



Programa Nacional
do Hidrogênio


Transição Energética e Transformação Econômica: perspectivas do H2V

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MINAS E ENERGIA

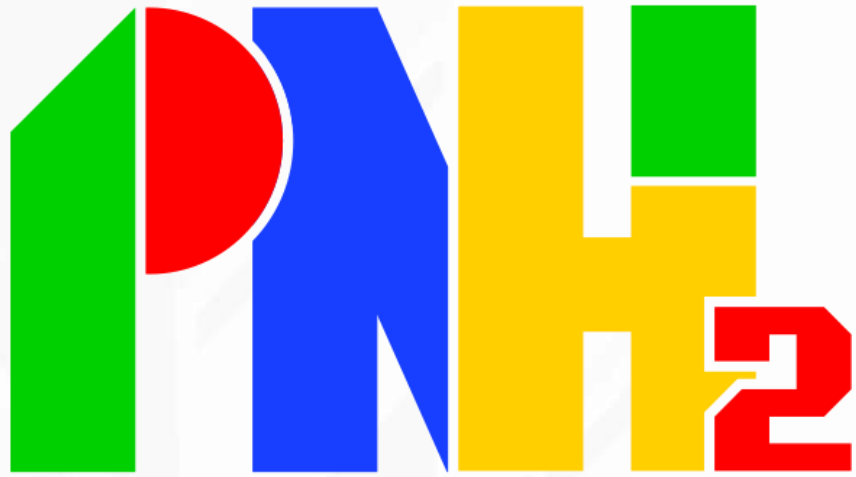


An aerial photograph of a lush green forest with a winding river. Mist or low clouds are visible in the lower right and along the riverbanks. The image is used as a background for a presentation slide.

