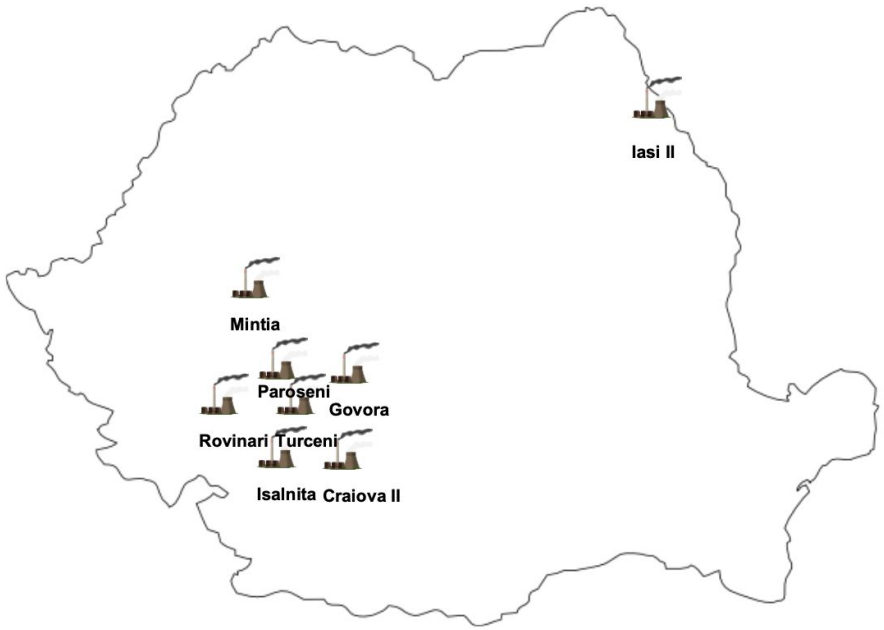
Diagnostics - analysis of coal-fired power plants in Romania

Coal power plants in Romania (2000 vs 2023)

