

**Interreg
Danube Region**



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Danube Indeet

D1.1.2

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D1.1.2 – Regional

infrastructure analysis

A general analysis of <region name>

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Version history – Please note that this is the default table style for the document.				
Number	Date	Author(s)	Partner(s)	Description
1	10.09.2024	Balázs Kiss	PP11 Paks	First draft version of the national analysis template that will be compiled into D1.1.2.
2	18.10.2024	Balázs Kiss Filip Rukavina Antonio Karmeluti	PP11 Paks PP10 UNIGZFER	Second draft updated with feedback from PP10.

1. Introduction

1.1. Context in the project

Deliverable D1.1.2 – Report on infrastructure analyses is a part of activity A1.1 – Infrastructure analysis. The infrastructure analysis relies on two main pillars: i) infrastructural data collected by all partners that will be used in the Danube Indeet Model testing and later on as data provided in the Model for broader use; and ii) contributes to the Strategy for an integrated energy and mobility concept. The Strategy is one of the main outcomes of Danube Indeet, whereas this

regional/national analysis is a textual summary of the state-of-art in each region regarding the infrastructure and market of electricity, hydrogen, and renewables. It provides context regarding: the infrastructural landscape, data sources, data collection methodology, selection criteria and geographical coverage, the composition and key players of national and regional infrastructure, and it provides background information about electrical and hydrogen infrastructure among others.

By collecting this information, an overview of the current infrastructural composition will be available for stakeholders, contributing to the implementation of other project activities that require understanding the circumstances of energy, transport systems, hydrogen, etc.

Please consider exploring the national databases in conjunction with this document to gain a better understanding of the infrastructural landscapes of the Danube Indeet partner countries.

The topics covered by the national reports are the following:

- **Overview, data collection methodology (including main data sources for further reference), selection criteria (if applicable), description and justification of geographical coverage**
- **Electricity infrastructure and market:**
 - Overview, national data on consumption and production
 - Household and non-household (business) cases (prices, tariffs)
 - Transmission and distribution networks: infrastructural overview, key players, daily schedules, grid fees
 - Connection costs
 - Energy storage
- **Renewable energy market and infrastructure: subsidies, models, if any;**
- **Hydrogen infrastructure and market: production and usage, relevant projects, relevance to natural gas grid**
- **Oxygen market and usage (if any)**
- **EV charging infrastructure and market**

INTERNAL NOTE: Please note that all sections should begin with an overview of national numbers, statistics if they are available followed by aggregated data for your region (or the geographical coverage of the database, if possible). All provided information should have references (links).

2. Analysis

2.1 Overview and data collection

methodology

- Overview
- Data collection methodology, including main data sources for further reference
- Selection criteria (if applicable)
- Description and justification of geographical coverage

2.2 Electricity infrastructure

- Electricity production, sources, description of important players in the market and their roles
- Transmission system description, very brief description of important transnational connections, connection conditions and costs, grid usage fees
- Distribution system description, connection conditions and costs, grid usage fees
- Models, tariffs and fees of electricity supply for businesses (non-households)
- Models, tariffs and fees of electricity supply for households if applicable
- Regulations and provisions regarding certificate of origin, schemes supporting RES/hydrogen/storage
- Balancing and ancillary services m

- **Energy storage**

2.3

Renewable energy market

- **Renewable electricity:** renewable energy production per source, percentage in electricity production and primary energy production (national, and if possible, regional data)
- **Renewable energy plants in the region/country:** installed power and annual energy production (and surplus percentage if that data is available)
- **Renewable projects in the region/country,** pilots, sector coupling
- **Subsidies, models that apply in your country**
- **Green energy certification**

2.4

Hydrogen infrastructure

- **Production and consumption data on hydrogen**
- **Hydrogen projects**
- **Use of oxygen, demand and supply for oxygen (if applicable), oxygen as a byproduct of hydrogen production via electrolysis should be treated separately**

2.5

EV charging infrastructure

- **National trends, municipality/regional charger infrastructure presentation**
- **Charging sites within the municipality/region**
- **Pricing schemes**
- **Status of V2G**