



## Leidy Y. García,

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10h00, UTBM, Building B, B212**

Leidy Y. García is an associated professor and works as Director of the Doctorate in Economics of the Faculty of Economics and Business of the Universidad de Talca. She received her Ph.D. in Economics from the Universidad de Chile in 2013. She has extensive professional experience in consulting, research, and undergraduate and postgraduate teaching. She currently participates in five research projects of the National Research and Development Agency of Chile (ANID). Among them stands the 'Center for Multidisciplinary Research on Smart and Sustainable Energy Technologies for Sub Antarctic Regions under Climate Crisis' where she currently serves as Director. Her lines of research are Social Sector Economics (health, education, and environment) and Energy Economics.

# Global green hydrogen production: a perspective from economic viability

Taking into account climate change and the need to generate clean energy solutions, different substitutes for traditional energy sources based on fossil fuels have emerged. One of them is green hydrogen that is produced using renewable electricity (solar, wind, and biomass). Green hydrogen production causes relatively fewer greenhouse gas emissions than the production of other energy sources. However, its production and use require not only technological development but also rigorous economic evaluations that allow determining the economic viability of its production.

For this, the most used analysis methods are those based on economic evaluation, such as the levelized cost of hydrogen (LCOH), the levelized cost of electricity (LCOE), the net present value (NPV), sensitivity analysis, and the evaluation of uncertainty.

Therefore, the objective of this presentation is to offer a general overview of the different evaluation methods, their applicability, and comparison of production costs worldwide, based on an extensive review of the literature. This knowledge serves as a starting point for future research and efforts aimed at addressing challenges in the transition to a green hydrogen-based economy.