National Hydrogen Program



National Hydrogen Program

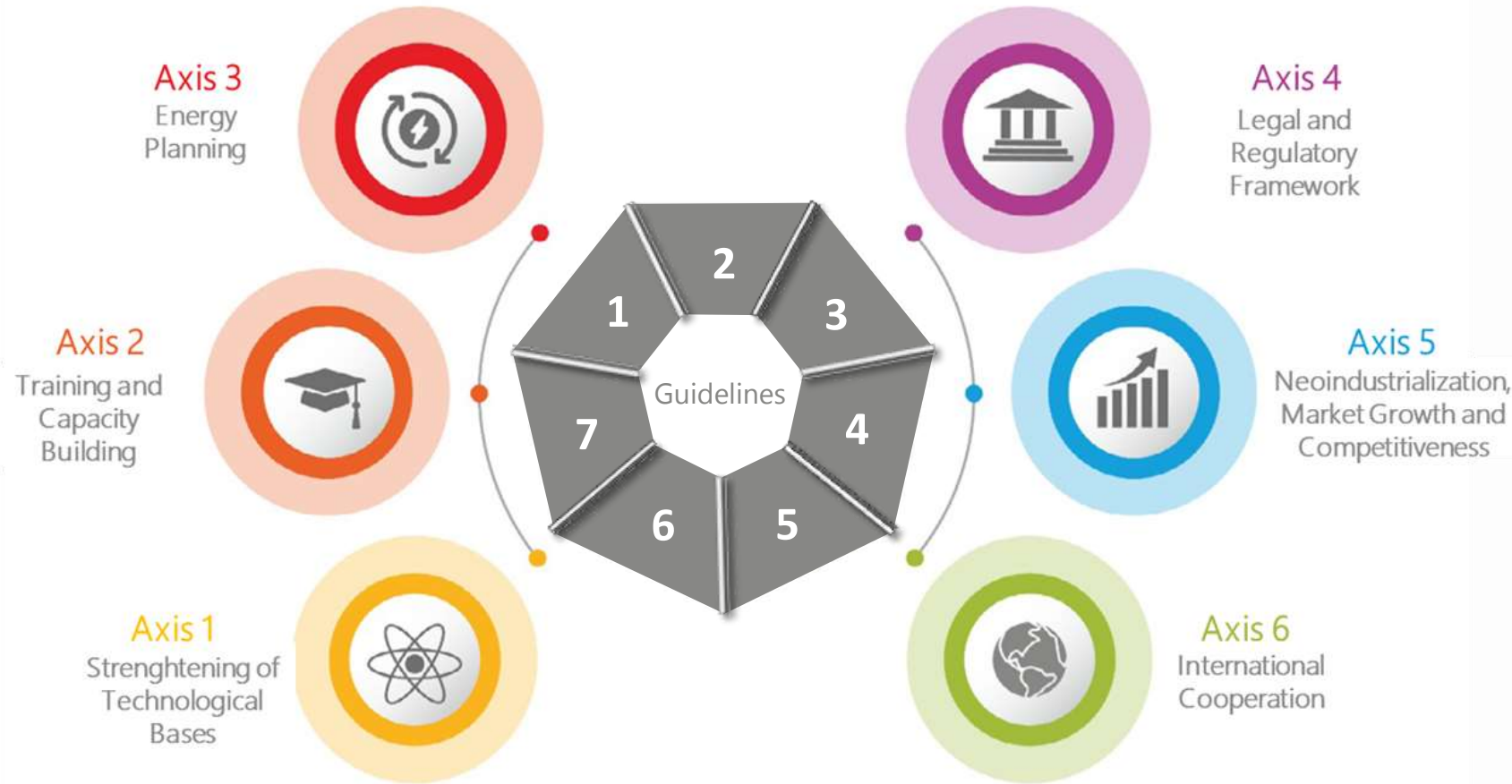


**Programa Nacional
do Hidrogênio**

Created by the National Council for Energy Policy in 2022 (Resolution #6/2022), PNH2 sets the national governance, guidelines and axes.

To strengthen the hydrogen market
and industry as an energy vector in
Brazil

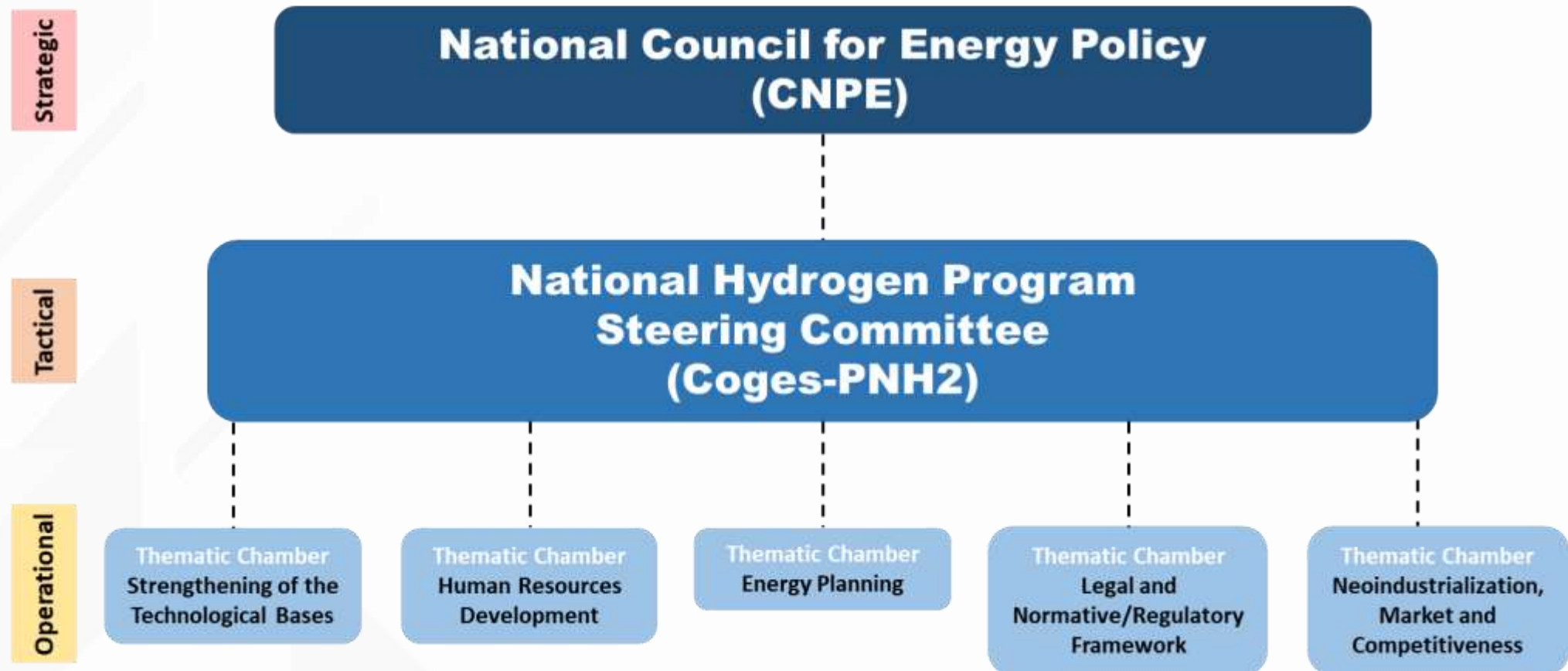
Axes and guidelines of the PNH2



Guidelines:

