

Strategic Agenda 2026



ABIHV
Associação Brasileira da Indústria
do Hidrogênio Verde

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Executive Director's Message



Hydrogen, ammonia, e-methanol, and green fertilizers are emerging as some of the most strategic drivers of the global energy transition. In this context, Brazil has unique conditions to play a leading role due, among other factors, to its predominantly renewable electricity mix, with a strong presence of hydro, wind, and solar sources. This provides the country with a structural competitive advantage in the large-scale production of green hydrogen and its derivatives. It is a distinctive edge that combines abundant natural resources, consolidated experience in renewable energy, and technical expertise built over decades.

Over the past two years, we have made consistent progress in building a favorable institutional environment for the sector. The development of a specific legal framework for low-carbon hydrogen demonstrates regulatory maturity and coordination between the Executive and Legislative branches. The legislative agenda has been marked by dialogue with industry, participation from academia, and federal coordination, resulting in a framework that offers greater legal certainty, predictability, and initial incentive mechanisms for production. This institutional movement signals to the market that

Brazil is both willing and prepared to structure a new strategic value chain.

At the same time, we have seen the announcement of significant investments, the signing of memoranda of understanding, and the development of hydrogen hubs in different regions of the country—especially in port areas with export potential. These hubs integrate renewable generation, logistics infrastructure, and industrial demand, creating ecosystems capable of accelerating technological learning curves and reducing costs over time.

However, the path ahead requires further deepening. Market consolidation will depend on the implementation of additional public policy instruments capable of driving domestic demand, particularly in hard-to-abate sectors such as steel, cement, and heavy chemicals. There are clear opportunities in the production of nitrogen fertilizers, the decarbonization of aviation and maritime fuels, and integration with carbon pricing mechanisms. The challenge now is to transform potential into contracts, projects into scale, and innovation into competitiveness.

In an international geopolitical landscape marked by trade tensions, the reconfiguration of global supply chains, and growing distrust among nations, Brazil has the opportunity to organize its internal strategy, strengthen its regulatory framework, and structure its industrial policy. By doing so, it can not only meet its own decarbonization goals but also position itself, in the medium and long term, as a reliable and competitive green hydrogen hub on the global stage.

Fernanda Delgado,
Executive Director of ABIHV

Chair of the Board of Directors' Message



The energy transition remains a structural trend in the global economy, driven by climate commitments, energy security, and industrial competitiveness. Even in the face of an increasingly complex international environment—marked by geopolitical tensions, regional conflicts, trade disputes, and economic volatility—the shift toward cleaner energy mixes continues to move forward.

It is important to recognize that geopolitical conflicts and crises often delay climate agendas and investments by shifting government priorities and putting pressure on supply chains. At the same time, these tensions reinforce the need to reduce dependence on fossil fuels and diversify energy sources. Growing instability in traditional oil-producing regions—such as the Persian Gulf, through which approximately 20% of the world's oil flows via the Strait of Hormuz—highlights the strategic importance of energy security and the search for sustainable and reliable alternatives.

In this context, a significant portion of future demand for hydrogen and its derivatives is already being shaped through public policies and regulatory

frameworks, particularly in Europe, where around 90% of projected demand is at different stages of legislative discussion or regulation.

In the short term, however, the sector faces challenges that have slowed investment decisions across several markets. The lack of firm long-term demand for hydrogen and its derivatives, delays in the implementation of key policies—such as IMO maritime regulations and European directives like RED III—along with rising global capital costs and volatility in energy prices, create a more cautious environment for investors. In Brazil, additional factors such as curtailment episodes and fluctuations in short-term electricity prices (PLD) also highlight the need for regulatory and market improvements to ensure predictability and competitiveness.

Despite these short-term challenges, Brazil continues to offer unique conditions to position itself as one of the world's leading hubs in the new energy economy. The country combines large-scale renewable resources, institutional stability, geographic distance from conflict zones, and strong potential for integration with strategic industrial value chains such as mining, steel, and fertilizers. Furthermore, Brazil already has approved legislation for low-carbon hydrogen (LCH), establishing regulatory guidelines and incentives that provide greater legal certainty and predictability for investments in the sector.

In an increasingly global context shaped by friendshoring and supply chain security, Brazil can offer competitive and reliable solutions for decarbonizing sectors that are difficult to electrify. More than an environmental agenda, the energy transition represents a historic opportunity for reindustrialization, enabling the country to produce and export energy, fuels, and green industrial products at scale—something that few countries in the world have the natural and structural conditions to replicate.

Luis Viga

Chair of the Board of Directors of ABIHV

The Association

The Brazilian Green Hydrogen Industry Association (ABIHV) was founded in 2023 to foster the development of the green hydrogen industry and its derivatives in Brazil, given the country's vast potential for its development.

Currently, ABIHV brings together 35 companies with investments across the entire green hydrogen value chain, including producers and consumers, clean energy generators, as well as suppliers of machinery and equipment and state development agencies. This representation across all segments of the value chain provides the association with the capacity and legitimacy to represent the green hydrogen industry in a comprehensive and robust manner.

Green hydrogen and its derivatives—such as ammonia, methanol, fertilizers, and green fuels—not only have the well-known potential to reduce greenhouse gas (GHG) emissions in hard-to-abate sectors, but also the ability to drive Brazil's green reindustrialization, generating positive impacts in the regions where these industries are established, including income generation, job creation, and socially responsible technological advancement.

Through the development of public policies and the representation of interests before government authorities, other organizations, and stakeholders, ABIHV works to expand the integration of green hydrogen into Brazil's energy matrix and production processes, while promoting technical and economic knowledge about green hydrogen and financial support mechanisms for production projects.



ABIHV Mission

ABIHV's MISSION is to promote the conditions necessary for green hydrogen, ammonia, e-methanol, and green fertilizers to be produced and commercialized in the most competitive and widespread way in Brazil, fostering an economically sustainable future for all.

Values



Dissemination

Organize meetings and seminars to discuss and present proposals for the use of energy resources derived from green hydrogen.



Leadership

Actively contribute to the development of the necessary conditions for the competitive production of green hydrogen and its derivatives in Brazil, promoting sustainable national economic development.



Competitiveness

Influence the formulation of public policies for the sector through the legitimate representation of interests before Executive and Legislative bodies, as well as Regulatory Agencies.



Sustainability

Encourage the integration and participation of green hydrogen in Brazil's energy matrix and its use in production processes.



Commitment to Society

Promote the broad contribution of green hydrogen to Brazilian society through income generation, technology, and job creation, guided by a diverse, inclusive, responsible approach recognized by society.



The potential of the green hydrogen industry in Brazil

BRAZIL HAS THE FUNDAMENTALS NEEDED TO LEAD IN GREEN HYDROGEN



Abundant and low-cost renewable sources (hydropower, wind, and solar)



Large-scale capacity and high-potential projects



Strong sustainability credentials and well-established public policies, supported by a clean energy mix



Strategic location in the Northeast: proximity to Europe and strong potential to develop port-integrated hubs, with shared costs among projects



Potential to generate carbon credits associated with production and export



Solid and stable geopolitical position, along with strong relationships with key markets



Proven track record of bold public policies to foster and stimulate demand for new technologies, such as biofuels and wind and solar power.

It is based on these fundamentals that numerous investors—both domestic and international—are looking to Brazil for the production of green hydrogen, ammonia, e-methanol, and green fertilizers.

Projects associated with ABIHV with investment decisions expected by 2030 represent more than BRL 53 billion in investments, with an estimated impact of BRL 120 billion on GDP.

ABIHV Members' Projects

Projects with investment decisions expected by 2030:

There are **13 projects**, totaling:

- **BRL 53 billion in investments**, with an estimated impact of **BRL 120 billion on Brazil's GDP** (1.8x multiplier effect, according to LCA Consultoria), and more than 39,000 jobs generated during the plant

Key Characteristics



Green: Green hydrogen is produced through water electrolysis powered by renewable energy sources (hydropower, wind, and solar), resulting in an extremely low carbon footprint.