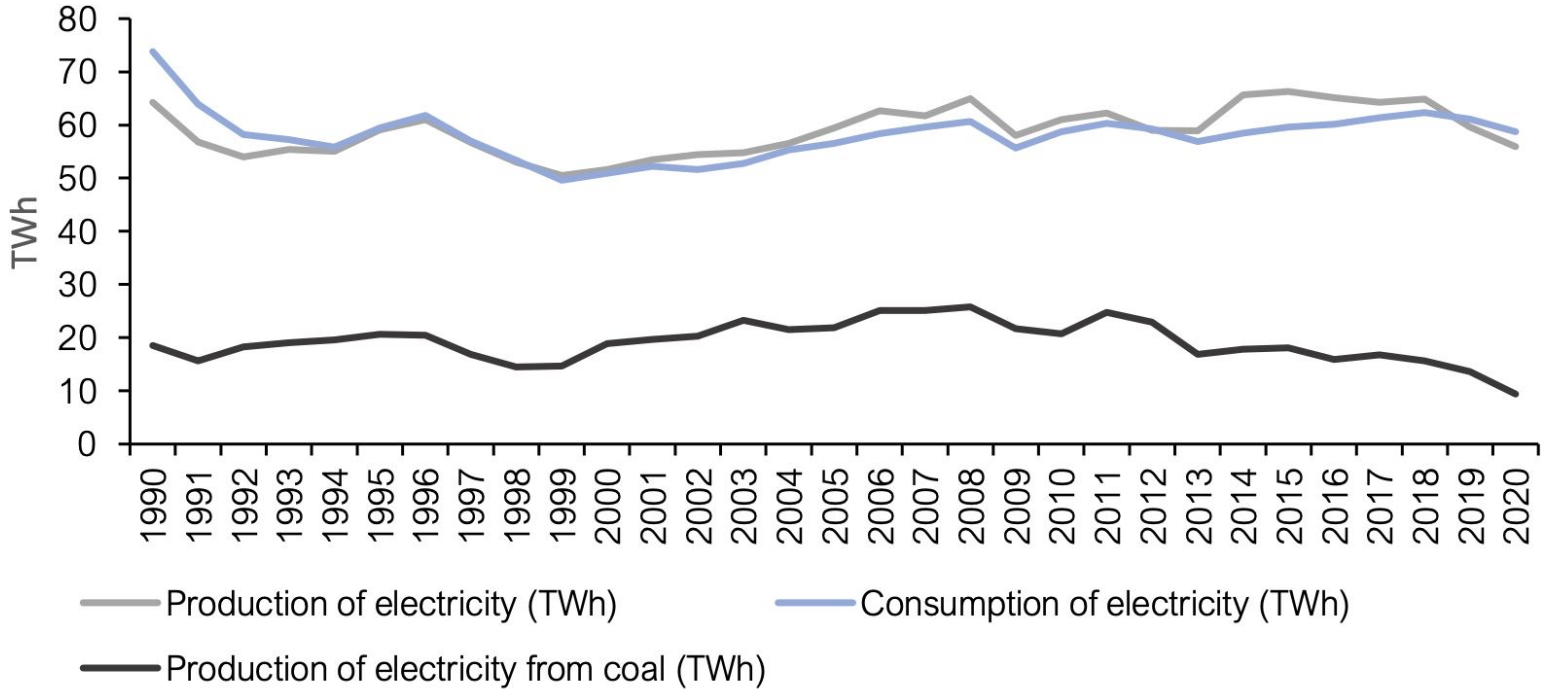
2000

2023



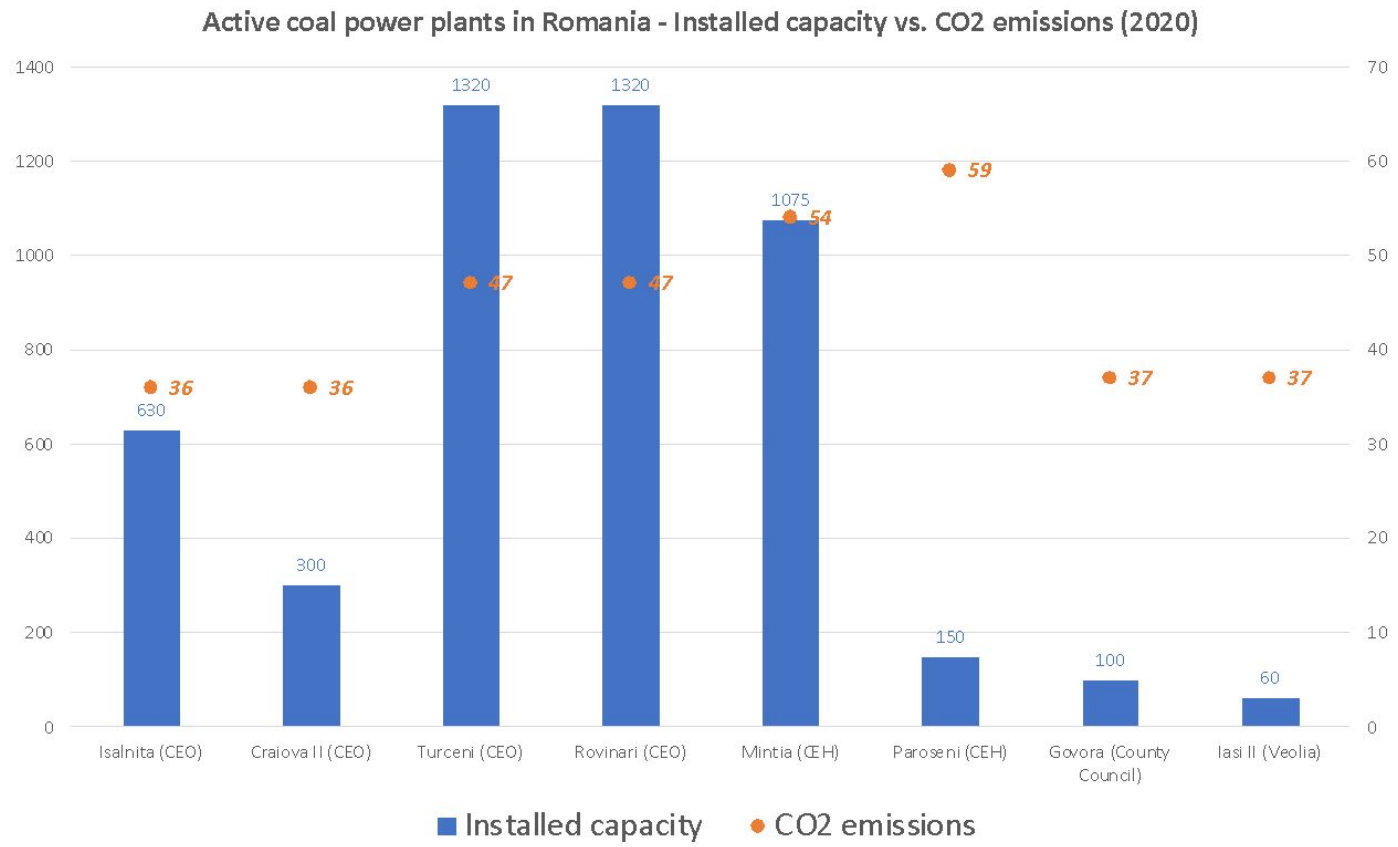
Source:
- maps developed by Energy Policy Group
- data available from Europe Beyond Coal, at September 1st 2023

Evolution of coal generated electricity | Total production and consumption (1990-2020)



