

2025 White Paper

The push towards Net Zero

Blue Green Energy, Inc.

We are part of the GLOBAL effort to reduce CO2 emissions and transition to Clean, Zero Emission Hydrogen.

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Background – The push towards Net Zero

The urgency to combat climate change has led to a worldwide push for net zero emissions, a goal that aims to balance the amount of greenhouse gases (GHGs) emitted with the amount removed from the atmosphere. This movement is gaining momentum, with over 140 countries, covering nearly 90% of global emissions, having pledged to reach net zero by mid-century. These commitments mark a significant shift in global climate policy, backed by stringent government regulations, clean energy investments, and corporate sustainability initiatives.

Among the key strategies to achieve this goal is the transition away from fossil fuelpowered transportation, particularly gasoline and diesel-powered cars. Governments worldwide are enacting policies to phase out internal combustion engine (ICE) vehicles in favor of electric vehicles (EVs) and alternative fuel technologies.

Governments worldwide are implementing policies and regulations to drive the transition to a low-carbon economy. Some of the most impactful measures include:

1. Carbon Pricing & Emission Regulations

- The European Union's Emissions Trading System (ETS) places a cap on emissions and allows businesses to trade allowances, incentivizing reductions.
- Countries like Canada and Sweden have introduced carbon taxes to encourage industries to cut emissions.

2. Investment in Renewable Energy

- Governments are rapidly shifting towards wind, solar, and hydrogen energy to replace fossil fuels.
- The U.S. Inflation Reduction Act (IRA) has allocated billions of dollars to support clean energy projects and tax credits for renewable investments.

3. Phasing Out Gasoline and Diesel Cars

Transportation is a major contributor to global carbon emissions, with road vehicles alone accounting for nearly 15% of global CO_2 emissions. Many countries have recognized the urgent need to transition to cleaner transportation options and have set deadlines to ban the sale of new gasoline and diesel-powered cars:

- European Union: The EU has legislated a ban on the sale of new petrol and diesel cars by 2035, requiring all new cars sold from that point to be zero-emission.
- United Kingdom: The UK has pledged to ban new petrol and diesel car sales by 2030, with hybrids allowed until 2035.
- Norway: A global leader in EV adoption, Norway plans to phase out new gasoline and diesel car sales by 2025, one of the most ambitious targets worldwide.
- Germany: Europe's largest car market has agreed to the EU's 2035 deadline but is pushing for exemptions for e-fuels.
- France: Committed to phasing out sales of new ICE vehicles by 2035, aligning

with the EU's broader strategy.

- Netherlands: The Dutch government has set an even earlier goal, aiming to ban new petrol and diesel car sales by 2030.
- California (USA): The state has announced that all new passenger vehicle sales must be zero-emission by 2035, with plug-in hybrids allowed under limited conditions. Eleven other states, including Oregon, Washington, Colorado, New Mexico, New York and Massachusetts, have adopted similar policies.
- Canada: The federal government has mandated that all new cars and lightduty trucks sold must be zero-emission by 2035.
- China: While not a full ban, China has set aggressive EV adoption targets, aiming
- for 50% of all new car sales to be plug-in hybrids or battery-electric vehicles by 2035.
- Japan: Plans to end new gasoline-only car sales by 2035, pushing for hybrid and electric vehicle adoption.
- India: While not an outright ban, India aims for 30% of new car sales to be electric by 2030, with further policies expected in the coming years.

These policies are expected to accelerate the global transition to electric and hydrogenpowered vehicles, significantly reducing carbon emissions from the transportation sector.

4. Corporate Sustainability Mandates

• Governments are enforcing corporate disclosures on emissions, requiring companies to adopt science-based net zero targets and shift towards greener operations.

5. Public-Private Partnerships & Innovation

- Many nations are investing in green hydrogen, carbon capture technologies, and electric vehicle (EV) infrastructure to support the clean energy transition.
- Countries such as Germany and Australia are forming alliances to develop green hydrogen as a key component of their energy mix.