Northeast: Of the 13 projects, 11 are located in the region—representing a major economic opportunity through the development of hubs, increased demand for renewable generation, attraction of industrial players and service providers, and reduced electricity losses.



Anchor projects: Large-scale projects (in terms of investment and production capacity) will act as “anchor tenants” for hub development, absorbing initial costs such as shared infrastructure and regulatory structuring.



Export-oriented: Around 90% of projects are focused on exporting green hydrogen. The European market currently stands out as more mature and ready to absorb this demand in the near term.

Why prioritize large-scale (anchor) green hydrogen projects and low-GHG emission pathways in the regulatory framework

These projects are the only ones with the scale and profile to:

- Enable the creation of green hydrogen industrial hubs (network industries), multiplying the value of invested capital
- Produce lower-emission hydrogen, with higher value and greater potential to add value across other value chains
- Strengthen the competitiveness of Brazilian hydrogen (economies of scale will reduce production costs)
- Drive demand for additional clean electricity generation, revitalizing the sector and attracting further investment
- Connect Brazil to global value chains and carbon markets
- Promote economic and social development in the Northeast region (where most of these projects are located)



Green:
Priority for projects with low emissions (zero or near zero)



Anchor (Large-Scale):
Scale capable of enabling hubs and networks of services, buyers, and infrastructure



Located in the Northeast:
A less developed region of the country, with abundant renewable energy and lower production costs

ABIHV Members' Projects Announced for the Coming Years

Projects for the coming years: FID until 2030

The investments planned for these projects exceed USD 10 billion¹, with a combined electrolysis capacity of 5.42 GW. In addition, some have been selected through various support and incentive mechanisms.

The FID is a crucial milestone in the development of a project, marking the transition from the planning phase to implementation. It is at this stage that financial resources are allocated for equipment purchases, the signing of engineering contracts, among other commitments.



- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 4,600
- Investment:** USD 2.28 billion
- Product:** Green Ammonia
- Electrolysis capacity:** 1.2 GW

- Annual production:** 900,000 tonnes
- Under approval within the New PAC program**
- The project is listed on the Brazil Climate and Ecological Transformation Investment Platform (BIP)**
- Investment in renewable energy:** USD 2.44 billion



- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 8,920
- Investment:** USD 3.37 billion
- Product:** Green Hydrogen
- Electrolysis capacity:** 1.2 GW
- Annual production:** 170,000 tonnes

- Pending approval under the New PAC program**
- The project is listed on Brazil Climate and Ecological Transformation Investment Platform (BIP) and was selected by the ITA**
- COD:** 2nd half of 2029
- Milestones achieved:** feasibility studies; licensing and authorizations; fieldwork



- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 650
- Investment:** USD 1.12 billion
- Product:** Green Ammonia

- Electrolysis capacity:** 500 MW
- Annual production:** 400,000 tonnes
- COD:** 1st phase - 2nd half of 2029

Qair

- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 5,700
- Investment:** USD 3.32 billion
- Projects:** Fraternité and Liberté
- Product:** Green Hydrogen, Ammonia, and Oxygen
- Electrolysis capacity:** 2.52 GW

- Annual production:** Liberté – 1,680,000 tonnes of Green Ammonia, 296,000 tonnes of Green Hydrogen, and 2,353,000 tonnes of Oxygen
- COD:** Fraternité – 2028
Liberté - 2033 (phased ramp-up until 2039)



- Location:** Uberaba, Minas Gerais
- Jobs (Construction):** 2,000
- Investment:** USD 1.12 billion
- Product:** Nitrogen fertilizers
- Electrolysis capacity:** 300 MW
- Annual production:** 530,000 tonnes

- The project is listed on Brazil Climate and Ecological Transformation Investment Platform (BIP) and was selected by the ITA**
- Milestones achieved:** 22% of offtake volume under binding agreements; >30% in advanced negotiations; Start of FEED² in December 2025

¹-Original amount in BRL converted at an exchange rate of BRL 1 = USD 0.19. Information provided by member companies (January 2026).

²-FEED: Front-End Engineering Design

- Location:** Porto de Suape, Pernambuco
- Jobs (Construction):** 300
- Investment:** USD 0.38 billion
- Product:** e-Methanol
- Electrolysis capacity:** 150 MW

- Annual production:** 100,000 tonnes
- The project was selected by the Industrial Transition Accelerator (ITA)**
- Milestones achieved:** preliminary environmental license and water abstraction permit obtained

Italia

- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 1,400
- Investment:** USD 0.50 billion

- Product:** Green Ammonia
- Electrolysis capacity:** 280 MW
- Annual production:** 250,000 tonnes



- Location:** Macau, Pendências and Guamaré, Rio Grande do Norte
- Jobs (Construction):** 4,640
- Investment:** USD 2.06 billion³

- Product:** Green Ammonia
- Electrolysis capacity:** 500 MW
- Annual production:** 430,000 tonnes
- COD:** 2032



- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 650
- Product:** Green Ammonia
- Electrolysis capacity:** 200 MW

- Annual production:** 170,000 tonnes
- Current phase:** Site reservation at the Port of Pecém, with engineering, electrical, and environmental studies in progress



- Location:** Bahia
- Jobs (Construction):** 1,000
- Product:** e-Methanol

- Electrolysis capacity:** 100 MW
- Annual production:** 80,000 tonnes
- Current phase:** Engineering and electrical studies in progress

Qair

- Location:** Porto de Suape, Pernambuco
- Jobs (Construction):** 5,000
- Investment:** USD 2.94 billion
- Product:** Green Hydrogen, Ammonia, and Oxygen
- Electrolysis capacity:** 2.24 GW

- Annual production:** 1,680,000 tonnes of Green Ammonia, 296,000 tonnes of Green Hydrogen and 2,353,000 tonnes of Oxygen
- COD:** 2032 (phased ramp-up until 2039)
- Project:** Suape



- Location:** Complexo do Pecém, Ceará
- Jobs (Construction):** 5,000
- Investment:** USD 3.37 billion
- Product:** Green Ammonia

- Electrolysis capacity:** 1.5 GW
- Annual production:** 1,200,000 tonnes
- COD:** 2nd Phase – 2032

The Brazil Climate and Ecological Transformation Investment Platform (BIP) is an initiative from the Brazilian government that aims to attract international investment for energy transition and decarbonization projects.

Industrial Transition Accelerator (ITA): A platform launched by the government of the United Arab Emirates and Bloomberg Philanthropies, focused on promoting global industrial decarbonization.

New PAC program (New Growth Acceleration Program, or Novo PAC, in Portuguese): An investment program coordinated by the federal government that provides credit for key infrastructure projects, including those under the “energy transition and security” axis. Brazilian Development Bank (**BNDES**) and Funding Authority for Studies and Projects (**FINEP**): Responsible for some of the main funding mechanisms supporting national development.

3-The announced investment amount includes a wind farm, a solar power plant, and a dedicated port terminal.

Green Hydrogen Timeline

Law 15.103/2025 – Energy Transition Acceleration Program

In June, Congress overturned the veto that authorizes the use of Climate Fund resources for logistics mobility projects in the road, rail, and waterway sectors.

Complementary Law 214 – Tax Reform

- Preferential tax regime for hydrogen
- Renewable energy sources included among tax-exempt inputs in Export Processing Zones (EPZs)
- Contracting of external services covered by tax exemptions in EPZs
- In January 2026, a new amendment to Complementary Law 214 ensured the alignment of Rehidro with the new tax framework

ANEEL Normative Resolution 1.112/2025

- Access Rules for Free Consumers to the National Interconnected System (SIN)

- Creation of financial guarantee mechanisms for participation in the access request and contracting process

ABIHV in the “Conselhão”

Appointment of Executive Director Fernanda Delgado as a member of the Council for Economic, Social and Sustainable Development (CDESS).

