

Brussels, December 5th, 2023

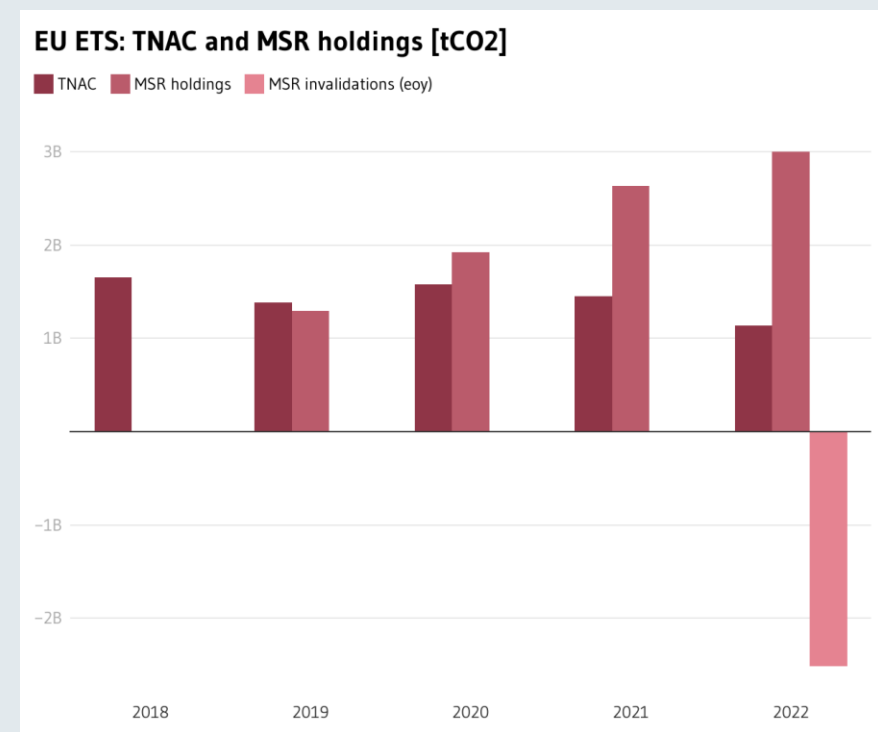
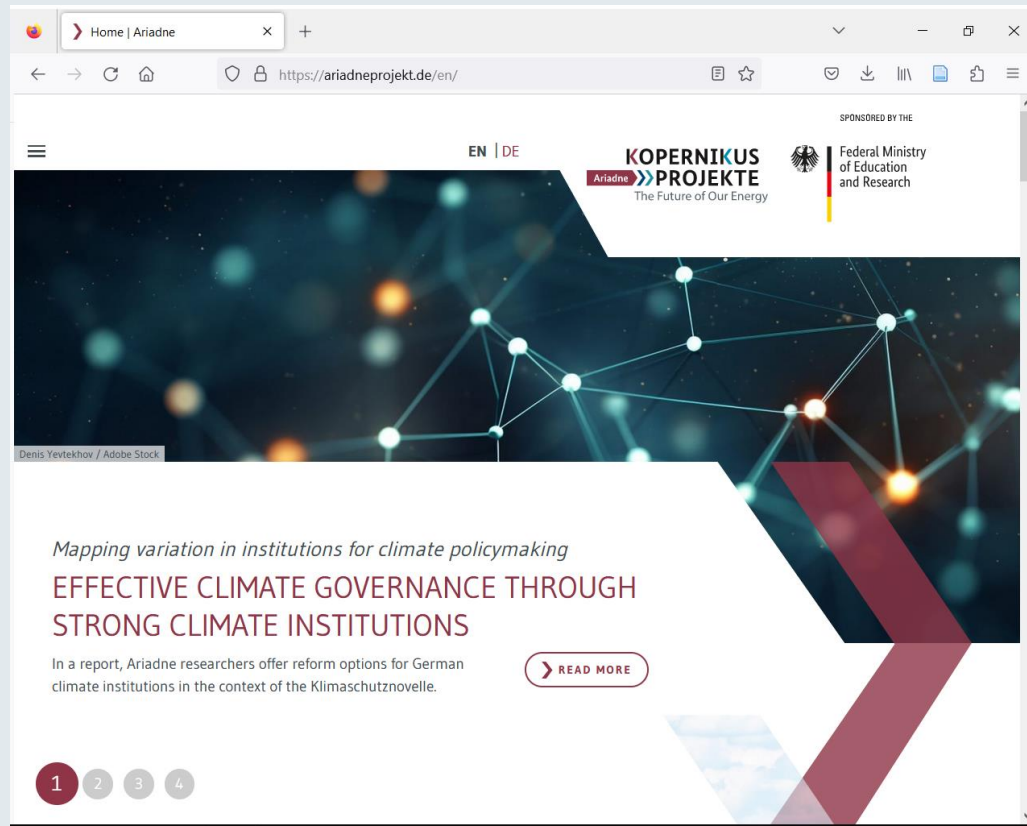
ARIADNE WEB-PLATFORM: ELICITING DEMAND AND USE CASES



