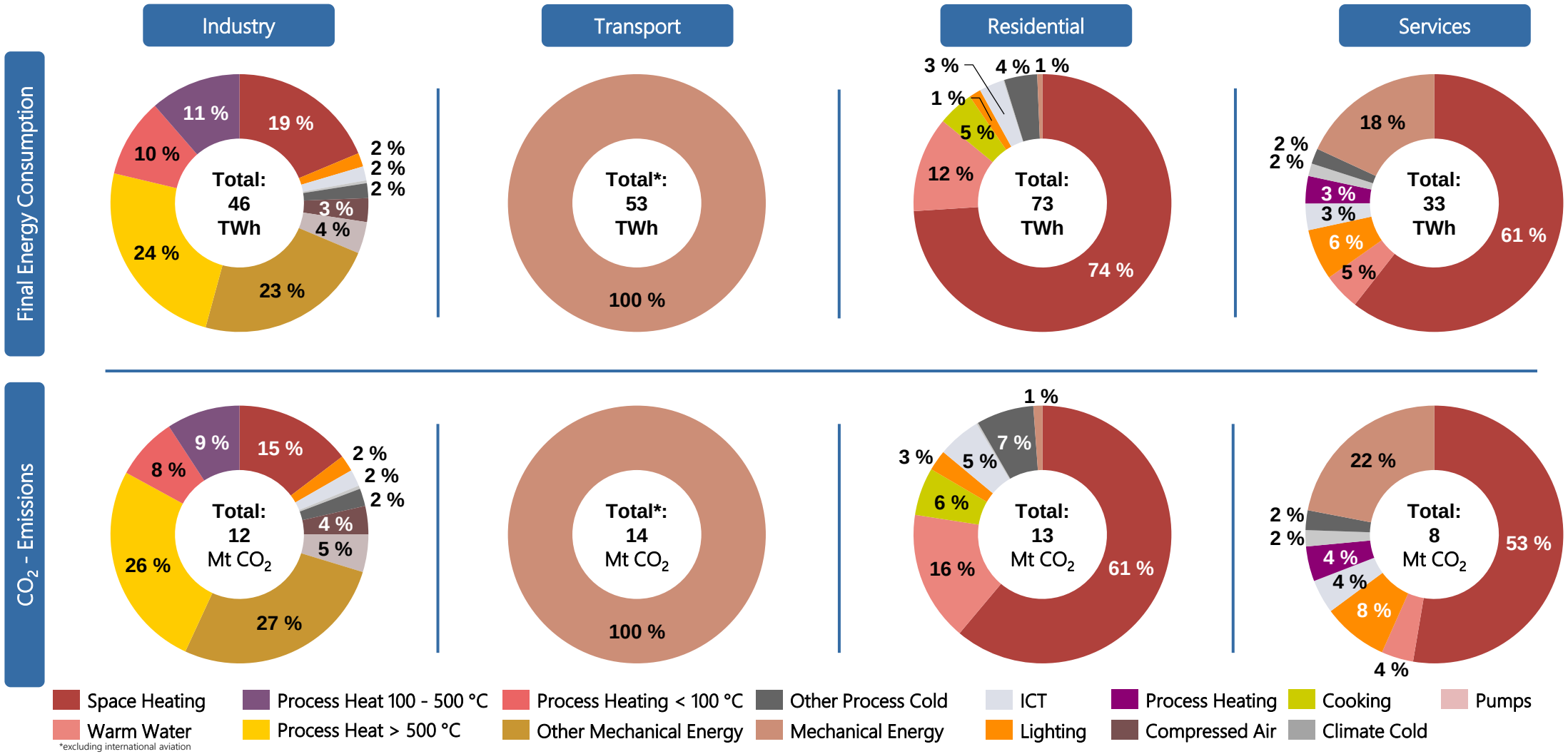
All evaluations based on the year 2017 if not mentioned otherwise.

Hungary's Energy Consumption & Emissions by Sectors and Energy Carriers - 2017



*excluding international aviation

Hungary's Energy Consumption & Emissions by Application & Sector - 2017



Hungary: Sources

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TSO	Mavir	www.mavir.hu
Regulator	Hungarian Energy and Public Utility Regulatory Authority	www.mekh.hu

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- **National Energy Report 2017** (Energy Regulatory Office), https://www.ure.gov.pl/download/2/452/NationalReport2017.pdf

Abbreviations

RES	Renewable Energy Source
EFR	Effort Sharing Regulation
PEC	Primary Energy Consumption
GHG	Greenhouse Gases
ESD	Effort Sharing Decission
EU ETS	European Union Emissions Trading System
EL	Electricity
EU	European Union
TSO	Transmission System Operator