The “Conselhão” is one of the federal government’s main bodies for engagement with the private sector and for supporting discussions on public policy.

Carbon Market Secretariat

An extraordinary secretariat was created within the Ministry of Finance and designated to act as the Managing Authority. The Executive Branch is expected to submit a bill to Congress in 2026 to establish a permanent entity.

- IMO postpones adoption of the Net-Zero Framework (NZF) by one year
- ANP publishes a manual for requesting authorizations for low-carbon hydrogen
- ANEEL approves four hydrogen R&D projects (Call 23/2024), with estimated investments of BRL 200 million

Decree 12.772/2025 – National Policy for Access to the Transmission System (PNAST)

- Establishes rules for access by new users, including the creation of Access Windows, a competitive process, and exemption from prior approval by the MME and ANEEL

Roadmap

A presidential order mandates the development of a proposal aimed at gradually reducing dependence on fossil fuels, as well as a proposal to create an Energy Transition Fund.

2024

2025

January

February

March

April

May

June

July

August

September

October

November

December

Law 14.902/2024 - Mover Program

Law 14.948/2024 - Legal Framework for Low-Carbon Hydrogen

Law 14.990/2024 - Low-Carbon Hydrogen Development Program (PHBC)

Law 14.993/2024 - Fuel of the Future Program

Law 15.042/2024 - Brazilian Emissions Trading System – SBCE

CMSE Curtailment Working Group

A working group was created to develop solutions to mitigate the impacts caused by the curtailment of electricity generation from renewable sources. In September, the group projected an average increase in curtailment of 10% to 20% for wind and solar sources in the coming years.

ABIHV at the CNPE

Executive Director Fernanda Delgado was invited to join Working Subgroup No. 05 of the National Energy Policy Council. The subgroup aims to propose guidelines for the development of the sustainable marine fuels market in Brazil.

ANEEL Public Consultation 28/2025

A Public Consultation was published regarding Transmission Auction 1/2026, scheduled for March. Among other measures, it provides for the installation of synchronous compensators in the states of Rio Grande do Norte and Ceará, enabling the addition of 3 GW of load capacity margin for green hydrogen projects.

Law 15.269/2025 – Power Sector Reform

- Expands the Free Energy Market, establishes a cap for the CDE, and regulates energy storage and self-generation arrangements
- Extends the validity period of incentives under the PHBC from 2028–2032 to 2030–2034
- Provisions regarding compensation criteria for generators affected by curtailment and the imposition of additionality in self-generation were vetoed

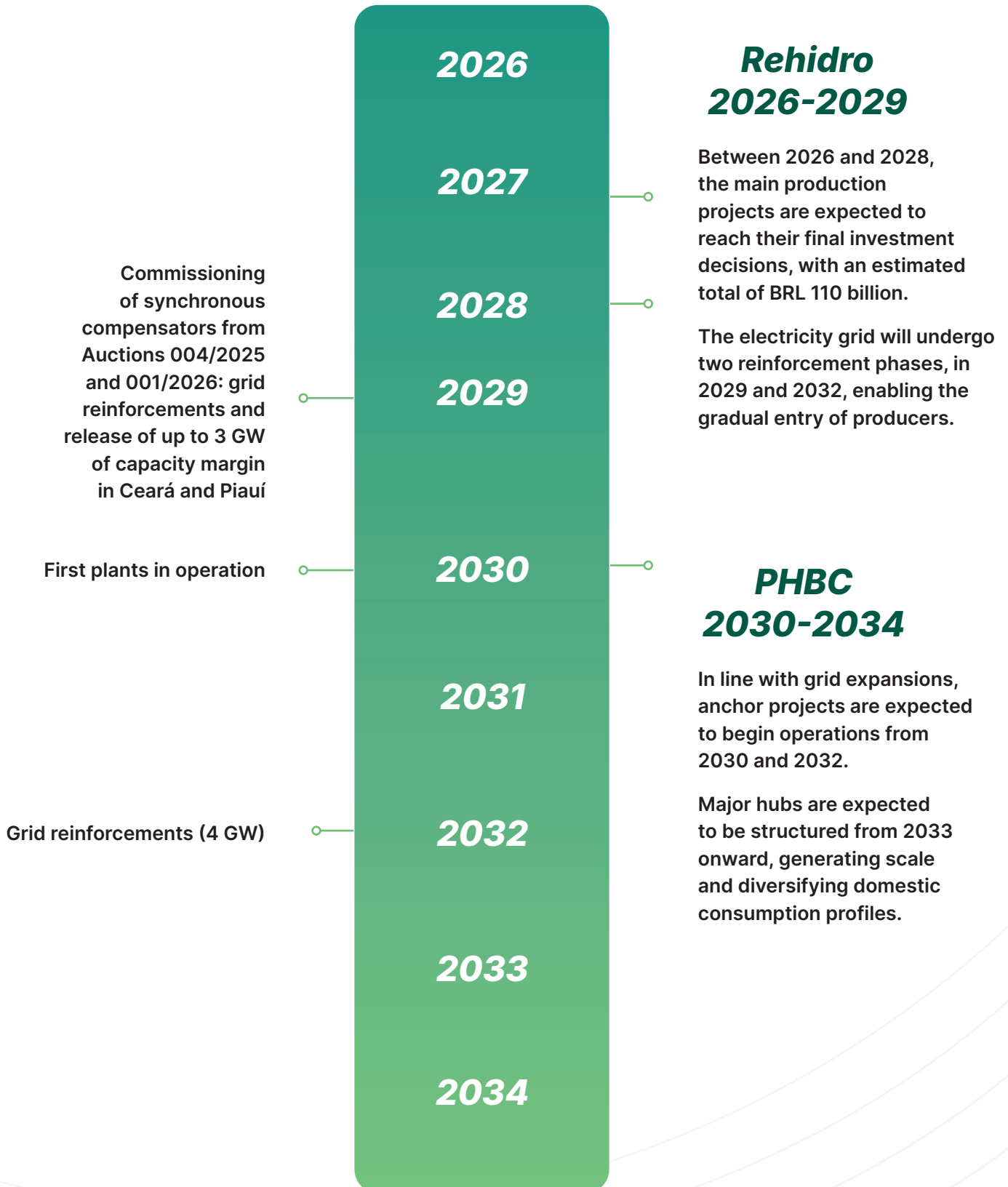
COP30

The world’s largest climate conference was held in Brazil, with strong participation from ABIHV (including panels with the Ministries of Finance and Environment, and 22 engagements throughout the event).

Key outcomes:

- Belém 4X – Belém Commitment on Sustainable Fuels
- Scheduling of a parallel meeting to discuss the “Roadmap” for phasing out fossil fuels

The coming years will consolidate the sector for the **next decade**



1. LOW-CARBON HYDROGEN FRAMEWORK

1.1 Regulation of the Legal Framework

The years 2024 and 2025 marked significant legislative progress for green hydrogen, green ammonia, e-methanol, and green fertilizers in Brazil. The main challenge for 2026 is the completion of the secondary regulation of the Low-Carbon Hydrogen Legal Framework by the Executive Branch, which is essential for the first investment decision announcements.

Law 14.948/2024 – Establishes the Legal Framework for Low-Carbon Hydrogen

A comprehensive legal framework addressing several aspects, including:

- **Taxonomy:** Defines and classifies different types of hydrogen (low-carbon, renewable, green);
- **Certification:** Establishes the Brazilian Hydrogen Certification System (SBCH2), responsible for certifying hydrogen based on its characteristics (energy sources used, emissions, etc.);
- **Regulation:** Assigns the ANP the authority to regulate hydrogen exploration and production activities;
- **Rehidro:** The first incentive program for hydrogen producers and related activities, with a mechanism similar to Reidi.

