



Ministerio  
de Industria,  
Energía y Minería

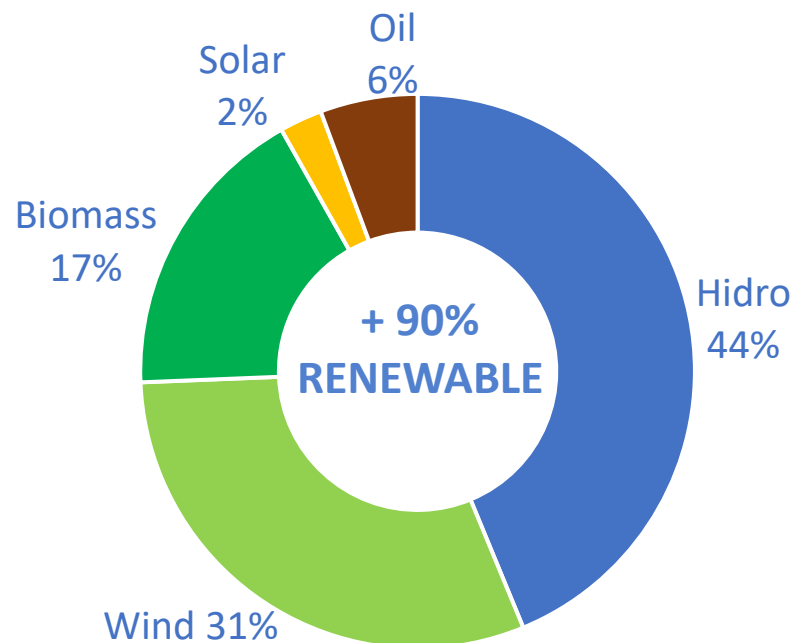
# URUGUAY ENERGY TRANSITION



# URUGUAY'S ENERGY SUCCESSION STORY

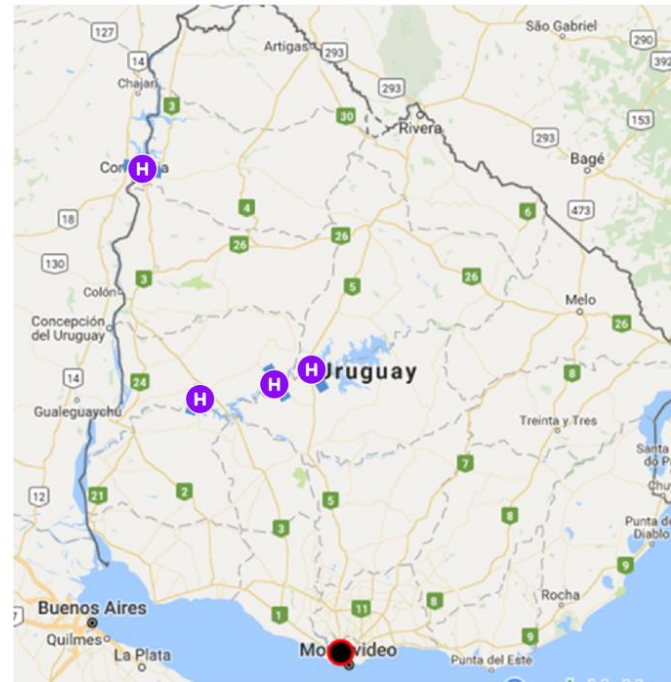
URUGUAY HAS SHOWN GREAT POTENTIAL

Urban and rural  
electrification rate  
