natran
The core of
your energies

# Call for expressions of interest in inter-regional CO2 transport infrastructure

## $CO_2$ Specifications Proposal

## Disclaimer

The infrastructure and carbon dioxide technical specifications presented in this document ("**CO2 Specifications Proposal**") reflect the best available knowledge at the time of publication. The information contained in this document reflects the views of NaTran S.A. at this stage and is made public for information purposes only and without any commitment on the part of NaTran S.A., and should not be considered as giving rise to any contractual relationship between NaTran S.A. and any interested party.

# 1 Introduction

CO2 specifications, just as they exist for natural gas transmission, are needed to ensure the safe operation of future CO2 transmission networks and to ensure interoperability with adjacent systems.

These CO2 specifications must make it possible to preserve the integrity of the transport structures and to guarantee the routing of CO2 to other transport infrastructures.

Any CO2 stream introduced on the CO2 transport infrastructure proposed in this call for expression of interest will therefore have to comply with specifications in terms of:

- $CO_2$ quality (composition)
- Pressure and temperature conditions

# 2 CO2 quality

CO2 quality specifications will apply to CO2 stream injected into the transport infrastructure and to deliveries to export points, networks and other adjacent transport systems and CO2 utilisation sites.

**The CO2 quality specifications proposal will be shared with stakeholders responding to this call for expressions of interest.**

It is based on benchmarks, studies and R&D work and takes account of existing standards (in particular NF EN ISO 27913: 2025[1]) and the standardisation work in progress within CEN TC 4 74[2].

This proposal defines the following component thresholds: CO2 (> 96%), H2, N2, Ar, CH4, CO, O2, H2S, SO3, total S, NOx, HCN, H2O, ethanol, methanol, MEG, TEG, amine compounds, NH3, acetic acid, formaldehyde, acetaldehyde, other aldehyde compounds, aromatic hydrocarbons (C6-10), BTEX, aliphatic hydrocarbons (C2-8 and C9-10), VOCs, mercury, cadmium, thallium, solid particles.

All other components not listed above must be declared by the CO2 producer for assessment. The CO2 stream must not contain impurities that could damage downstream transport infrastructures, equipment and systems or tanks.

The CO2 quality proposal for this CO2 transport infrastructure project may be amended as a result of discussions with interested parties, advances in R&D, developments in processing techniques, and any publications or updates of standards on CO2 transport infrastructures.

1 NF EN ISO 27913: 2025: Capture, transport and geological storage of carbon dioxide - Pipeline transport systems
2 Technical Committee on Carbon Dioxide Capture, Transport, Utilization and Storage (CCUS) of the European Committee for Standardization

NaTran's objective is to establish an optimal CO2 quality specification for the entire CCUS value chain.

# 3 Pressure and temperature conditions

At this stage, NaTran favours a transport infrastructure for CO2 injected and transported in a gaseous state.

Preliminarily, the aim is to transport the gas in a gaseous state, with a maximum operating pressure of 35 bar. The operating pressure can vary between 18 barg and 35 barg.

The operating conditions for the infrastructure, and in particular the minimum and maximum pressures and temperatures, will be fine-tuned in later phases of the project, in particular in consultation with the stakeholders involved, according to the technical specifications gathered from the emitters and the CO2 export or utilisation sites, and depending on the constraints of the environment encountered and the operating conditions of the network that will be defined.