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THE ROLE OF HYDROGEN IN THE DECARBONIZATION OF PUBLIC TRANSPORT ZERO FARE IN MARICÁ

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The use of fossil fuels, as the main energy source of economic activities since the Second Industrial Revolution, caused a significant increase in the concentration of greenhouse gases in the atmosphere, causing environmental impacts in several places on the planet. In this sense, the greatest motivation for addressing this topic comes from the socio-environmental need to reduce the use of fossil fuels, due to the risk of compromising future generations, due to the high emission of greenhouse gases (GHG), caused by fuels derived from finite sources. Therefore, we warn about the urgency of energy transition, recommending a change from the current matrix (predominantly polluting) to a clean and renewable matrix. The use of hydrogen has gained notoriety as an energy vector, already being a reality in the urban public transport sector, as a cleaner alternative that

adds environmental and social quality. In this work, the current panorama of the economic and environmental viability of using hydrogen as a potential energy vector for the urban public transport sector in the municipality of Maricá is investigated, through an exploratory bibliographic review. This way, it was possible to attest that hydrogen can be considered a promising energy source, classified as a green fuel, burning cleaner and more efficiently. It is noteworthy that the topic involves technological, social, economic, environmental and political factors, and requires investments in research, development and innovation for its implementation and expansion. Even so, the importance of the energy transition is evident, as it is necessary to abandon fossil sources and prioritize renewable sources, enabling the popularization of hydrogen in distributed generation.