Special Incentive Regime for the Production of Low-Carbon Hydrogen (Rehidro):

The Executive Branch will regulate, among other aspects:

- The process for qualification and co-qualification under Rehidro
- Minimum requirements, including:
 - Local Content (LC) percentages
 - Investment in R&D&I
- Compliance with these requirements will be a condition for access to the PHBC.
- The National Hydrogen Policy (PNH2), an instrument of the framework, will be managed by the Hydrogen Policy Steering Committee (Coges-PNH2)

ABIHV's Perspective

The confirmation of ABIHV's inclusion in Coges-PNH2 is essential, given the association's representativeness and legitimacy within the industry.

The minimum Local Content requirements under Rehidro should consider that this is an emerging industry, especially regarding machinery and equipment. The priority should be to ensure the realization of the first projects and the creation of mechanisms to stimulate the value chain.

In line with its proactive role and commitment to dialogue between industry and policymakers, ABIHV has prepared and submitted contributions to the relevant Ministries regarding minimum local content requirements.

In subsequent stages, Rehidro should also consider the downstream hydrogen value chain, particularly in decarbonization projects across various sectors, where investments required to adapt industrial plants are still costly and not yet economically advantageous.

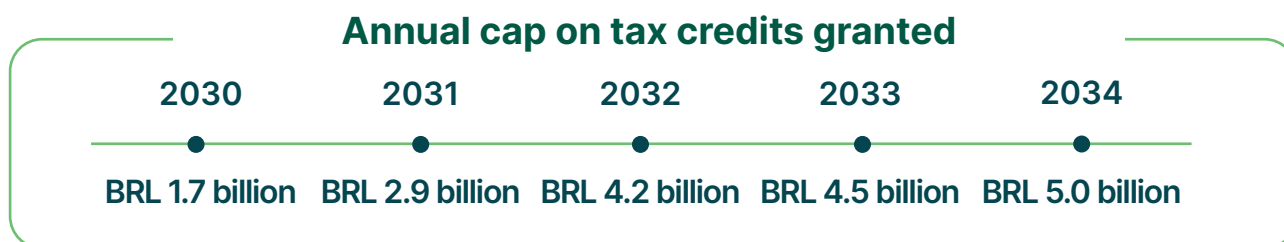
1. LOW-CARBON HYDROGEN FRAMEWORK

1.2 Incentive Program

Several countries have already adopted or are developing public policies to support green hydrogen production. International evidence shows that the PHBC—an incentive mechanism for hydrogen production—if not properly regulated, may end up favoring projects that lack sufficient maturity, potentially hindering the consolidation of the industry in Brazil.

Law 14.990/2024 – Establishes the Low-Carbon Hydrogen Development Program (PHBC)

- A program that grants tax credits to producers and buyers of low-carbon hydrogen. In 2025, following a proposal by ABIHV within the electricity sector provisional measure, **the start of the PHBC validity period was shifted from 2028–2032 to 2030–2034**, aligning incentives with the availability of transmission infrastructure in the power sector.
- The law **is still under regulation, which will define the rules of the competitive process for beneficiary companies** (eligibility criteria, selection process, allocation of resources, etc.).
- A total of **BRL 18.3 billion** in tax incentives



Key considerations

- PHBC requires prior enrollment in Rehidro
- Incentives will be shared between producers and offtakers
- Allocations will be made through auctions, regulated by ordinances issued after the regulatory decree
- The decree will establish the conceptual framework for the auctions
- PHBC may apply to projects located in Export Processing Zones (EPZs)
- The right to financial tax credits will be granted based on hydrogen commercialization, only after installed capacity is operational

ABIHV's Perspective

The Low-Carbon Hydrogen Framework is a law inherently oriented toward decarbonization. Regulatory alignment must prevail so that the **PHBC prioritizes the lowest-emission pathways—particularly green hydrogen**.

It is essential for Brazil to establish itself as the most competitive green hydrogen producer in the world, leveraging all of its natural comparative advantages. This will only be achieved if the right conditions are **provided for large-scale, anchor projects**, which, by their nature, have a **greater capacity to strengthen value chains and enable the development of industrial hubs**.

Minimum maturity criteria for participation in auctions

To avoid speculative auctions and ensure that awarded contracts translate into real projects, ABIHV recommends that auctions and mechanisms associated with the PHBC require, at a minimum:



Licensing:

Proof of an advanced stage (filed applications, preliminary licenses, or equivalent processes underway)



Financial:

Evidence of committed equity and provision of guarantees (e.g., bid bond), compatible with the project's scale



Engineering:

Consolidated technical and economic feasibility studies, as well as a robust financial model



Commercial:

Demonstration of negotiations with buyers (MoUs, HoAs, or pre-contracts), especially in anchor industrial sectors

2. DEMAND CREATION

Opportunities related to green hydrogen

Green hydrogen has enormous potential to support the energy transition and industrial decarbonization processes. However, for this potential to materialize over the next decade, it will be necessary to develop demand-creation mechanisms that enhance the competitiveness of green hydrogen.



Potential to reduce greenhouse gas emissions in industrial processes and value chains



Diversification of the energy matrix, reducing dependence on fossil fuels and increasing energy security



Promotion of renewable energy technologies such as hydropower, solar, and wind, which are essential for hydrogen to be classified as green

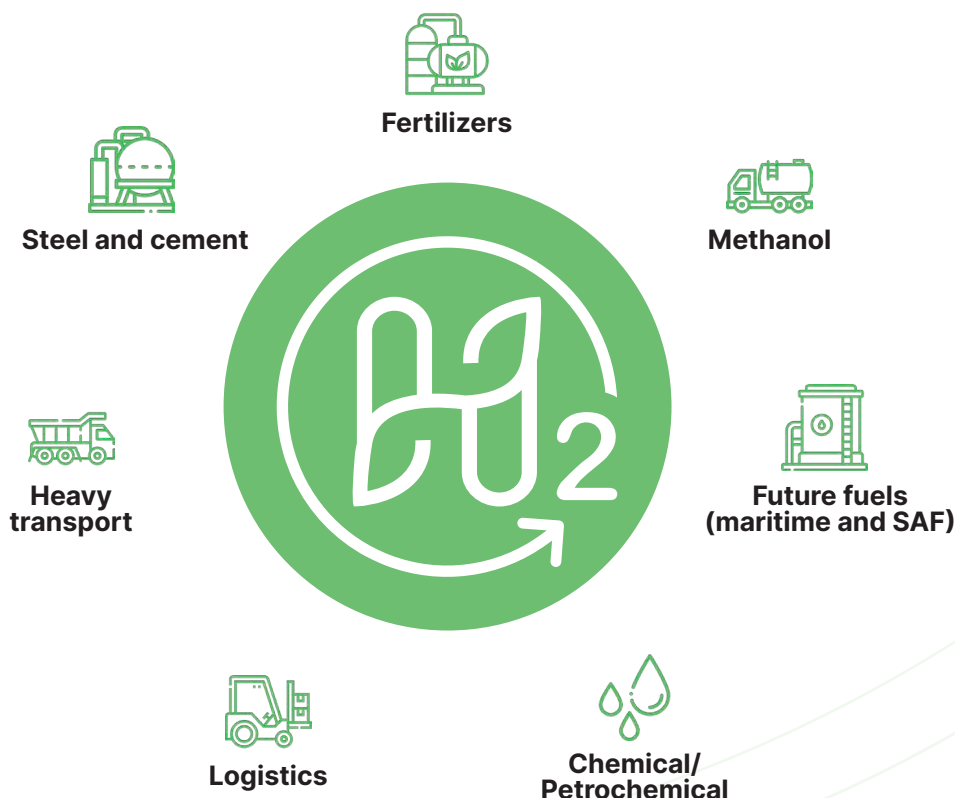


Encouragement of innovation and job creation across the hydrogen value chain, from production to distribution and use in different sectors



Promotion of international partnerships for hydrogen trade and related technologies, fostering cooperation and technological exchange between countries

Hydrogen is strategic for decarbonizing multiple industries



2. DEMAND CREATION



2.1. Regulated Carbon Market

The regulation of Law 15.042/2024 (Brazilian Emissions Trading System – SBCE) is expected to provide greater legal certainty and attract investments in energy transition in Brazil.