The global push toward net zero emissions is not just an environmental necessity—it is an economic and social imperative. As more governments, businesses, and individuals commit to cutting carbon emissions, the transition to a sustainable future becomes increasingly achievable. However, meeting these ambitious goals requires continued investment, innovation, and global cooperation.

With over 140 countries pledging to achieve net zero and more than a dozen major economies phasing out gasoline and diesel car sales, momentum is building. The next decade will be critical in determining whether we can limit climate change and create a cleaner, more sustainable world for future generations.

What is Hydrogen

Hydrogen (H_2) is the most abundant element in the universe and plays a crucial role in various scientific, industrial, and energy applications. It is a colorless, odorless, and highly flammable gas that is often used as a clean energy source. Though hydrogen rarely exists in its pure form in nature, it can be produced from various sources, including water, natural

gas, and biomass.

Properties of Hydrogen

- Atomic Number: 1 (the lightest element)
- Highly Reactive: Bonds easily with other elements, forming compounds like water (H₂O) and methane (CH₄)
- Energy Carrier: Can store and deliver energy eNiciently
- Non-Toxic and Clean: When burned or used in a fuel cell, it produces only water vapor

Types of Hydrogen Based on Production

Hydrogen is categorized based on how it is produced, often using color codes:

- Gray Hydrogen Produced from natural gas via steam methane reforming (SMR), releasing CO₂ emissions
- Blue Hydrogen Also derived from natural gas, but CO₂ emissions are captured and stored (carbon capture and storage, CCS)
- Green Hydrogen Produced using renewable energy (wind, solar, hydro) to split water via electrolysis, making it 100% clean
- Pink Hydrogen Produced via electrolysis powered by nuclear energy
- Brown/Black Hydrogen Made from coal or lignite, the most carbonintensive method

How Hydrogen is Used

- Hydrogen has diverse applications across various industries:
- Energy Storage Stores excess electricity from renewable sources for later use
- Fuel for Transportation Used in hydrogen fuel cells for cars, buses, trains, and even planes
- Industrial Applications Essential in petroleum refining, steel production, and ammonia (fertilizer) manufacturing
- Power Generation Can be burned in gas turbines or used in fuel cells for zeroemission electricity
- Space Exploration NASA and other agencies use hydrogen as rocket fuel

The Hydrogen Economy

The hydrogen economy refers to a global shift toward hydrogen as a primary energy source, replacing fossil fuels in key sectors such as transportation, industry, and power generation. With governments and corporations investing billions in hydrogen production, infrastructure, and fuel cell technology, the industry is rapidly evolving as a crucial part of the net zero transition.

Hydrogen Applications Across Industries

Transportation: Fuel cell electric vehicles (FCEVs) for cars, buses, trucks, trains, and even planes.

Energy Storage: Hydrogen stores excess renewable energy and can be converted back into electricity.

Heavy Industry: Steel, cement, and chemical manufacturing are switching to hydrogen to cut CO_2 emissions.

Heating & Power: Hydrogen can be blended with natural gas to power homes and businesses.

Shipping & Aviation: Hydrogen and ammonia are emerging as clean alternatives for global freight transport.

Government Commitments & Hydrogen Roadmaps

Over 40 countries have announced national hydrogen strategies to scale production and infrastructure. \$320+ billion in planned investments by 2030 from governments and private companies.

Hydrogen Hubs are being developed in Europe, the U.S., Japan, South Korea, China, and Australia.

Leading Countries & Initiatives

European Union:

- REPowerEU Plan Targets 20 million tons of green hydrogen by 2030.
- Hydrogen Bank €3 billion in funding to accelerate projects.

United States:

- Inflation Reduction Act (IRA) ONers \$3/kg tax credits for green hydrogen.
- DOE Hydrogen Hubs Investing \$8 billion in regional hydrogen infrastructure.

<u>Japan:</u>

- World's first hydrogen strategy (2017)
- Plans to triple hydrogen imports by 2040.

