

PATHFNDR Scenarios

Work package 1

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What are PATHFNDR scenarios?

- Scenarios are alternative developments of the future energy system and
- Quantifying these scenarios helps us with understanding the role of

flexibility and sector coupling in achieving the Swiss net zero GHG goal.

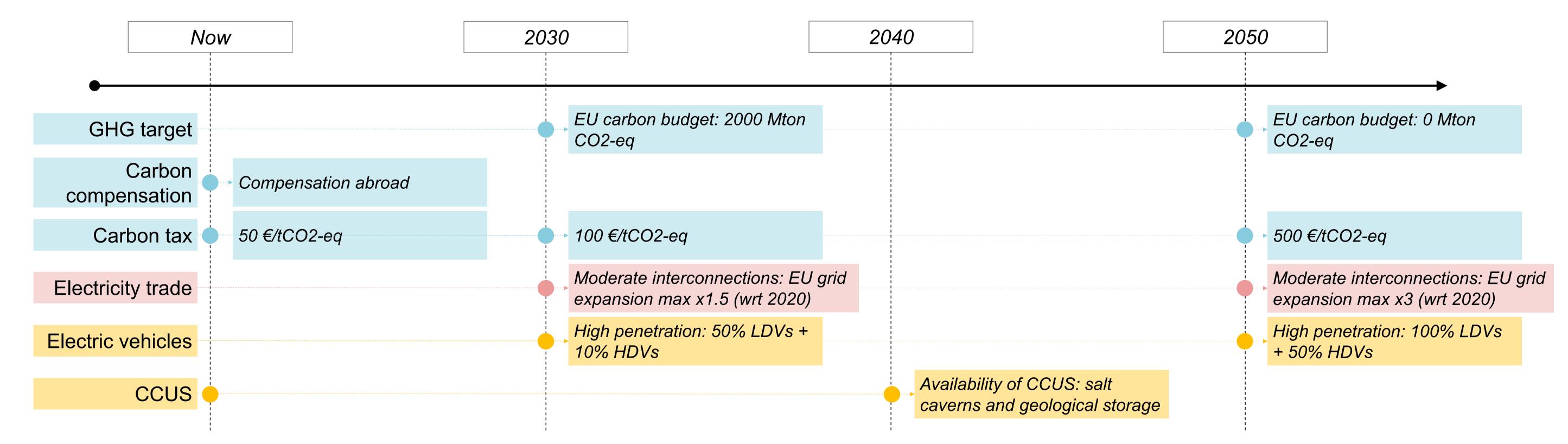
How are PATHFNDR scenarios built?

Scenarios are built considering a tree-structure for which each scenario is characterized by 4 different dimensions. Under each dimension, a set of thematic
variables are defined. Variables are not meant to cover all possible assumptions but indeed to highlight those drivers on which policy and people can assert
influence. Variables are quantified by setting up variants. Multiple variants can be defined for the same variable to depict different assumptions or boundary
conditions in alternative scenarios.

Scenario	Dimensions	Variables	Variants
Scenario	Policy dimension	 GHG target Carbon compensation Carbon pricing Regulatory framework 	 Compensation abroad No compensation abroad Low interconnection Moderate interconnection Moderate interconnection Low penetration Low penetration Each variant has to be: Quantified; and Time referenced
	Energy market integration dimension	 Electricity trade Biomass and biofuels trade Hydrogen & synthetic fuels trade 	
	Social dimension	 Public acceptance of new infrastructure Willingness to change lifestyles and consumption patterns Acceptance of higher energy costs in the short term 	
	Technological dimension	 Electric vehicles Heating technologies Nuclear plant lifetime Availability of CCUS Availability of seasonal heat storage Availability of hydrogen storage Availability of hydrogen transport grid 	

Time referenced

Example of a quantified scenario



How to integrate Swiss scenarios and European scenarios

 Different scenarios are developed for both Europe and Switzerland. Those scenarios can be then combined together. A subset of all possible combinations will be investigated.

How to interactively participate in the SCENARIO building process

- The SCENARIO document Scenario dimensions and scenario construction process is meant to collect the process and the building blocks required to construct the scenarios. The document collects references to dataset and the assumption underlying the scenario building process.
- New versions of the document will be periodically released with updates. Let's contribute to the
 process accessing through the QR codes aside.

Have a look at the SCENARIO document version 22.12

Actively contribute suggesting new dimensions and variants



REFERENCES

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