**99.9%**

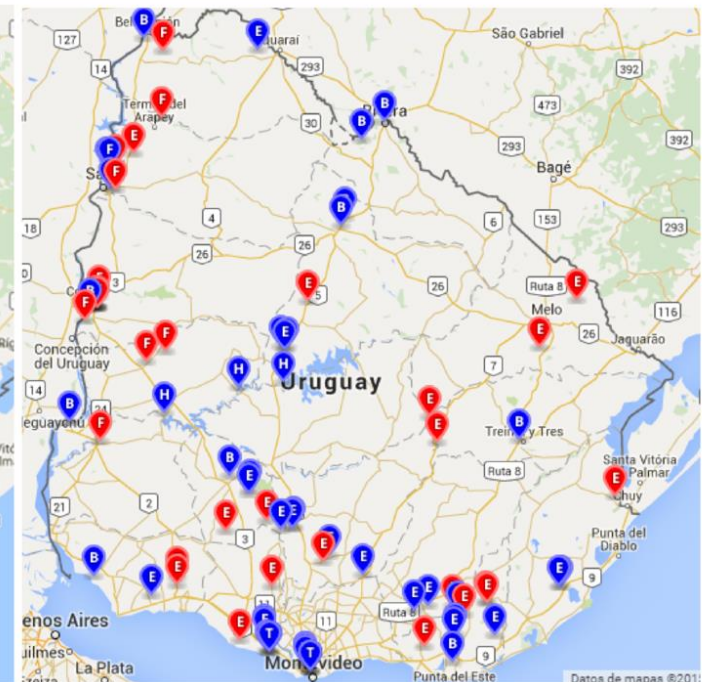


Over 90% renewable power over more than 5 years

Power Generation  
(before)



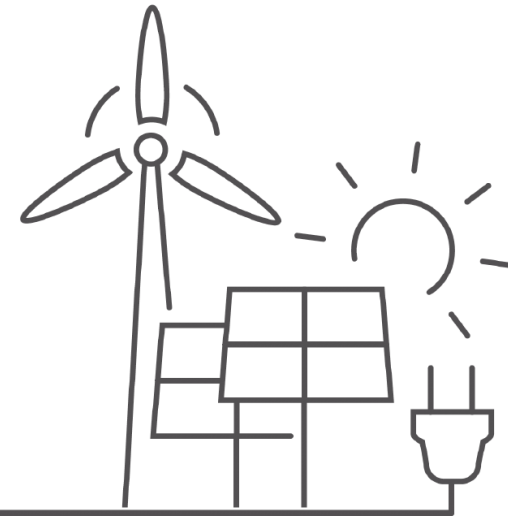
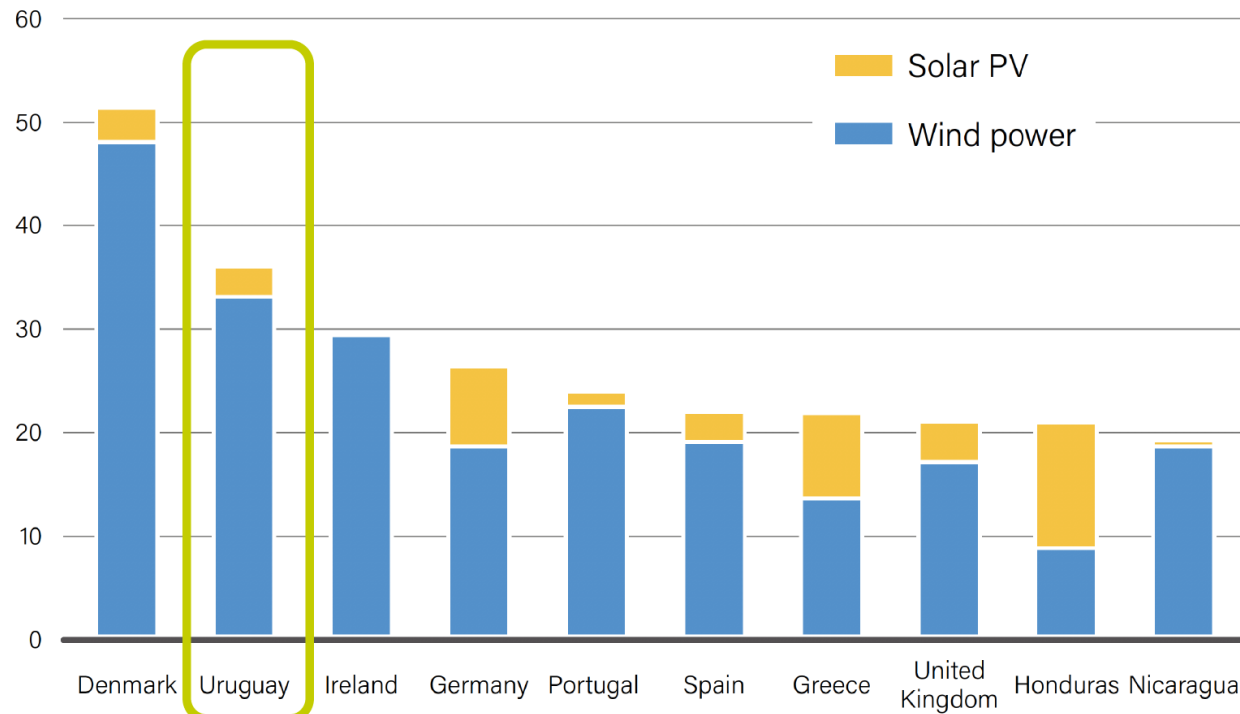
Distributed Power Generation  
(now)