Public Authorities

- 1 Organized under a specific Managing Authority
- 2 Responsible for developing “National Allocation Plans,” setting emission targets
- 3 Oversees and enforces companies’ compliance with targets

Regulated Entities

- 1 Facilities and sources emitting more than 10,000 tons of CO₂ per year
- 2 Required to meet targets and obligations
- 3 Allowed to trade certificates proving emission reductions

Extraordinary Secretariat for the Carbon Market

- Established in October 2025 to temporarily structure the regulated market and promote alignment on the SBCE and related secondary regulations
- Led by Secretary Cristina Fróes, with two sub-secretariats responsible for:
 - Regulation and Methodology
 - Implementation
- The Executive Branch is expected to submit a bill in 2026 to create a permanent, autonomous Managing Authority

Implementation Phases of the Regulated Carbon Market

Phase 1 2025-2026 (ongoing) Regulation of market roles and the Managing Authority	Phase 2 2027 Operationalization of emissions reporting	Phase 3 2028-2029 Submission of Emissions Monitoring Plans	Phase 4 2030-2031 First National Allocation Plan and distribution of emission allowances	Phase 5 From 2032 onward Full market implementation
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Key Considerations

- Carbon pricing in production processes can generate tangible economic gains for decarbonization technologies
- Strengthens industrial policy through multiple instruments that can deepen value chains
- Adds value to sustainable sectors, including renewable energy

ABIHV’s Perspective

Signaling and pricing the negative externalities of emissions—especially from fossil fuels—is essential.

Beyond environmental impact, this mechanism will play an important role in commercial terms and international competitiveness, particularly in addressing policies such as CBAM.

It is also important that, throughout the process, alternatives are considered to support the development of decarbonization technologies for hard-to-abate sectors such as steel, cement, and others.

2. DEMAND CREATION



2.2. Fuels

Green hydrogen and its derivatives have strong strategic potential in civil aviation and maritime transport. Beyond being a key driver of demand, regulatory development in this area supports compliance with international agreements.



Fuel of the Future – Law 14.993/2024

- Brings together several initiatives and programs aimed at promoting the production of sustainable and advanced fuels.
- Currently under regulation and in the early stages of implementation
- Includes:
 - a. National Sustainable Aviation Fuel Program (ProBioQAV)
 - b. National Green Diesel Program (PNDV)
 - c. National Program for the Decarbonization of Natural Gas Producers and Importers and Incentives for Biomethane



Maritime Fuel

- The decarbonization of maritime transport is urgent and remains on the agenda of the IMO, despite the postponement of the Net-Zero Framework until October 2026, following pressure from oil-producing countries (such as the United States, Russia, and Saudi Arabia).
- Brazil is advancing with policies and working groups on maritime fuels, as well as regulations such as BR do Mar, CDTMar, and programs like PND-Portos and PND-Navegação.
- The agenda now depends on stronger engagement from the Legislative Branch.

ABIHV plays a strategic role as a technical and institutional coordinator between the green hydrogen and e-fuels industry—key to maritime decarbonization—and the public sector. The Association has actively participated in CNPE Working Group 05 and contributed to defining Brazil's position on sustainable fuels. Through dialogue with the Brazilian Navy, ABIHV highlights the potential of green hydrogen, ammonia, and methanol, and emphasizes the importance of port hubs and national infrastructure for the global energy transition.

Given this technical and regulatory leadership, ABIHV is expected to seek observer status at the IMO in 2026.

ABIHV's Perspective

Green hydrogen is a strategic input across multiple value chains, serving as the foundation for fuels such as SAF, green ammonia, e-methanol, and green diesel. Recognizing and prioritizing low-emission pathways is essential for Brazil to lead this agenda and fully leverage its natural, economic, and geopolitical potential.

In this context, advancing decarbonization requires the mandatory and incentivized adoption of low-carbon maritime fuels, as well as the use of these mechanisms to align with international agreements and commitments, such as CORSIA and IMO guidelines.

2. DEMAND CREATION



2.3. Fertilizers

In addition to being a driver for the development of domestic industry, green hydrogen has the potential to reduce dependence on fertilizer imports—lowering the carbon footprint of agribusiness and increasing its international competitiveness.

Green hydrogen in fertilizer production

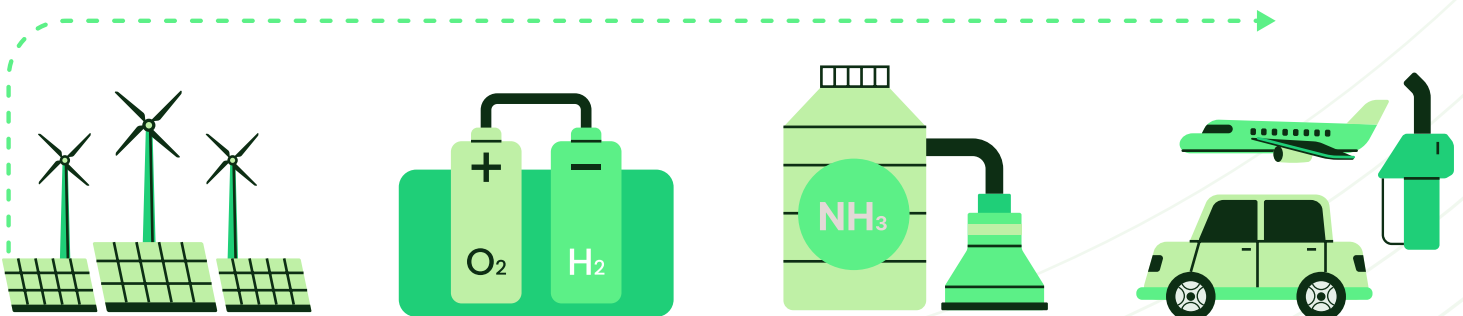
- Green hydrogen is an essential input for the production of sustainable fertilizers and a key step for enabling green ammonia projects
- Brazil currently imports around 85% of its fertilizers and 90% of the related technologies
- On the legislative front, proposals focused on subsidizing producers have not gained traction:
 - a. Bill 699/2023, which creates the Fertilizer Industry Development Program (Profert)
 - b. Bill 4.338/2023, which establishes the Emergency Ammonia and Urea Program

EU–Mercosur Partnership Agreement

- Progress and implementation of the agreement are expected to reduce export tariffs on ammonia and other hydrogen derivatives to Europe from 5% to 0%, improving Brazil's competitiveness
- Although negotiations have advanced, further stages—such as appeals and legal challenges from European stakeholders—create uncertainty regarding the timeline for the new rules to take effect

ABIHV's Perspective

Brazil is highly dependent on fertilizer imports, particularly from politically unstable regions. Measures such as Profert and Pefau, if properly structured, could encourage domestic fertilizer production—especially green ammonia—helping reduce the carbon footprint of agribusiness and strengthening its competitiveness in the face of environmental trade barriers.



2. DEMAND CREATION

2.4. Industrial Decarbonization



New Industry Brazil (NIB)

Due to its wide range of applications, green hydrogen is highlighted as one of the priority value chains for industrial development and for achieving the target of a 30% reduction in CO₂ emissions in the sector by 2033. In addition to hydrogen, green steel and green cement are also identified as key priorities.

- Maintenance of the program's investments, currently the main instrument of Industrial Policy, with a sectoral focus in its Mission 5, on Bioeconomy, Decarbonization, and Energy Transition.
- Sets as investment priorities bioproducts and bioinputs; carbon capture; green diesel; low-carbon hydrogen; and energy storage technologies.
- Work also involves the development of technologies for ultra-high voltage power transmission, power compensators, and other solutions for greater security and resilience of the National Interconnected System and its subsystems.

