



UPDATES ON NATIONAL HYDROGEN STRATEGY

Hanoi, 25-26 October 2023



UPDATES ON NATIONAL HYDROGEN STRATEGY DRAFT

Concepts:

- In agreement with PDP8 & EMP;
- To support for achievement of targets on hydrogen in PDP8 & EMP.

EMP

II. Viewpoint, development objective

Specific objective for the development of energy industry sector:

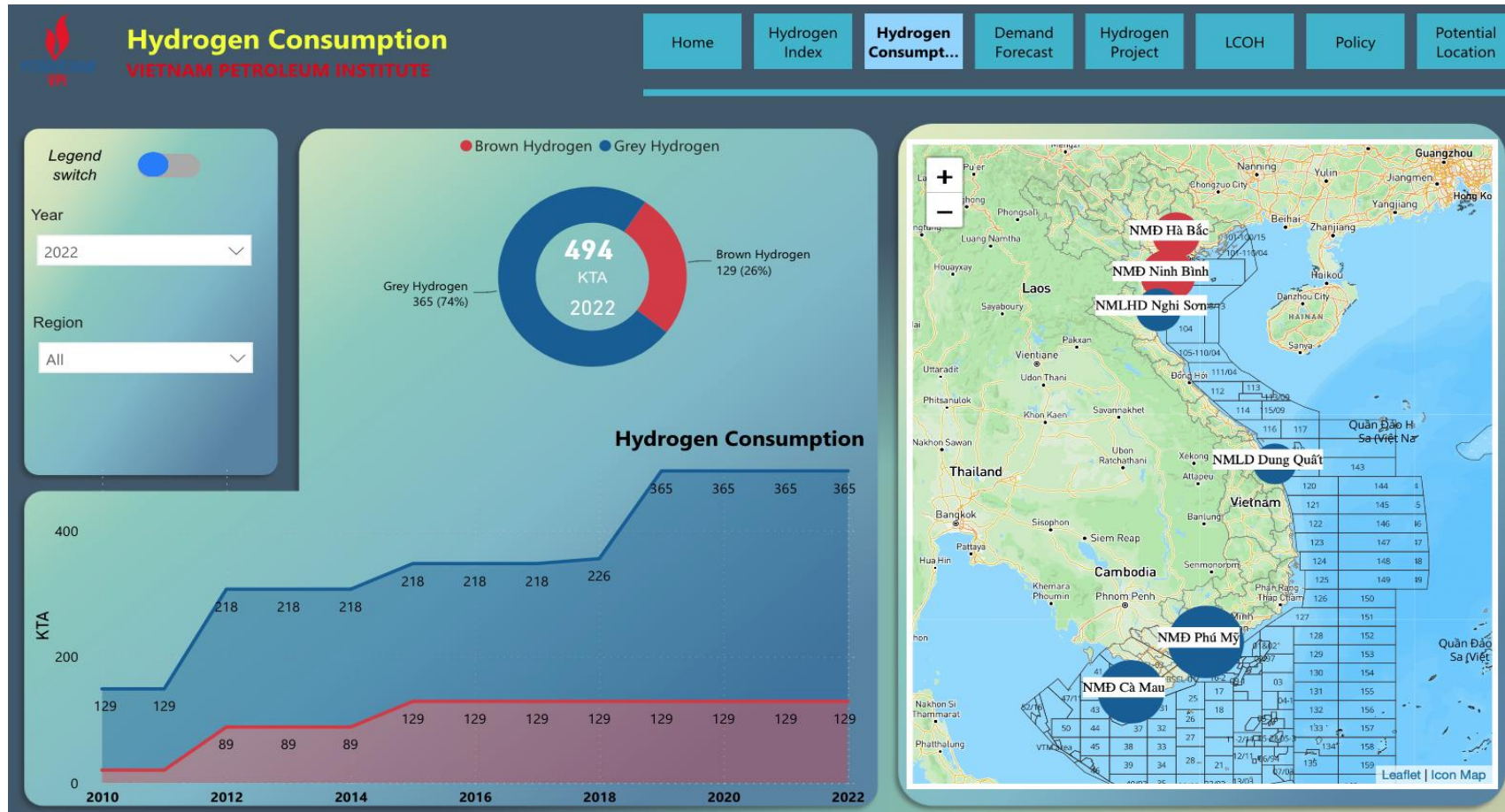
“...Developing new energy production to serve domestic and export demand... Striving to 2030, ***the capacity of green hydrogen production will be about 100-200 thousand tons/year***. In orientation to 2050, the scale of green hydrogen production capacity will be ***about 10-20 million tons/year...***”