## Uruguay in the international context

### Share of Electricity Generation from Variable Renewable Energy Top 10 Countries

Share of total generation (%)

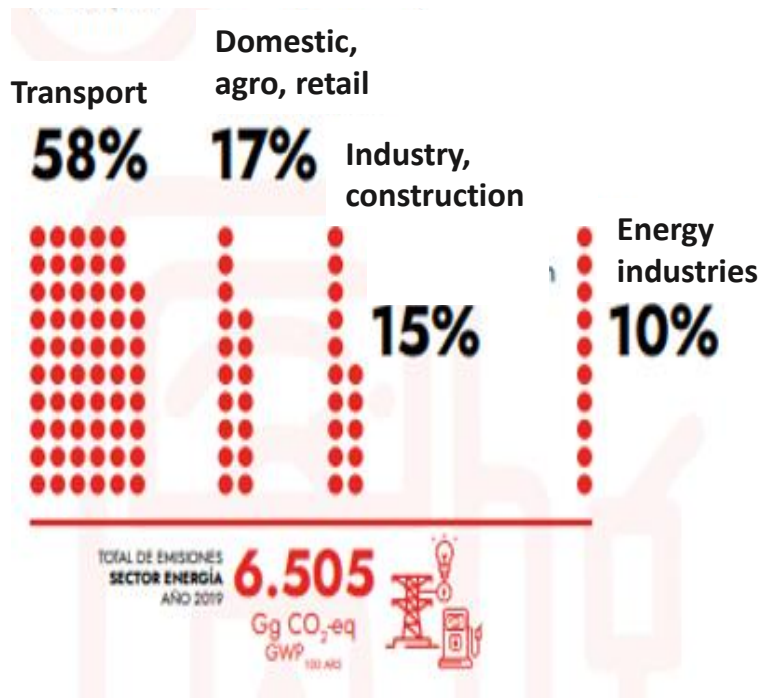


Note: This figure includes the top 10 countries according to the best available data known to REN21 at the time of publication.