GEFÖRDERT VOM



ARIADNE WILL CREATE A NEW WEB PLATFORM



Primary tool for visualization: [Datawrapper](#)

OBJECTIVES FOR THE NEW WEB-PLATFROM

- › Avoid ending up at the **cemetery of online tools** (Paul Ekins) after the project
- › Requires **persistent uses cases**, and **“real” demand**
- › **Two groups of users** envisaged:
 - › **Stakeholders:** Platform provides **information** useful for **understanding policies** (project results, but also other information)
 - › **Modelers:** Platform provides **data** useful for **modelling** (within project and outside)
- › **Main questions** for today: (1) Which data/information is useful for modelers and stakeholders? (2) How to provide it, and how to go beyond what already exists?

POTENTIAL USE CASES FOR STAKEHOLDERS

1. Policy dashboard
2. Policy FAQs
3. Policy “projections”



1. POLICY DASHBOARD (1)

› Dashboards

“seek to provide a concise, easy-to-use overview of the major climate laws and programs”

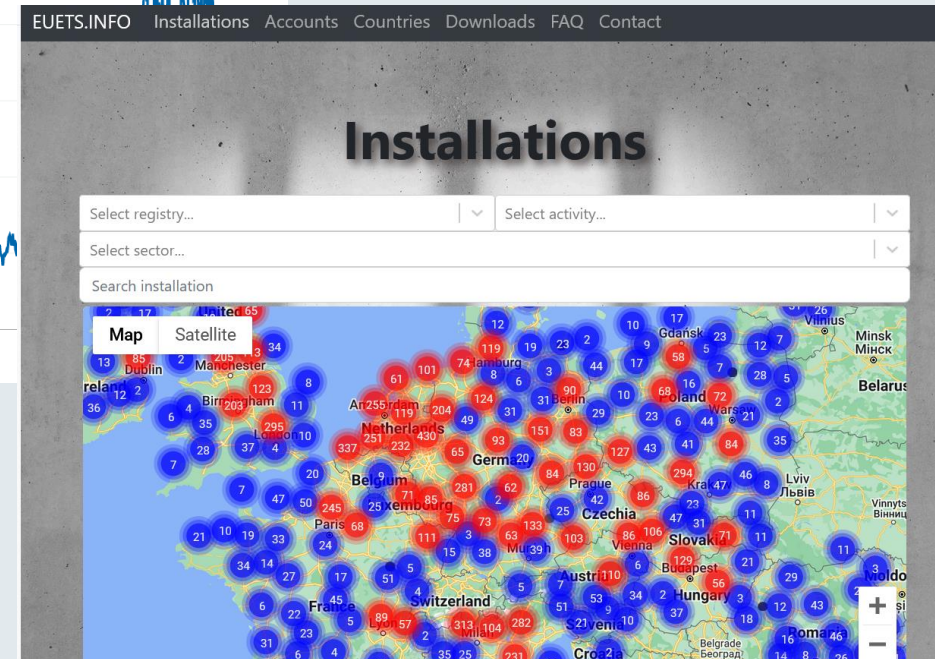
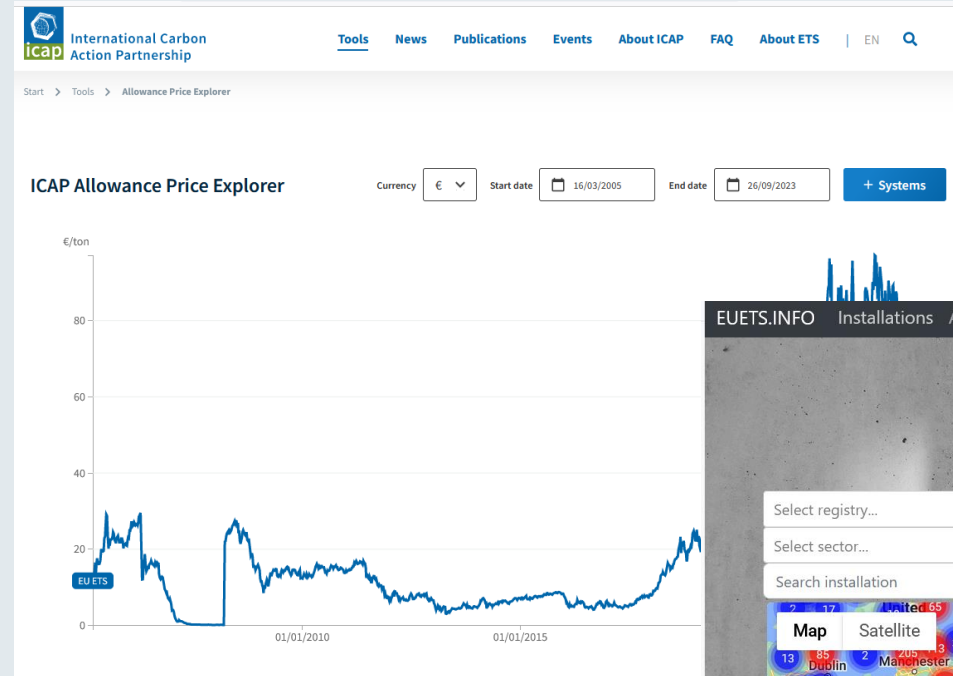
The image shows two overlapping web dashboards. The top one is from Berkeley Law, titled 'California Climate Policy Dashboard'. It features a breadcrumb trail: Home > Research > Center for Law, Energy, & the Environment > Research Programs > Climate & Energy > California Climate Policy Dashboard. Below the title, it says 'For more detail, view CLEE's California Climate Policy Fact Sheets here.' A teal box titled 'About the Dashboard' explains its purpose: 'Our California Climate Policy Dashboard seeks to provide a concise, easy-to-use overview of some of the major California climate laws and programs and introduce readers to some of the state regulators responsible for implementing them. Readers can find detailed information on these efforts by following links to full statutory text, agencies' program pages, and CLEE reports on these laws and programs.'

The bottom dashboard is from CalEPA (California Environmental Protection Agency), titled 'California Climate Dashboard'. It has a blue header with the title and a navigation menu including Home, About Us, Departments, Programs, Communications, Get Involved, and Contact Us. Below the header, it features a section titled 'Closing in on our climate targets' with a line graph showing greenhouse gas emissions (MMT CO2e) from 2000 to 2030. The graph shows a solid line for historical emissions and a dashed line for the 2030 target. A callout indicates 'Hit target 6 years early' in 2014. To the right, text states: 'Our path to 2030 and beyond. The 2006 California Global Warming Solutions Act (AB 32) set a target to return greenhouse gas emissions to 1990 levels by 2020. California surpassed this target six years early in 2014 (CARB). California's next climate target is to reduce emissions by 40%'.