PDP8

- Biomass/Ammonia co-firing with coal power plants: 2035-2045
- Coal-fired power plants switching to 100% Biomass/Ammonia combustion: from 2045-2050/2045
- H₂ co-firing with LNG for combined cycle gas power plants: 2035-2040
- Gas-fired power plants switching to 100% H₂ combustion: from 2045-2050/2045

Until now, most brown & grey H₂ used internally

H2.oilgas.ai



- Most of H₂ produced using reforming, cracking & gasification, & used internally (refineries, fertilizers).
- Negligible H₂ produced from electrolyzers using grid electricity, transported by trucks (short distance) to industrial consumers.

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Clean hydrogen projects in Vietnam

Investor	Location	Capacity	Status
Enterprise Energy	Binh Thuan	300 KTA of GH ₂	Investment opportunity
TGS	Tra Vinh	24 KTA of GH ₂ & 150-180 KTA of GNH ₃	Approved investment policy
TGS	Ben Tre	<u>Phase 1</u> : 24 KTA of GH ₂ & 150 KTA of GNH ₃ <u>Phase 2</u> : 60 KTA of GH ₂ & 375 KTA of GNH ₃	EPC
PECC2	Quang Tri	<u>Phase 1</u> : 193 KTA of GNH ₃ <u>Phase 2</u> : 465 KTA of GNH ₃ <u>Phase 3</u> : 82 KTA of GH ₂	Investment opportunity
SK	Ba Ria – Vung Tau, Ca Mau	70 KTA of BH ₂ & 32.6 KTA of GH ₂	Investment opportunity
OneVN	Binh Thuan, Son My & Mekong Delta	10 GW of offshore wind power for GH ₂ /GNH ₃ production	Investment opportunity

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Concepts:

- In agreement with PDP8 & EMP;
- To support for achievement of targets on hydrogen in PDP8 & EMP.

Objectives:

- Development of clean hydrogen, including green hydrogen and others combined with CCS/CCUS;
- Development of hydrogen hubs connected with RE zones for production of hydrogen & its derivatives;
- Accelerated applications of hydrogen and its derivatives in various sectors, including power, transportation & other industries.

Directions for hydrogen development in Vietnam:

- Development of the full value chain of clean hydrogen, including its production, storage, transportation, distribution, and uses;
- 2 development stages:
 - 2023-2030: (1) Mechanism, policies & standards; (2) Pilot/demonstration on green hydrogen; (3) R&D on blue hydrogen and other advanced technologies; and (4) Training;
 - 2031-2050: (1) R&D on coal-based blue hydrogen; (2) Development of large-scale projects of green hydrogen; (3) Hydrogen applications in power sector (PDP8), transportation (Decision 876-QĐ/TTg) & other industries; and (4) A competitive market on hydrogen energy.

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Milestones	Timeline
First draft preparation	June – August 2023
Sent to Ministries, Departments & Groups for comments & recommendations	31 August 2023
Feedback from Ministries, Departments & Groups	September 2023
Updates & revisions	in progress

UPDATES ON NATIONAL HYDROGEN STRATEGY DRAFT

The first draft of the Strategy for Hydrogen Energy Production by 2030 with a vision to 2050

(August 2023)

- Introduction
- Current status of the national energy and the hydrogen sector
- Global current status and development trend of the hydrogen sector
- Development potential of the hydrogen sector in Vietnam
- Contents of the strategy for hydrogen energy production: development viewpoint, objectives, development orientation, implementation solutions, implementation organization
- Strategic environmental assessment



Thank you