# URUGUAY CLIMATE CHANGE CHALLENGES

TODAY WE ARE MOVING TO OUR SECOND ENERGY TRANSITION: TRANSPORT AND INDUSTRY

CO2 eq. energy  
emissions by sector



Transport  
Efficiency



Industry  
Efficiency



# ATTRIBUTES TO BEING A HYDROGEN PRODUCER/EXPORTER COUNTRY



**POLITICAL,  
INSTITUTIONAL and  
LEGAL STABILITY**



**POWER POTENTIAL  
and  
COMPLEMENTARITY**



**AVAILABILITY  
OF BIOGENIC  
CO2**

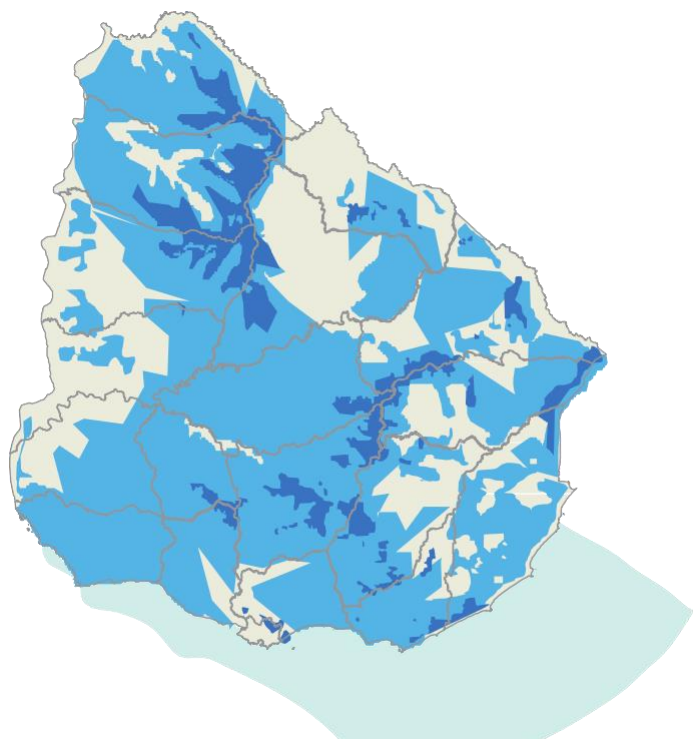


**LOGISTICS**

# URUGUAY OPPORTUNITY

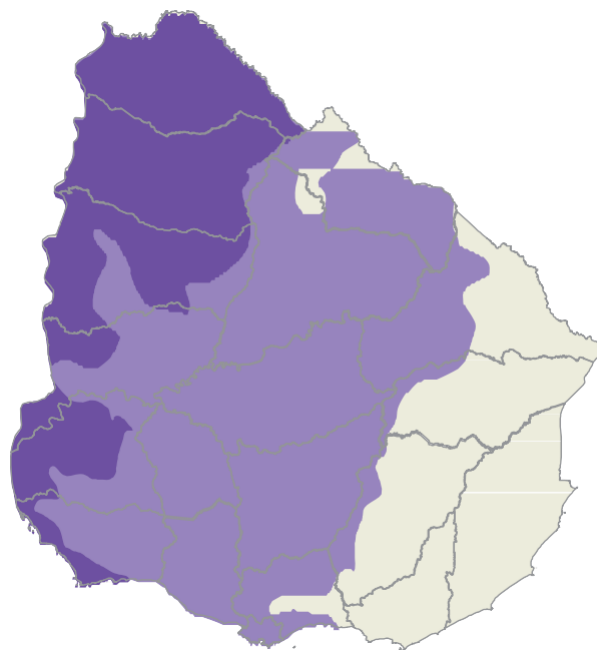
**RENEWABLE POWER POTENTIAL: TOTAL DEVELOPMENT CAPACITY OF ~60 GW SOLAR AND ~30 GW WIND FOR TOP-TIER RESOURCES.**