Australia:

- Leading green hydrogen producer with massive solar & wind energy resources.
- Exporting hydrogen to Asia and Europe.

China:

- Plans to build 1,000 hydrogen refueling stations by 2035.
- Dominates fuel cell vehicle production.

Companies Leading the Hydrogen Revolution

Automakers & Fuel Cell Vehicles (FCEVs)

Toyota (Mirai) Hyundai (Nexo) Nikola, Daimler, Volvo, Kenworth, GM (Hydrogen trucks)

Hydrogen Production & Infrastructure

Air Liquide, Linde, Plug Power – Leading hydrogen gas suppliers. Bloom Energy, Ballard Power, Cummins – Fuel cell manufacturers. BP, Shell, Blue Green Energy – Investing in hydrogen refueling stations and supply chains.

Heavy Industry & Energy

ArcelorMittal, Thyssenkrupp – Using hydrogen to produce green steel. Siemens, Mitsubishi Power – Developing hydrogen power plants. Amazon, Walmart, FedEx – Deploying hydrogen-powered forklifts and delivery trucks.

Investing in Hydrogen

As the global economy transitions toward sustainable energy solutions, green hydrogen is emerging as a game-changing investment opportunity. With its potential to revolutionize industries, reduce carbon emissions, and drive economic growth, green hydrogen presents a compelling case for investors looking for longterm gains and environmental impact.

Green hydrogen, produced using renewable energy sources like wind and solar power, plays a crucial role in decarbonizing hard-to-abate sectors such as heavy industry, transportation, and power generation. Unlike grey and blue hydrogen, which rely on fossil fuels, green hydrogen oNers a zero-emission alternative, aligning with global net-zero targets and sustainability mandates.

Governments worldwide are introducing ambitious policies, subsidies, and incentives to accelerate the development and adoption of green hydrogen. The European Union, the United States, and countries like Japan and South Korea have unveiled multi-billion-dollar hydrogen strategies aimed at boosting production capacity, infrastructure, and research. These initiatives create a favorable investment landscape with minimized risks and enhanced profitability. The global green hydrogen market is projected to grow exponentially, with estimates predicting a multi-trillion-dollar industry by 2050. As industries such as steel, aviation, and shipping shift toward hydrogen-based solutions, demand is expected to soar. Companies investing early in green hydrogen production, storage, and distribution will be well- positioned to capitalize on this growing market.

About Blue Green Energy, Inc.

Blue Green Energy, Inc. is a forward-thinking renewable energy company committed to advancing sustainable power solutions through innovative green hydrogen technology. Founded with a vision to accelerate the transition to clean energy, the company specializes in producing hydrogen from renewable sources such as wind, solar, and hydroelectric power.

With a strong focus on research, development, and scalable production, Blue Green Energy, Inc. aims to reduce carbon emissions in the transportation sector. By leveraging cutting-edge electrolyzer technology and strategic partnerships, the company is positioned at the forefront of the hydrogen economy, delivering clean, eNicient, and cost-eNective energy solutions.

How to Invest

Blue Green Energy, Inc. is paving the way toward a clean, sustainable future with bold initiatives in green hydrogen.

What We're Building:

- <u>Green Hydrogen Production Facilities</u>: Using renewable energy to create clean hydrogen with zero emissions.
- <u>Distribution Networks</u>: ENicient systems to deliver hydrogen where it's needed most.
- <u>Refueling Stations:</u> Accessible hydrogen refueling for vehicles, supporting the transition to carbon-free transportation.

Now, YOU have the chance to be part of this movement!

How Blue Green Energy, Inc. is raising capital through crowdfunding, allowing everyday investors—anyone over 18 years old—to support and benefit from the future of clean energy.

Why Invest?

- Hydrogen is essential for reaching net-zero emissions.
- The global hydrogen market is growing rapidly.
- This is a chance to own a stake in the next big energy revolution.

Together, we can fuel a cleaner, greener world!

Join the movement & invest today: <u>Invest Now</u>