

A common nomenclature for assessing low-carbon transition pathways

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KEYWORDS

Energy system; Scenario Analysis; Nomenclature; open-source python package

ABSTRACT

We present ongoing work in the Horizon 2020 project openENTRANCE to develop a common nomenclature for integrated-assessment and energy system scenario results/data. This effort is based on the IAMC data template and the list of variables used in IAM comparison projects (CD-LINKS, ENGAGE, NAVIGATE) and scenario ensemble compilations (IAMC 1.5°C Scenario Data supporting the IPCC SR15).



The nomenclature is developed in an interactive process on GitHub comprising technical-engineering, economic and social dimensions and seeks to bridge a user-focused, easy-to-read file format with a structure that can be used in scripted workflows.

	A	B	C	D	E	F	G	H	I
1	Model	Scenario	Region	Variable	Subannual	Unit	2015	2020	2025
2	GENeSYS-MOD	Directed Transition	Europe	Primary Energy	Year	EJ/yr	70.48	64.73	...

An illustrative example of the tabular openENTRANCE data format

To facilitate an open discussion and for making it easy for non-experts to get an understanding of the code lists and related definitions, the nomenclature is implemented using the yaml-file format for listing variables and regions together with definitions and additional information.

We also implemented an installable Python package providing several validation and utility functions of conforming to the nomenclature, so that definitions and mappings can be easily used in scripted scientific workflows for automated scenario processing.



More information: <https://github.com/openENTRANCE/nomenclature>