**URUGUAY COULD BE IN A COMPETITIVE POSITION WORLDWIDE, FOR H2 DERIVATIVES PRODUCTION**



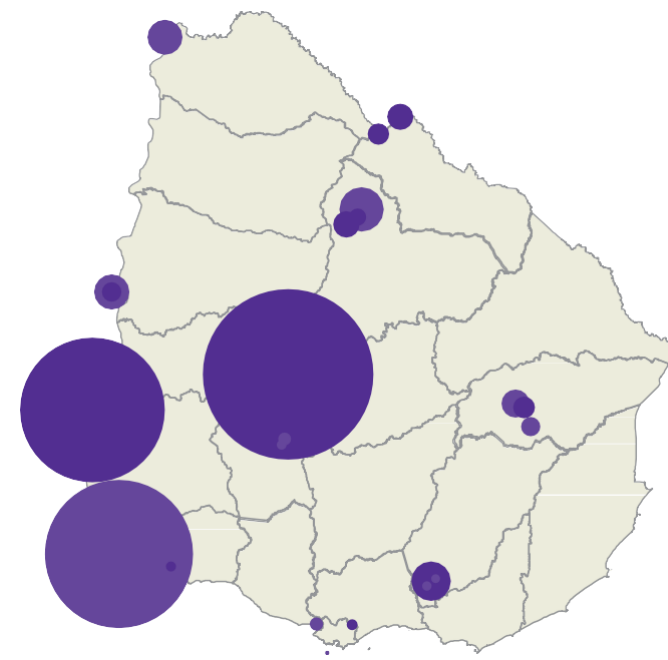
**Onshore y offshore wind capacity**

- Tier I >8m/s 30 GW**  
Suponiendo 15% del área potencial
- Tier II >7m/s 50 GW**  
Suponiendo 5% del área potencial
- Offshore 275 GW**



**Solar phototovoltaic**

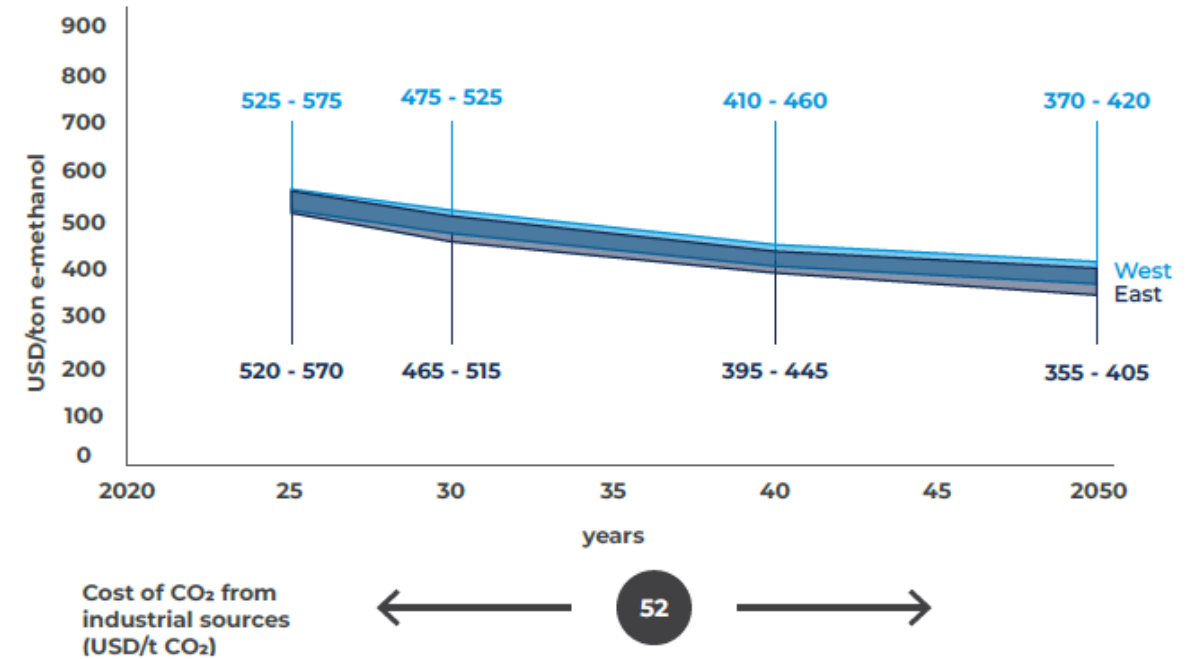
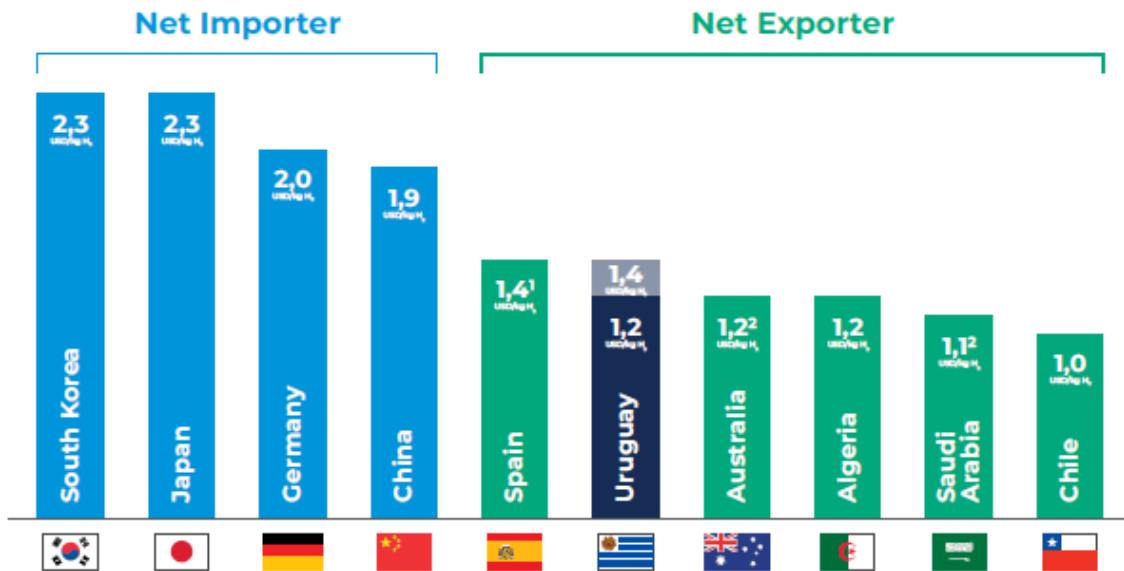
- Tier I 60 GW**  
Suponiendo 5% del área potencial
- Tier II 135 GW**  
Suponiendo 5% del área potencial