Challenges in Strengthening Value Chains

New energy sources

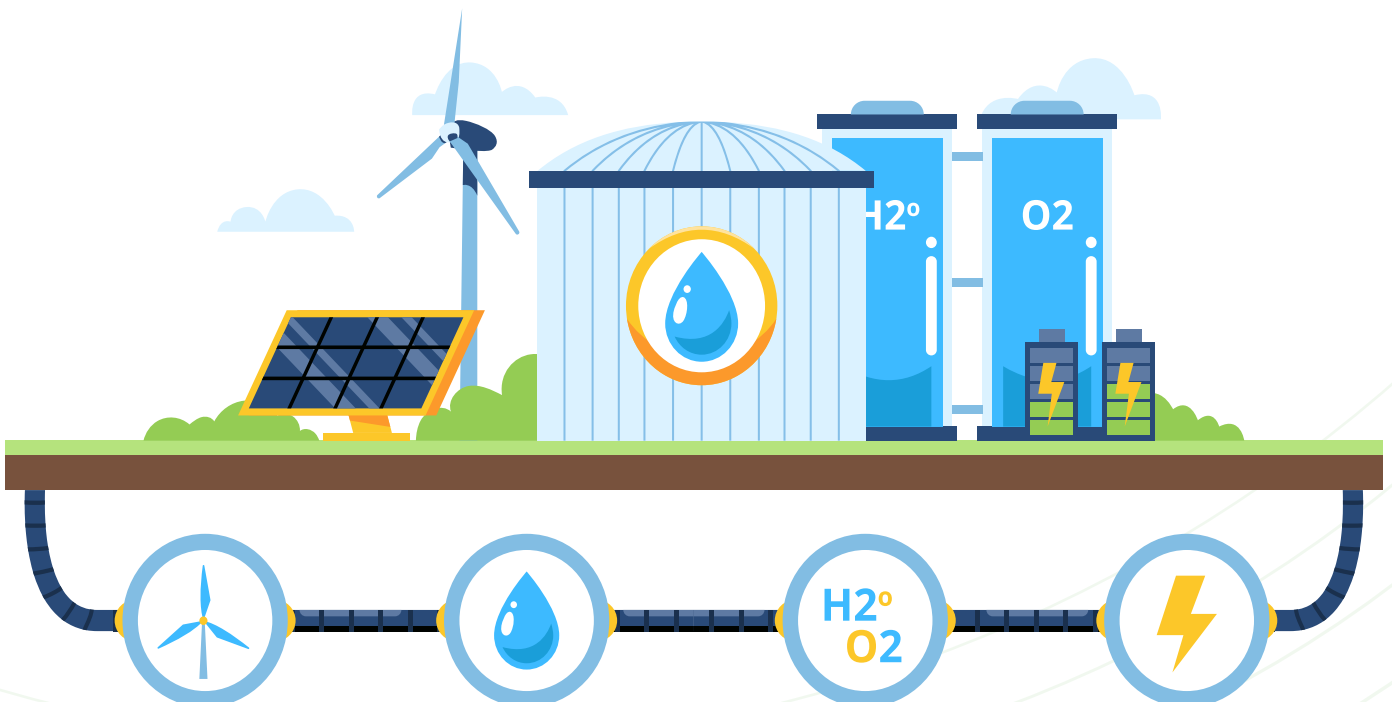
(SAF, green diesel, hydrogen)

Green energy equipment

(wind turbines and photovoltaic panels)

Decarbonization of basic industries

(sustainable cement, steel, and chemicals)



2. DEMAND CREATION



2.5. Roadmap

Roadmap COP30

- Theme incorporated into Brazil's NDCs at COP30 in Belém.
- The roadmap had support from over 80 countries, but no final consensus due to resistance from major oil producers.
- The 1st Global Conference on the Phased Elimination of Fossil Fuels was agreed to be held in Colombia, in April 2026.

Domestic discussions

- The government has begun drafting a Roadmap for the Energy Transition to be submitted to CNPE, still at an early stage, aiming at the gradual reduction of fossil fuel dependence in Brazil.
- The proposal includes financing mechanisms, including the creation of a Fund for the Energy Transition, with potential impacts on the schedule due to the political calendar.

ABIHV's Perspective | Public Policy Suggestions

1 Promotion of Hydrogen Production:

- Extraordinary allocation of oil royalties to be integrated into the resources of the PHBC.
- Prioritization mechanism for green hydrogen in PNH2 and PHBC.
- Authorization for Coges-PNH2 to indicate projects for participation in non-reimbursable support lines from FINEP and the Climate Fund.
- Inclusion of green hydrogen production projects in the PAC's operational strategy.
- Strengthening of electrical monitoring in the Northeast to ensure adequate infrastructure in the region.
- Review of tax incentives granted to fossil sources – redirecting them to renewables.

2 Induction of National Hydrogen Demand:

- Demand-induction mechanisms for maritime fuels – under discussion at the IMO.
- Minimum utilization percentages of hydrogen in the fertilizer and steel sectors starting next decade.
- Expansion of incentives for construction/renovation of hydrogen-consuming plants – Rehidro for buyers.
- Preferential mechanism in public procurement.
- National and international implementation of the Regulated Carbon Market.

3. ELECTRICITY SECTOR

Main challenges

Law 15.269/2025 promoted the most significant update to public policies focused on the electricity sector in 20 years. Looking ahead, ABIHV points out the main challenges still to be addressed, particularly related to price formation, expansion of transmission infrastructure capable of supporting ultra-electro-intensive projects, an adequate response to generation curtailment while preserving investment in solar and wind projects, and maintaining a diverse pool of potential energy suppliers for the green hydrogen industry.



Price Formation

- Main factor for the competitiveness of green hydrogen in the country.
- Electro-intensive projects require price predictability and regulatory stability.
- Appropriate hourly and locational signals are essential to reflect costs and scarcity.
- Market opening, demand response, and storage should strengthen efficient price formation.



Curtailment

- Central theme of the electricity sector agenda, with direct impacts on renewable generation and new electro-intensive loads.
- Debate should focus on efficient cost allocation, avoiding automatic pass-throughs to tariffs.
- Structural solutions, such as expansion planning, flexibility instruments, and cross-subsidy balancing measures, are preferable to isolated financial compensation.
- Clear rules and technical criteria are essential for legal and tariff security.



Transmission

- Firm, predictable, and efficient access to the grid is a critical condition for green hydrogen projects.
- Expansion planning and transmission auctions are central instruments of energy policy.
- Maintaining schedules aligned with project maturation avoids bottlenecks and delays.
- Access criteria should prioritize mature projects with higher systemic impact.



Self-generation

- Relevant instrument to integrate dedicated renewable generation and industrial demand.
- Should be treated as a mechanism for efficiency and planning, not just as a subsidy.
- Self-generation arrangements anchor investments and organize electro-intensive consumption.
- Legal security and regulatory flexibility are essential for strategic projects.

ABIHV's Perspective

The implementation of the New Legal Framework for the Electricity Sector needs to be carried out with regulatory predictability and legal security for long-term electro-intensive investments.

ABIHV advocates for the establishment of technical regulation on curtailment, promoted by ANEEL, with clear cost allocation criteria, avoiding increases in charges and tariffs, and promoting the maintenance of investments in renewable energy that are strategic for the energy transition.

It is necessary to maintain the presidential veto on the provision that seeks to establish additionality for self-generation arrangements, preserving this segment as a legitimate instrument for strategic industrial projects, without restrictions on potential energy suppliers.

Regarding transmission, network access criteria must consider project maturity, economic impact, and the systemic role of low-carbon loads, with active expansion planning.



