THE GLOBAL STOCKTAKE
CLIMATE DATATHON

PROMPT OWNER
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PROMPT TOPIC
Carbon trading

PROMPT DATASET

EUETS.INFO: https://euets.info/download/

EEA EU ETS Explorer:
https://www.eea.europa.eu/data-and-maps/data/european-union-emissions-trading-scheme-17

TOPIC BACKGROUND / PROBLEM STATEMENT:

The European Union has recently updated the 2030 emissions reduction target to 55% relative to 1990. One of the main policy instruments to achieve this goal is the EU Emission Trading System (EU ETS) that aims to reduce electricity and large industry emissions by 43% relative to 2005. In the EU ETS, companies receive or buy (at auction or market) emission allowances to emit greenhouse gas emissions. Due to the increased ambition of the EU, the annual emission allowances for the period 2021-2030 will decrease more rapidly than before. In addition, the number of freely allocated allowances that avoid carbon leakage will be restricted, and the Market Stability Reserve that avoids a too large build up of surplus allowances has been revised.

MAIN PROMPT CHALLENGE

Construct and visualize historical data from before 2021, and projected emissions in the period 2021-2030 per EU Member State (and additional countries), sector (electricity vs industry, and industry sectors in more detail) or groups of large companies. In addition, add the remaining emissions that need to be decreased by other EU policy instruments. Using geographical maps is a plus.

SUPPLEMENTARY QUESTIONS

1. Include the number of allowances that are freely allocated in your visualization, and include a clear description for interested users of the assumptions made to develop projections.
2. Develop two scenarios in which the Market Stability Reserve would come into effect (or let users determine input parameters for this) and show the change in emissions allowances.
3. Show separately the impact of aviation allowances.

OPPORTUNITIES AND CHALLENGES WITH THE CURRENT DATA

The biggest challenge is to summarize the data for the year 2021, and make valid assumptions for the projections to 2030. In addition, including the evolution of free allocated allowances (based on benchmarks) and Market Stability Reserve needs clear understanding of the ETS rules and also valid assumptions for projections to 2030.

APPENDIX - DATA TABLES AND VARIABLES

Description of the EU ETS policy instruments is available at EU Climate Action:
https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en

'**allowance**' means an allowance to emit one tonne of carbon dioxide equivalent during a specified period, which shall be valid only for the purposes of meeting the requirements of this Directive and shall be transferable in accordance with the provisions of this Directive.

'**installation**' means a stationary technical unit where one or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution;

A '**benchmark**' is a reference value for the greenhouse gas emissions, in tCO2, relative to a production activity. The benchmark is used to determine the level of free allocation that each installation within each sector will receive. In the EU ETS product benchmarks have been based on the average greenhouse gas performance of the 10% best performing installations in the EU producing that product or equivalent levels where no data was available.

Data documentation EUETS.INFO
https://euets.info/static/download/Description_EUTL_database.pdf