

## PREPARATION FOR DEEP DIVE FOR MARKET DEVELOPMENT TENDER

### A) The Case for Change

North<sub>2</sub> is premised on the need to introduce green H<sub>2</sub> as important pillar of a future energy system that achieves carbon neutrality by 2050 at lowest cost to society.

Beyond independent validation of above, there is a requirement for a quantified, holistic and irrefutable logic that ultimately legitimates enabling policies and compels end-users to switch towards green H<sub>2</sub>, framing North<sub>2</sub> and stipulating the case for change. Moreover, the output of this scope module also entails the delivery of a compelling North<sub>2</sub> narrative towards governments, customer executives and the broader public, and, as such, needs to be developed in co-creation with the North<sub>2</sub> consortium team.

Given the importance and urgency of this part of the scope, tenderer is requested to offer deeper insight into the proposed steps, resources/manhours, data and expected outcome. Tenderer is requested to clearly outline proposed approach to cater for the above guided by conceptual outline and minimum expectations below.

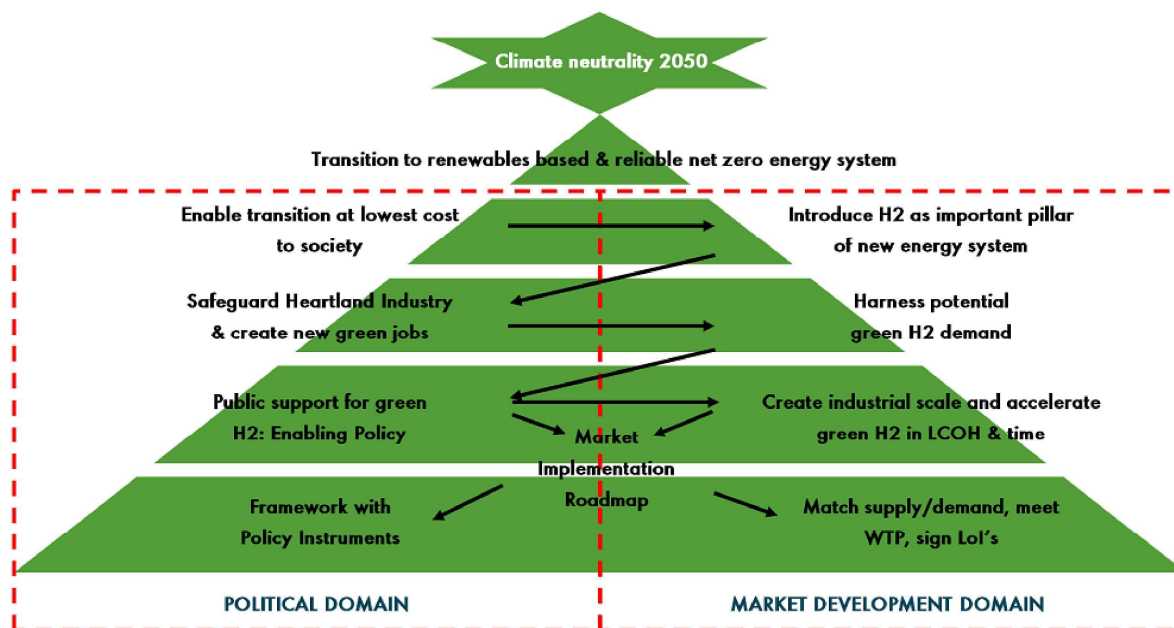


Figure 1, Intended logic depicted conceptually for guidance to tenderers

Minimum expectations 'Case for Change' scope:

- Demonstrate the need to start now (i.e. through North<sub>2</sub> Phase 1 – 4GW by 2030)
  - Show that NL, German and EU 2050 climate neutrality targets cannot be achieved without using green hydrogen to decarbonise important segments of the economy, position hydrogen as key pillar of future renewables-based and reliable net-zero energy system and work backwards

- Demonstrate what it takes in terms of building green hydrogen supply (domestic production over imports) and demand
- Place the 2030 hydrogen supply targets as put forward in the different H2 strategies (NL, DE, EU) in the 2050 perspective Outline time required to establish a well-functioning commodity market for green H2
- Demonstrate NorthH2 accelerator concept is essential (versus alternative scenarios)
  - Integrated value chain approach and orchestration will solve a number of problems that hinder the development of a green hydrogen economy
    - Bring down the LCOH
    - Coupling supply and demand
    - Enabling the required transportation and storage infra
- Demonstrate benefits large and early private and public investments in integrated green hydrogen megaprojects
  - Enable energy transition at lowest cost to society
  - Show how these investments will safeguard heartland industries
  - Show how new green jobs will be created (e.g. development of EU hydrogen supply chain, R&D)
- Establish a draft set of market mechanisms and policy instrument (building blocks), including the impact on demand and supply, needed to kick-start the market over time including any interdependencies, presented in such a way that it's easily explained to policy makers and the broader public

### **B) Market Development**

Similar as above, the tenderer is requested to offer deeper insight into the proposed steps, resources/manhours, data and expected outcome (and granularity thereof) to the develop the Market Development part of the overall scope including:

- Steps towards confirming targeted market segments
- Show the level of 'customer intimacy' you bring to the project and how your insights/connections at various levels (from senior executives to sustainability/technical experts) benefit the development of green H2 demand scenarios
- Give examples of how you would approach the analysis and engagement of a key potential customer (including estimated preparation time) and show the level of granularity of your analysis for different key parameters (e.g. technical, commercial, economics)
- Show how the information obtained from this analysis will be incorporated in the commercial and asset optimization work and in building the policy framework
- Show a rough sketch of a market implementation roadmap for one of the likely markets segments and how this underpins the i) "case for change" and ii) policy asks towards governments.