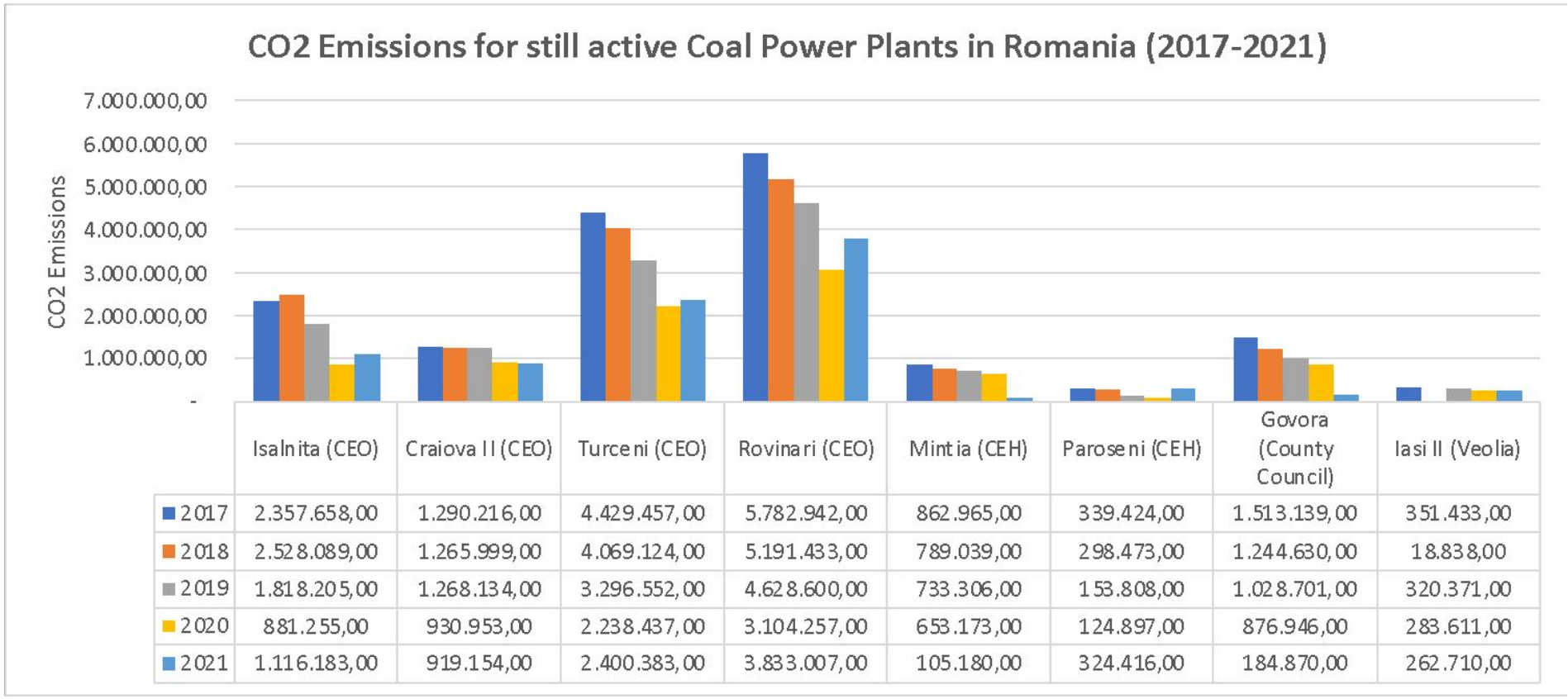
Source: EPG analysis based on Eurostat data (2022)

Overview of active coal power plants in Romania (2023)



Source: Europe Beyond Coal database

CO2 Emissions for still active Coal Power Plants in Romania (2017-2021)



	Isalnita (CEO)	Craiova II (CEO)	Turceni (CEO)	Rovinari (CEO)	Mintia (CEH)	Paroseni (CEH)	Govora (County Council)	Iasi II (Veolia)
2017	2.357.658,00	1.290.216,00	4.429.457,00	5.782.942,00	862.965,00	339.424,00	1.513.139,00	351.433,00
2018	2.528.089,00	1.265.999,00	4.069.124,00	5.191.433,00	789.039,00	298.473,00	1.244.630,00	18.838,00
2019	1.818.205,00	1.268.134,00	3.296.552,00	4.628.600,00	733.306,00	153.808,00	1.028.701,00	320.371,00
2020	881.255,00	930.953,00	2.238.437,00	3.104.257,00	653.173,00	124.897,00	876.946,00	283.611,00
2021	1.116.183,00	919.154,00	2.400.383,00	3.833.007,00	105.180,00	324.416,00	184.870,00	262.710,00

Source: Europe Beyond Coal database

EU’ Carbon Price increase is adding pressure on existing fossil-based generation

Source: Financial Times & Refinitiv

Decarbonization and Coal phase-out

Is fuel switching an option?

- An adjusted coal phase-out plan needs to be developed, in accordance to continously ambitious EU objectives for 2030 and beyond.
- Moreover, given the relatively poor technical efficiency of the coal generation units, the decreasing costs for renewable technologies, as well as the increased price of emission allowances, coal-fired electricity generators are becoming less of a solution for the Romanian energy sector.
- For this reasons, fuel switching – especially those involving massive investements in gas-fired generation – needs to be carefully considered given emission projections (less than coal generation, but still significant) and the increasing costs of gas. A miscalculation of the switching scale may lead to stranded assets in just a few years.
- A particular fuel switch scenario is represented by coal-to-black-pellets transformation. As shown in the “Paroseni Case Study” section of the report, while this conversion brings considerable emission reduction, the main challenge is related to fuel availability on the medium/long run.