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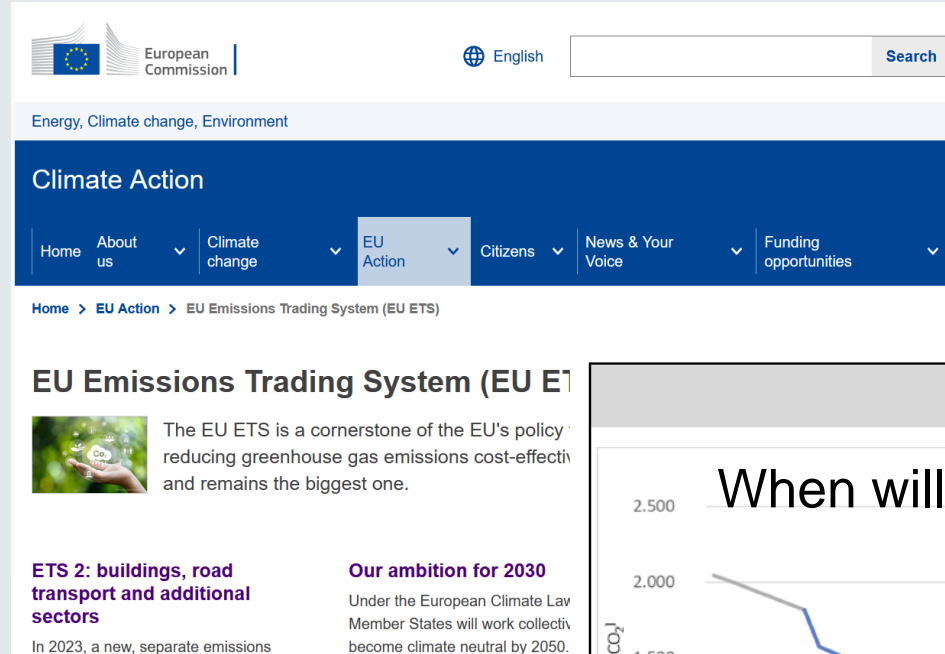
1. POLICY DASHBOARD (2)

- › Dashboards could link to relevant data and indicators
- › Example: EU ETS

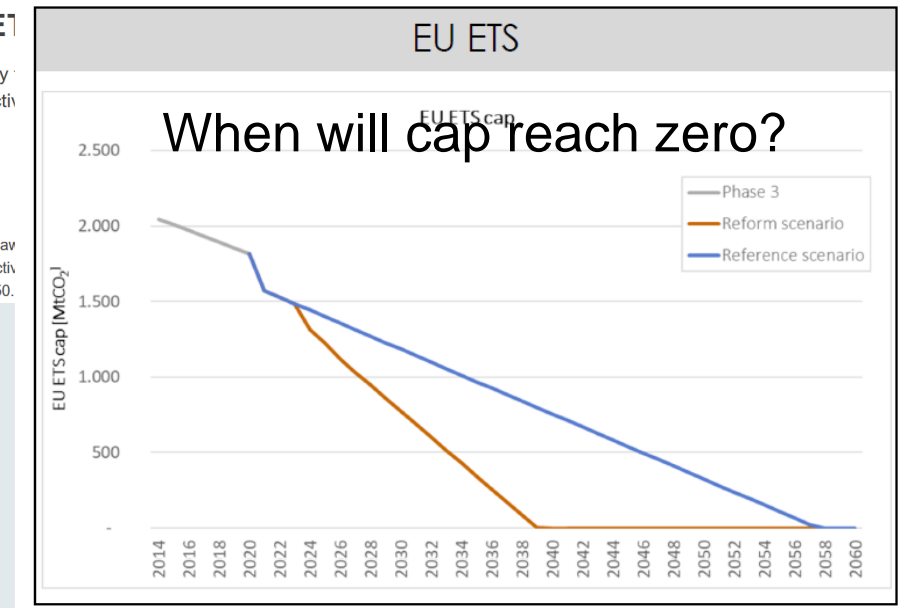


2. POLICY FAQs

- › Policies becoming increasingly complex, details matter
- › FAQ to shed light on most important details not covered in “official information”
- › Example (again): EU ETS



The screenshot shows the European Commission website. The top navigation bar includes the European Commission logo, a language selector set to 'English', and a search box. Below this, the main navigation menu is visible, with 'Climate Action' selected. The breadcrumb trail reads 'Home > EU Action > EU Emissions Trading System (EU ETS)'. The main heading is 'EU Emissions Trading System (EU ETS)'. A sub-heading reads 'The EU ETS is a cornerstone of the EU's policy reducing greenhouse gas emissions cost-effectively and remains the biggest one.' Below this, there are two columns of text: 'ETS 2: buildings, road transport and additional sectors' and 'Our ambition for 2030'.



