

## A Green Hydrogen Route for Electromobility in Brazil and Its Impact in Climate Change

**Authors :** Milena França Marques

**Abstract :** Due to the climate crisis, several countries such as Brazil began to look for energy alternatives, finding green hydrogen as a possible solution. In addition to not emitting polluting gasses, it also has a large energy capacity, being an excellent alternative for the transport sector, the third sector that emits the most Greenhouse Gases (GHG) in Brazil. Therefore, this work aims to suggest a route for using green hydrogen, through the analysis of plans implemented in other countries, the Brazilian situation, and its difficulties in the development of hydrogen and electromobility, aiming to understand how its value chain works, as well as how to make the Brazilian fleet more efficient and decarbonize. As a result, 68 structuring measures were suggested for the first 5 axes of the National Hydrogen Program (PNH2) using the Three-Year Plan as a basis. Categorizations of measures were also made, definitions of those responsible for their development and implementation, as well as deadlines for them to be met. It is concluded that the study has the potential to promote national energy-environmental mobility transition planning realistically, capable of developing hydrogen and electromobility in Brazil, in addition to contributing to achieving the goals established by its Nationally Determined Contribution (NDC).

**Keywords :** climate change, electromobility, hydrogen, roadmap

**Conference Title :** ICEER 2024 : International Conference on Energy Efficiency and Renewables

**Conference Location :** Vancouver, Canada

**Conference Dates :** September 26-27, 2024