3. ELECTRICITY SECTOR

3.1 Price Formation

The Brazilian electricity sector is a key driver of competitiveness for hydrogen, ammonia, e-methanol, and green fertilizers. Renewable electricity accounts for approximately 70–75% of the total cost of green hydrogen production. It is essential to ensure broad and reliable access to renewable energy, with lower regulatory risk, adequate infrastructure, and predictable price formation, enabling international competitiveness.

Price Formation

Electricity price formation is one of the main determinants of the competitiveness of green hydrogen in Brazil. This is an ultra-electro-intensive industry, with long-term investments and high exposure to regulatory risk, for which price predictability and regulatory stability are essential for feasibility.

- Green hydrogen projects involve robust investment decisions, requiring energy contracts with price visibility, including hourly and locational pricing tools that adequately reflect costs and scarcity.
- Transparent and participatory regulation by ANEEL is important regarding the remuneration mechanism for energy generation during peak consumption periods, as approved in the New Legal Framework for the Electricity Sector.
- Modernization should integrate price formation with market opening, demand response, storage, and ancillary services, providing a robust and predictable economic signal for investment.

ABIHV's Perspective

ABIHV recognizes recent advances in the modernization of the electricity sector, including the guidelines established by the New Legal Framework for the Electricity Sector. However, it understands that the evolution of price formation must prioritize regulatory predictability, rule stability, and clarity in transition processes, especially regarding hourly pricing and locational signals.

Changes to these mechanisms must follow consistent technical criteria and well-defined timelines, in order to preserve long-term investment decisions and ensure that price formation serves as a tool for efficiency and competitiveness. A predictable and transparent pricing environment is fundamental to the viability of the green hydrogen industry and the success of Brazil's energy transition.



3. ELECTRICITY SECTOR

3.2 Curtailment

Curtailment has established itself as a central topic in the electricity sector agenda, with direct impacts on the competitiveness of renewable generation and, consequently, on the viability of new strategic electro-intensive loads, such as green hydrogen.

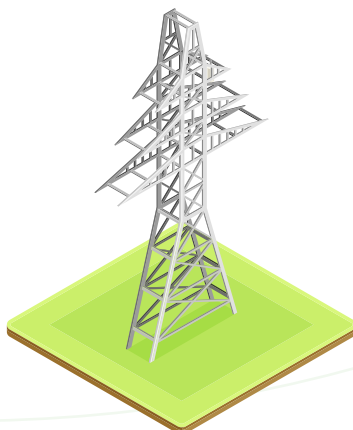
- The opening of Public Consultation 210/2025 represents a significant step toward structuring more rational regulatory solutions aligned with the system's operational reality.
- The discussion on curtailment should focus on proper cost allocation, avoiding automatic solutions that increase sectoral charges and put pressure on tariffs.
- Rationalizing compensation mechanisms is essential to preserve the economic sustainability of the sector and affordable tariffs.
- In this regard, the veto on the New Legal Framework for the Electricity Sector regarding the provision for compensation "regardless of cause" is important and reinforces the need for clear technical criteria and more precise governance on the issue.
- Flexibility instruments, such as storage system auctions, can help mitigate curtailment in specific contexts, provided they are integrated into sectoral planning and evaluated in terms of systemic costs and tariff impacts.

ABIHV's Perspective

ABIHV supports ongoing initiatives aimed at providing adequate regulatory treatment for curtailment, recognizing the importance of establishing clear, technically grounded rules aligned with tariff sustainability. The association understands that advancing this debate is essential to provide investor security and sector predictability.

At the same time, ABIHV advocates that the solution to curtailment should not be limited to financial compensation, but should encourage structural decisions that reduce its recurrence, promote better regional expansion planning, and avoid indiscriminate cost transfers to consumers.

Addressing curtailment must strengthen, not compromise, the competitiveness of the electricity sector and Brazil's energy transition strategy.



3. ELECTRICITY SECTOR

3.3 Self-Generation

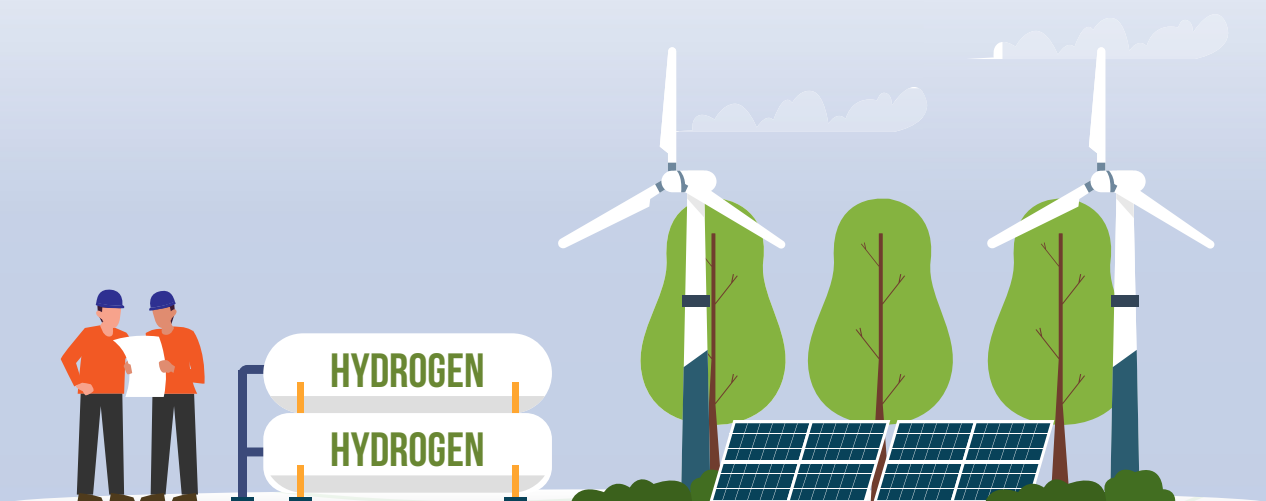
Self-generation plays a key role in organizing electro-intensive consumption and integrating renewable generation with industrial demand, especially in structuring projects such as green hydrogen.

- The recent electricity sector modernization agenda has brought self-generation to the center of the debate, linking the topic to incentive revision, tariff equity, and system financing.
- In this context, self-generation should be treated as a tool for efficiency and planning, not merely from the perspective of subsidies or avoided charges.
- Self-generation arrangements help anchor investments in dedicated renewable generation, improve load management, and facilitate integration between supply and consumption within the electricity system.
- The New Legal Framework for the Electricity Sector advanced by establishing clearer guidelines for the topic, and, importantly, presidential vetoes preserved regulatory flexibility and legal security, avoiding automatic restrictions that could compromise projects under development and structural investment decisions.
- Despite regulatory progress, risks persist regarding coordination, infrastructure access, self-generation arrangements, and additionality requirements, particularly in Export Processing Zones (ZPEs), with ongoing regulatory debate in the National Congress, primarily affecting ultra-electro-intensive industries.

ABIHV's Perspective

ABIHV advocates maintaining the vetoes related to self-generation as essential for regulatory stability and the preservation of a favorable environment for productive investment. The association understands that automatic or excessively rigid restrictions could compromise strategic industrial projects without efficiently addressing the sector's structural challenges.

For ABIHV, self-generation must remain a legitimate instrument for demand organization and for promoting the expansion of renewable generation linked to productive consumption. Incentives and responsibilities should be calibrated gradually and balanced, ensuring that electricity sector modernization strengthens the competitiveness of new low-carbon industrial value chains, such as green hydrogen.



3. ELECTRICITY SECTOR

3.4 Transmission

Electricity transmission is one of the main determinants of the competitiveness of green hydrogen in Brazil. Firm, predictable, and economically efficient access to the transmission grid is indispensable for the feasibility of electro-intensive projects and for converting the country's renewable potential into low-carbon industrial development.