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3. POLICY SCENARIOS AND PROJECTIONS (1)

- Forward looking model analysis important for policy development and debate
- Various “official projections” out there already

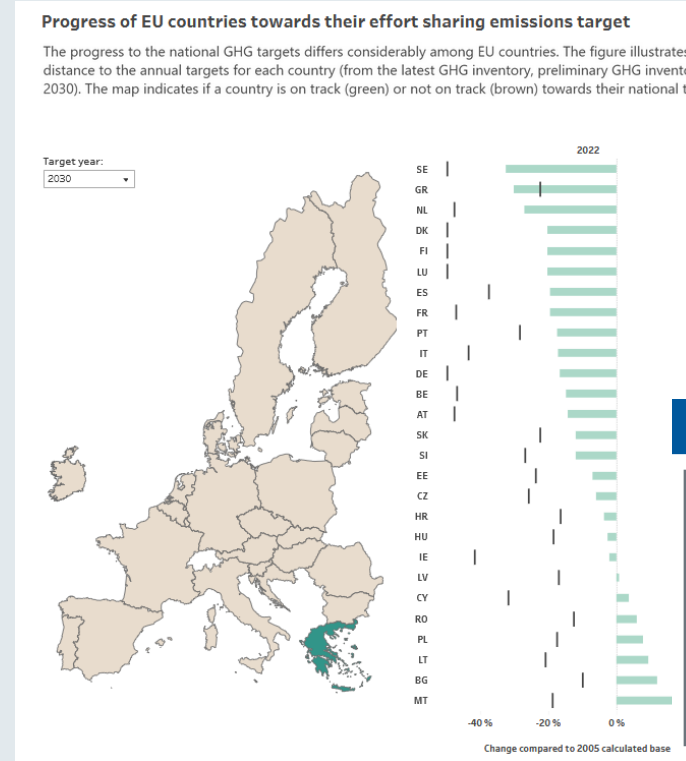


Table 36: ETS prices by 2030 in the difference scenarios (€2015/tCO₂)

Scenarios	Carbon price “current” ETS sectors		Carbon price “new” ETS sectors	
	2025	2030	2025	2030
REF2020	27	30	0	0
REG	31	42	0	0
MIX	35	48	35	48
MIX-CP	35	52	53	80

3. POLICY SCENARIOS AND PROJECTIONS (2)

› Still a lot of data/information that seems to **be wanted**, including:

› Distributional analysis on member state level

› Long(er)-term analysis, e.g. new 2040 target

› Uncertainties

› Alternative (new) policy options

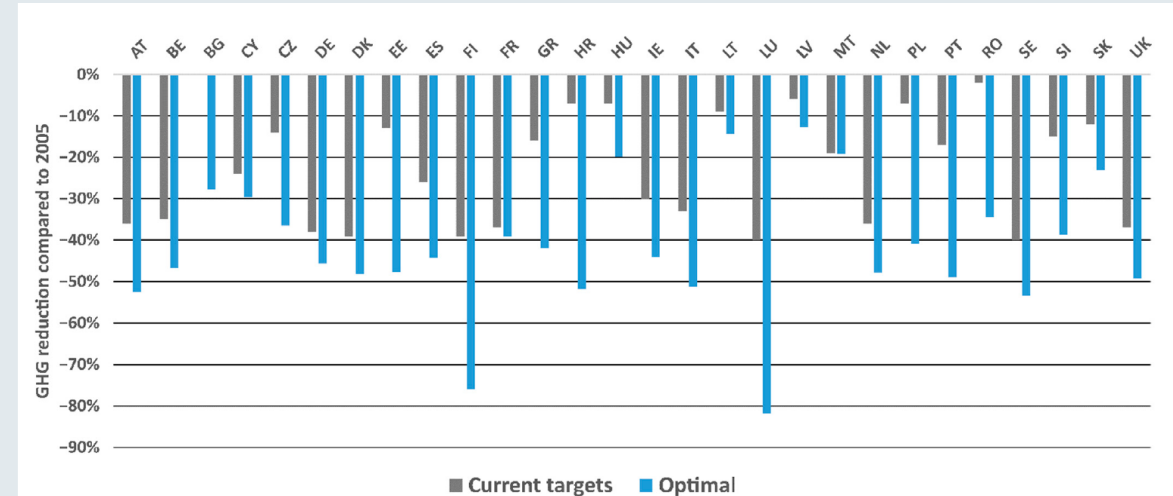
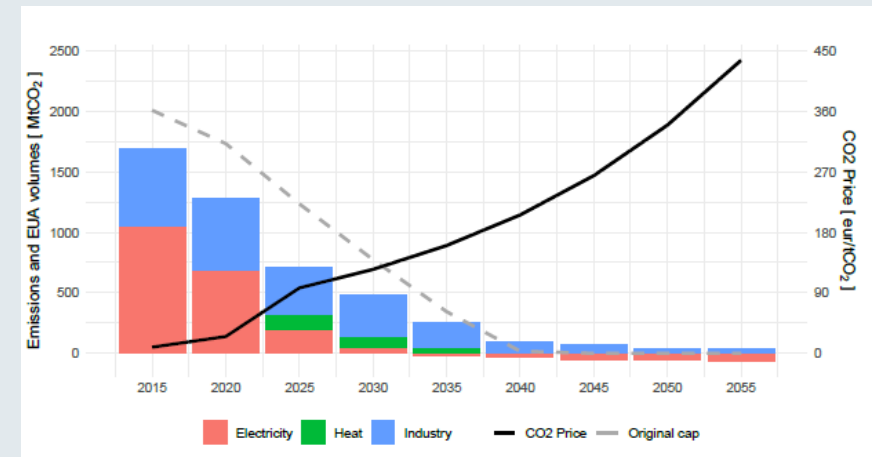


