



Unidad de Planeación  
Minero Energética





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# Integrating hydrogen in the Colombian Energy Scenarios



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Session 9: Broadening LTES to Feature Socioeconomic Aspects



# Hydrogen and energy planning in Colombia

2021

Hydrogen Roadmap  
Law 2099 - Tax incentives (IT)

?

We are reevaluating our demand targets: SAF, P2X, ...  
And production under a just energy transition framework

## Goals

### Production



- ☐ **Green H2** : Electrolysis capacity: 1 -3 GW
- ☐ **Green H<sub>2</sub>** : LCOH de 1,7 USD/kg
- ☐ **Blue H<sub>2</sub>** : Capacidad de producción de 50 kt



### Demand



- ☐ **Transport**: from 1.500 – 2.000 light vehicles with fuel cells
- ☐ **Transport**: From 1.000 – 1.500 heavy vehicles with fuel cells.
- ☐ **Transport**: From 50 – 100 hydrogen refueling stations
- ☐ **Industry**: 40% of H2 consumption will be low emissions



### Transversal



- ☐ Investments of 2,500 – 5,000 USD in production and demand
- ☐ 2.5 to 3 million tons of CO2e avoided
- ☐ Creation of 7,000 to 15,000 jobs

# Hydrogen and energy planning in Colombia

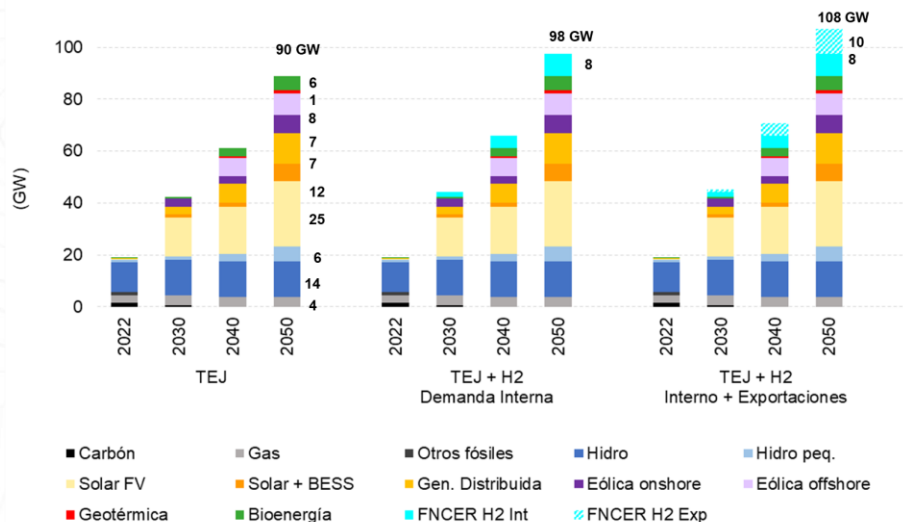
## 2022-2023

National Energy Plan (PEN)  
and JET Roadmap

2050: ~20 GW of renewable energy for H2  
production (Now it seems conservative)

## 2024

Next steps



- Update low-emission hydrogen production targets (green, blue, and white) to 2054
- Work in progress for develop a regulatory frame for origin certification, emissions threshold definition and evaluate possible demand incentives
- Creation of platform “Ecosistema hidrógeno Colombia” “EcoH2”
- Territorial concerns for JET

# Colombian hydrogen ecosystem (EcoH2)

## Type of information available:

- Technical and regulation information of hydrogen value chain.
- “How to build your project” section.
- Registration and monitoring of projects in the country in different stages.
- Directory of relevant private and public actors.

## How to access?



<https://www.minenergia.gov.co/es/ecosistema-hidrogeno-colombia-english/>



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