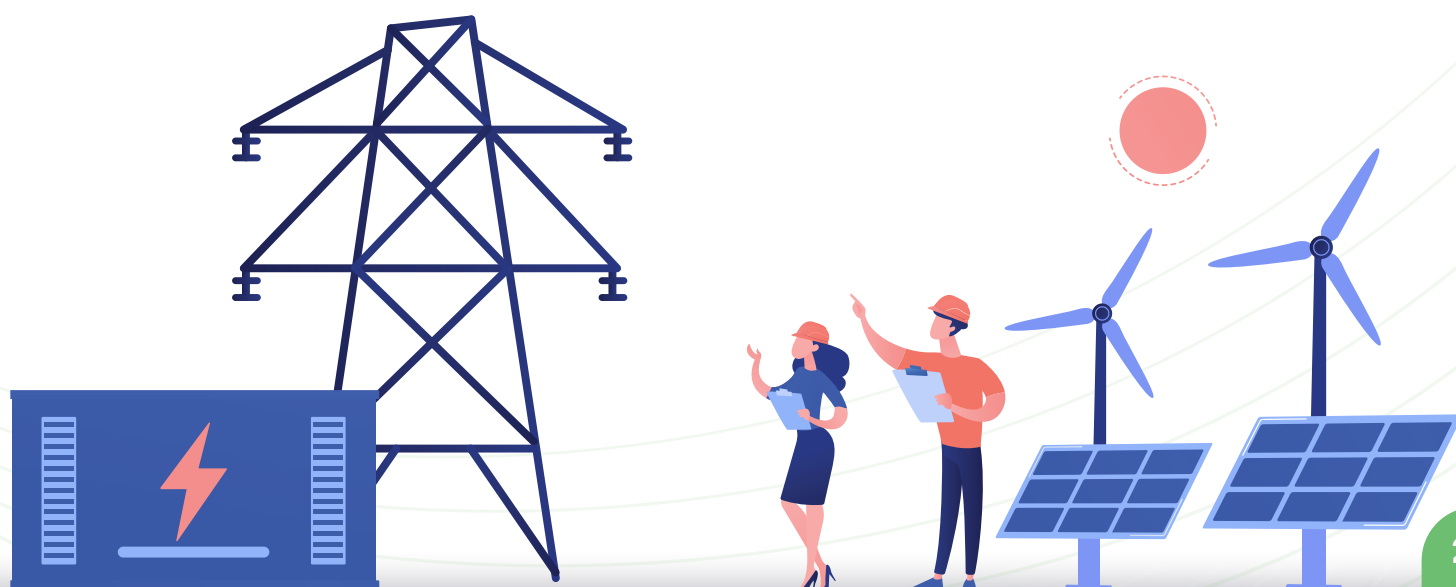
- The establishment of the National Policy for Transmission System Access (PNAST), as well as the execution of transmission auctions, reinforces the role of network expansion planning as a central instrument of energy policy, guiding reinforcements and expansions aligned with the needs of the energy transition.
- In this context, maintaining the currently scheduled timelines for network reinforcements, which could add up to 7 GW of capacity between 2029 and 2032, is critical, as these schedules align with the technological, regulatory, and financial maturation cycle of the green hydrogen industry in Brazil.
- Additionally, the adoption of guarantee mechanisms for network access is essential to mitigate speculative behavior, organize transmission demand, and prioritize projects with a higher degree of maturity and investment security.

ABIHV's Perspective

ABIHV recognizes and supports recent institutional advances that reposition transmission at the center of energy policy execution, particularly PNAST and the strengthening of planning through POTEE. However, it understands that these instruments must be applied in a way that enables the implementation of strategic industrial projects associated with the energy transition.

The association advocates that transmission access and expansion mechanisms explicitly incorporate criteria that consider project maturity, economic impact, and systemic role of new low-carbon electro-intensive loads, such as green hydrogen. Competition for grid access must be accompanied by active expansion planning, avoiding capacity scarcity from becoming a source of exclusion or delay for structural investments.

For ABIHV, transmission should be treated as a vector of industrial development and renewable energy efficiency, capable of organizing regional expansion, mitigating operational constraints, and sustaining Brazil's competitiveness in the global green hydrogen economy.



4. Financing and Support Instruments

Challenges faced in financing the decarbonization of industry, especially hard-to-abate sectors: cement, steel, chemicals, aluminum, glass, and pulp & paper.

- A bottleneck remains between financing demand and supply.
- Highly anchored in the public sector (BNDES), with important initiatives such as BIP and EcoInvest.
- Uncertainty and high costs hinder financing, including high cost of sustainable technology, lack of guarantees, credit risk, and demand uncertainty.
- More instruments to attract private capital are needed, through project structuring, guarantees, or demonstration effects along the value chain.
- Brazil has a structured framework to support the energy transition, under the Ecological Transformation Plan.

PATEN (Law 15.103/2025)

- Central instrument for **risk mitigation** via the **Guarantee Fund**.
- Mobilizes **tax credits** to secure financing.
- Focus on **industrial production infrastructure** and use of hydrogen and renewable energy.

Climate Fund (BNDES)

- Main **reimbursable credit line** with incentivized rates.
- Long-term financing for **fixed assets and green infrastructure**.
- Leverages **decarbonization projects** with the lowest financial cost in the market.

PHBC and Rehidro (Hydrogen Legal Framework)

- **PHBC**: Provides economic subsidies (credits) to reduce production costs (OPEX).
- **Rehidro**: Special regime with tax exemptions for equipment acquisition and construction (CAPEX).

ABIHV's Perspective

The financing challenge lies in reducing capital costs and supporting the conversion of industrial demand.

Structural Gap: Current support focuses on supply (production). The challenge for 2026 is to finance the demand side: adaptation of industrial plants and technological conversion for green hydrogen consumption.

BIP (Brazil Climate Investment Platform)

- Coordination hub that connects “**bankable**” projects to global investors.
- Reduces information asymmetry between Brazilian industry and capital markets.

EcolInvest Brazil

- Focus on currency **risk protection (hedging)** to attract long-term foreign capital.
- Essential for **large-scale projects** whose revenues are linked to external markets.

FIP Energy Transition (Finep/BNDES/Petrobras)

- Equity investments in decarbonization technology companies.
- Supports innovation for domestic components of the hydrogen value chain.

FMM (Merchant Marine Fund) and Finep Calls

- Supports the transition of logistics and shipping to low-emission fuels.
- Promotes innovation in hard-to-abate sectors (steel, cement, and chemicals).



5. Foreign Trade Instruments

Industrial and foreign trade policies are central tools for the development of the green hydrogen industry. The correct balance between incentives and regulatory coherence is essential to ensure long-term investment predictability and strengthen national productive capacity, with a focus on value addition and technology transfer.

In this context, the recent Resolution No. 852 issued by the Executive Management Committee of the Foreign Trade Chamber (Gecex), which raised the Import Tax (II) on capital goods (BK) and IT/telecommunications goods (BIT), including electrolyzers, raises concerns for the green hydrogen value chain for the following reasons:

- The sector is already subject to sectoral regulation that establishes mechanisms for developing the national production chain and rules for local content.
- Electrolyzers are strategic equipment for consolidating the production chain, directly impacting cost, efficiency, and technological leadership.
- Tariff increases may compromise large-scale projects, especially given the limited domestic industrial capacity for producing electrolyzers compatible with the demands of ongoing projects.
- The measure creates a misalignment with recent support instruments, such as Rehidro and PHBC, whose objective is to structure and attract investment to the hydrogen value chain.

ABIHV's Perspective


ABIHV understands that it is essential to ensure incentives for the full development of the Brazilian production chain. As a representative of all links in the green hydrogen chain, we advocate that industrial and trade policy be aligned with the maturity level of domestic production.

It is necessary to ensure coherence between incentive instruments and domestic productive capacity, especially at the stage of launching the first large-scale strategic projects in the country.


Regulatory predictability and coordination between industrial policy, foreign trade, and financing instruments will be decisive in enabling scale, competitiveness, and investment attraction.







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