1. Decarbonization of the economy
2. Highlighting the diversity of energy sources and technological alternatives
3. Fostering national technological development
4. Synergies and articulation with other countries
5. Contribution to the national industry
6. Development of a competitive market
7. Valorization of the national potential of energy resources

PNH2 Governance



Main milestones in Brazil's strategy

Increase annual R&D&I investments for hydrogen in Brazil

7x

2025

Disseminate low-carbon hydrogen **pilot plants** in all regions of the country

2030

Consolidate Brazil as the **most competitive** low-carbon hydrogen producer in the world

2035

Consolidate low-carbon **hydrogen hubs** in Brazil

An aerial photograph of a lush green forest with a winding river. A large yellow rectangular box is overlaid on the left side of the image, containing the text 'Low Emission Hydrogen Law'. The bottom of the image features a decorative border of colorful geometric shapes in red, green, blue, and yellow.

Low Emission Hydrogen Law

Designing a robust regulatory framework

1

Bring legal security and clarity of institutional roles to attract investments

2


Facilitate Brazil's insertion in the international hydrogen market, giving credibility to its certification system

3

Lay the groundwork for defining hydrogen standards, considering its carbon intensity and the perspective of life cycle analysis

National legal framework

Law 14.948/2024, published on August 2nd



Presidência da República
Casa Civil
Secretaria Especial para Assuntos Jurídicos

LEI Nº 14.948, DE 2 DE AGOSTO DE 2024

Institui o marco legal do hidrogênio de baixa emissão de carbono; dispõe sobre a Política Nacional do Hidrogênio de Baixa Emissão de Carbono; institui incentivos para a indústria do hidrogênio de baixa emissão de carbono; institui o Regime Especial de Incentivos para a Produção de Hidrogênio de Baixa Emissão de Carbono (Rehido); cria o Programa de Desenvolvimento do Hidrogênio de Baixa Emissão de Carbono (PHBC); e altera as Leis nºs. 9.427, de 26 de dezembro de 1996, e 9.478, de 6 de agosto de 1997.

[Mensagem de veto](#)