Figure 6. Country specific greenhouse gas reduction in the ESR sector against 2005 in the Optimal scenario in 2030 compared to the current targets, agreed in the Effort Sharing Regulation.



QUESTIONS FOR DISCUSSIONS

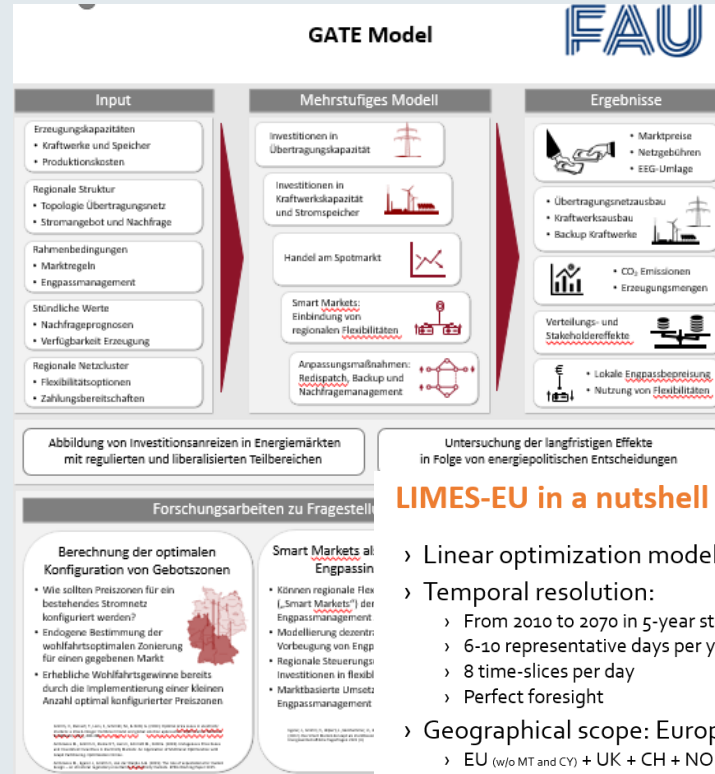
- › Which **policies** to focus on?
- › Are there **data/indicators you regularly use** in your work?
- › How could **platform add value** beyond what already exists?
- › How to **organize and bring in** broader expert knowledge?
- › What are the **weaknesses/blind spots** of official projections new platform could overcome?
- › ...