Principles

Governance

Certification

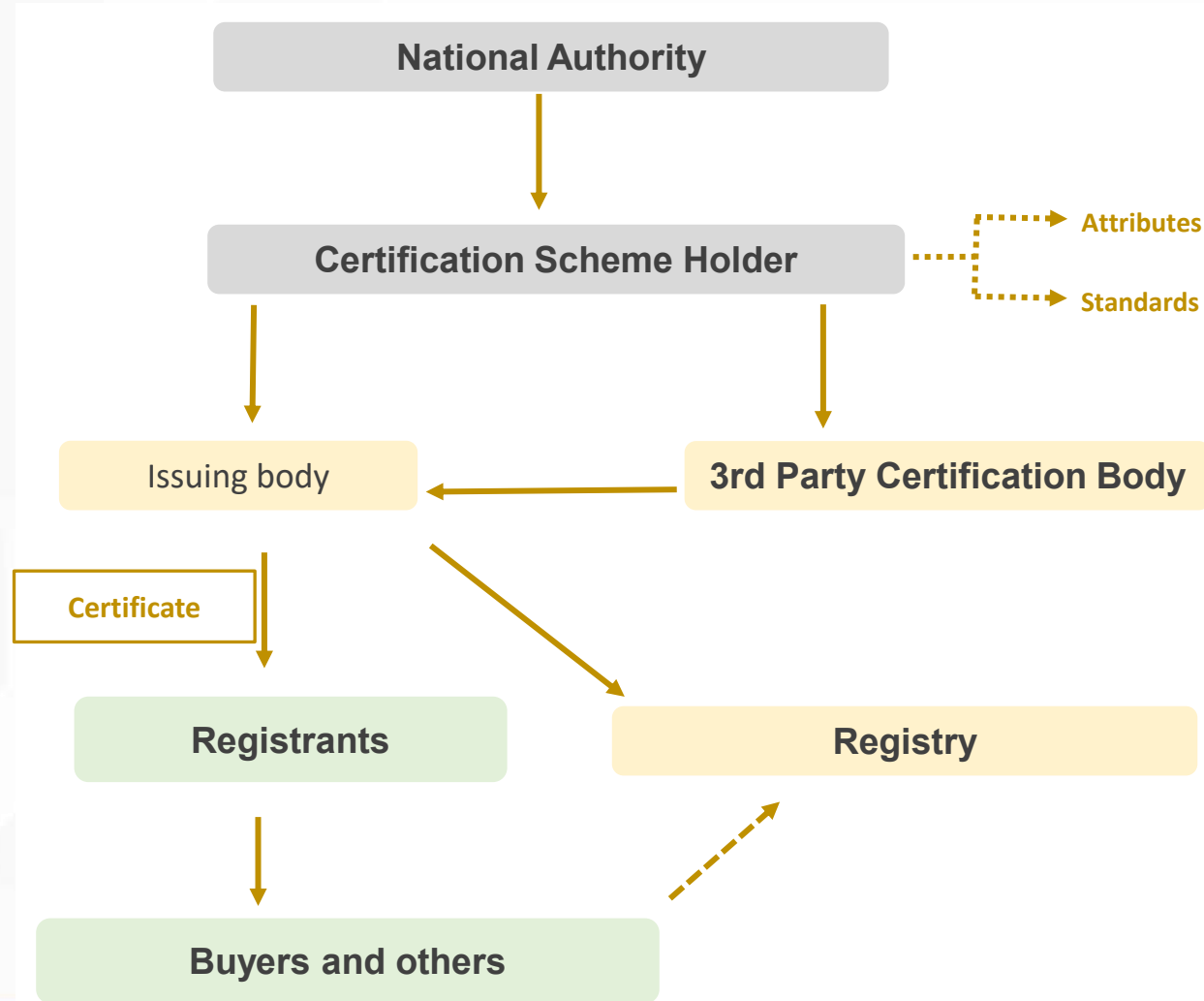
Incentives

Low Emission Hydrogen Law

- **Creates the Brazilian Hydrogen Certification System**
 - ✓ Based on the carbon footprint and lifecycle analysis
 - ✓ Certification system authority, regulator, accrediting body, registration body (to be conducted by existing institutions)
- **Tax incentives for low emission hydrogen**
 - ✓ Rehidro → Tax exemptions for investment in low emission hydrogen projects
 - ✓ PHBC → R\$ 18 billion in tax credits for production, window closing in 2034, based on competitive process, bonus for lower carbon
- **Regulation for natural hydrogen**
 - ✓ to be conducted by ANP (Oil, Gas and Biofuels Regulatory Agency)

Builds on the strong collaboration with IEA on hydrogen, following the Hydrogen in Latam Report (2022)

Governance structure of SBCH2



Creates the Brazilian Hydrogen Certification System (SBCH2)

Summary of the SBCH2

What will be certified?

The product

Which attribute will be adopted?