ADDED VALUE FOR QUANTITATIVE MODELLING GROUPS



1. MODEL FACT SHEETS

- › Provide concise, easy-to-access information on energy models in ARIADNE
- › E.g. data structure, software, contacts details
- › Overview “use cases”
- › Link technical documentation



LIMES-EU in a nutshell

- › Linear optimization model
- › Temporal resolution:
 - › From 2010 to 2070 in 5-year steps
 - › 6-10 representative days per year
 - › 8 time-slices per day
 - › Perfect foresight
- › Geographical scope: Europe (29 model regions)
 - › EU (w/o MT and CY) + UK + CH + NO + aggregated Balkan
- › 62 generation and storage technologies
- › EU ETS energy-intensive industry: MACC
- › Policy focus: EU ETS and MSR
- › Stylised representation of buildings: investment and dispatch decision for DH/P2H endogenous (heat demand profiles from [When2Heat](#) database [Ruhnau, 2019; Ruhnau et al., 2019; Ruhnau and Muesel, 2022])



2. MODEL DATA SOURCES AND APPLICATION

Different options:

- › Link collection for data sources (EU, country)
- › FAQ with data sources to input data (specific models?)
- › Data sets as open data
- › Complete model instances

The screenshot shows the IRENA website interface. At the top, there is a 'Menu' bar with options: Menu, Report, Data, Balance. Below this, there are two main sections: 'Geographical' and 'Indicators'. Under 'Geographical', there is a 'Region' dropdown menu with options: Africa, Central America and the Caribbean, Europe (selected), North America, South America, Asia, Eurasia, Middle East, and Oceania. Under 'Indicators', there is a list of indicators: Electricity Generation (GWh), Electricity Installed Capacity (MW) (selected), Heat Generation (TJ), and Public Flows (2019 USD M). At the bottom of the screenshot, there is a link to 'latest data' at <https://www.irena.org/Statistics>.

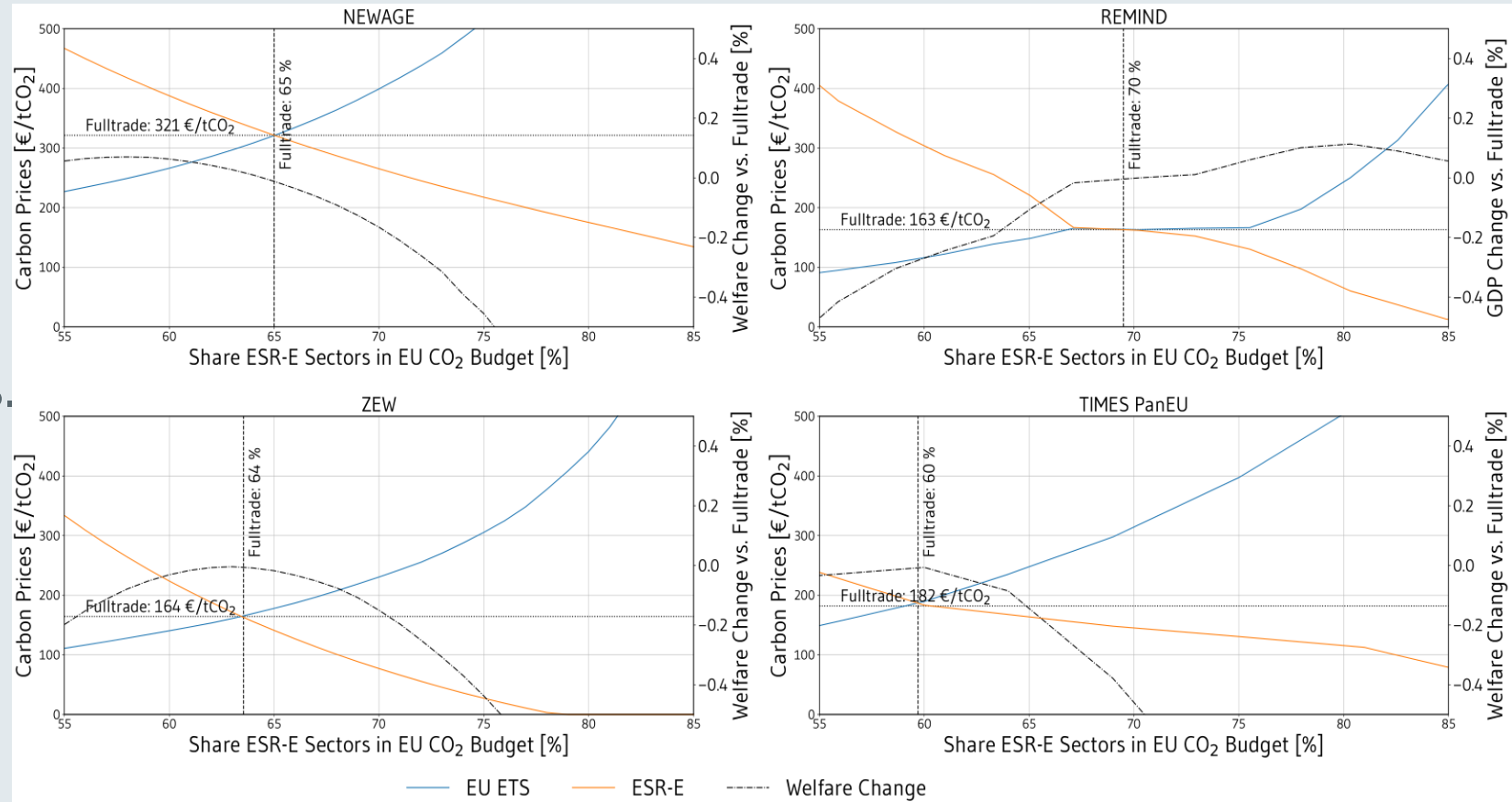
The screenshot shows the Eurostat Data Browser interface. At the top, there is a search bar and a 'Data Browser' title. Below this, there is a navigation bar with options: ALL DATA, RECENTLY UPDATED, DOWNLOADS. The main content area shows the title 'Disaggregated final energy consumption in households - quantities' and a breadcrumb trail: Environment and energy > Energy > Energy statistics - quantities > Energy statistics - quantities, annual data > Disaggregated final energy consumption. There are also links for 'About this dataset', 'Explanatory texts', and 'Add to My datasets'. At the bottom right, there is a 'Download' button and a 'Standard international energy product classification (SIEC) [15/15]' dropdown menu.