GHG emission intensity

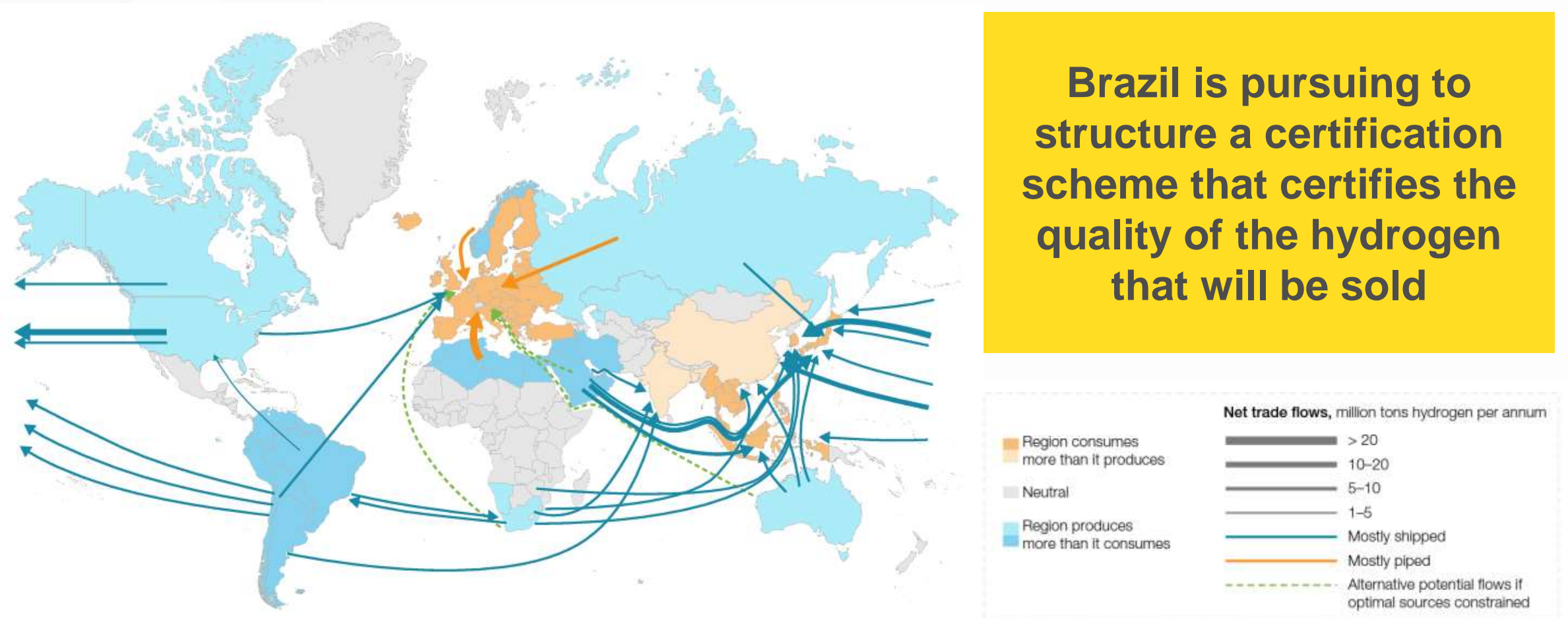
Is certification mandatory?

No, submission to SBCH2 is voluntary

Other criteria will be adopted?

Labels may be created, according to criteria defined in regulation

Certification is key for global hydrogen trade



Brazil is pursuing to structure a certification scheme that certifies the quality of the hydrogen that will be sold

Source: Hydrogen Council (2022)

Focus on the certification scheme

Brazil is designing its own certification system to grant State approval for hydrogen that will be produced in the country, as part of a voluntary scheme.



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HYDROGEN
INITIATIVE
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL



Launch of the International Hydrogen Trade Forum to Accelerate Global Hydrogen Flows

July 24, 2023

Goa, India - On July 22, 2023, during the [14th Clean Energy Ministerial](#) (CEM14) Meeting, a historic joint declaration was established by Australia, Brazil, Canada, Chile, Germany, Japan, Saudi Arabia, South Korea, The Netherlands, United Arab Emirates, United Kingdom, United States, Uruguay and the European Commission on behalf of the European Union. These governments have united under the CEM's flag with one aim: to accelerate international hydrogen trade. This significant milestone was marked by the launch of the [International Hydrogen Trade Forum](#) (IHTF), which will provide a unique platform to foster the dialogue between a wide group of governments on the nascent international hydrogen market.

Engagement with international initiatives

Graphical representation of the possible content of a product passport for a traded hydrogen cargo



IEA, CC BY 4.0.

Source: IEA (2023)

- ▶ Global effort to harmonize certification schemes
- ▶ Definition of methodologies for minimum standardization and to ensure interoperability between national schemes

Focus on carbon emission intensity, based on Life Cycle Analysis (LCA)

Next Steps

- **Decree under construction**
 - ✓ By the Steering Committee of the National Hydrogen Program (multi-ministerial forum)
- **GW-scale projects starting process for access to the grid**
 - ✓ Existing grid capacity to be allocated to first movers
 - ✓ New grid expansion plans under study for long-term de-risking
- **Regulatory agency publishes assessment of gaps to be addressed**
 - ✓ ANP Regulatory Agency to advance on hydrogen as a new area of regulation
- **Major call for R&D projects**
 - ✓ ANEEL Regulatory Agency conducting strategic call for funding R&D and innovation projects of low emission projects

Obrigado

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