Compilation TNAC reports		2017	2018	2019	2020	2021	2022
Supply							
a)	Allowances banked from phase 2 (2008-12)	1,749,540,826	1,749,540,826	1,749,540,826	1,749,540,826	1,749,540,826	1,749,540,826
b)	Allowances allocated for free for the period from 1 January 2013 to 31 December [year], including from the NER	4,402,755,035	5,162,023,498	5,850,263,308	6,588,904,098	7,141,195,439	7,683,593,499
c)	Allowances not allocated under Articles 10a(7), 10a(19) and 10a(20) of Directive 2003/87/EC in phase 3 (2013-20)				301,801,477	886,806,455	886,806,455
d)	Allowances deducted from c) and auctioned for the Innovation Fund				- 50,000,000	- 50,000,000	- 50,000,000
e)	Allowances deducted from c) and placed in the NER					- 200,000,000	- 200,000,000
f)	Allowances auctioned from 1 January 2013 to 31 December [year], including early auctions	3,725,458,000	4,641,208,000	5,229,748,000	6,008,253,000	6,591,205,500	7,073,594,500
g)	Allowances used for flexibility purposes in 2021-22					7,213,787	14,427,576
h)	Allowances deducted from auction volumes in 2014-16			900,000,000	900,000,000	900,000,000	900,000,000
i)	Allowances deducted from auction volumes in 2019-2022 in line with the Communications on the total number of allowances in circulation			397,124,722	772,749,992	1,095,875,607	1,464,416,332
j)	Allowances monetised for the NER300 programme	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
k)	International credits used in respect of	419,338,468	434,049,616	450,221,816	478,844,902	497,248,017	497,248,017

3. MULTI-MODEL ASSESSMENT

Different options:

- Orientated on specific (policy) questions
- Orientated on European vs. member states transition pathways
- Orientated on sectoral analysis



➤ ...



QUESTIONS FOR DISCUSSIONS

- › Which **information on models** to focus on?
- › Are there **platforms on models** you already use in your work?
- › If so, where can our **platform add value** beyond what already exists?

- › Where do you see the most value in **data sources and applications**?
- › What do you think would be the **typical user** of this part of the platform?