**Disponibilidad de CO2 biogénico**

- 150.000 ton/año biogenic CO<sub>2</sub>**

# ESTIMATED COST PRODUCTION



**Figure 8a CO<sub>2</sub> supplied industrially: production cost curve for e-methanol, (USD/ton e-methanol).**

Source: McKinsey & Company, 2021, as per contract #C-RG-T3777-P001 entered into with the IADB.

# PRIORITY SECTORS



**METANOL**

**E-FUEL**



**HEAVY DUTY  
TRANSPORT**

**FERTILIZERS**



# HYDROGEN AND DERIVATIVES URUGUAY ROADMAP

**2022-2025**

**1**



First pilots:  
2 – 25 MW Electrolyzers



•  
**Regulations**



**Citizen dialogue  
and capacity  
buildings**

**2026-2030**

**2**



Metanol

1 - 2 GW Electrolyzers

2 - 4 GW Renewable  
energies



SAF

Expansion nationwide,  
export of derivatives

•

**2030**

+

**3**



Metanol

9 GW Electrolyzers



SAF

18 GW Renewable energies

Synthetic fuels, hydrogen,  
ammonia



Ammonia

# Transversality, articulation and coordination

PRESIDENTIAL RESOLUTION 294/22

## INTER-INSTITUTIONAL GROUP



**Ministerio de Industria, Energía y Minería**  
**Ministerio de Ambiente**  
**Ministerio de Relaciones Exteriores**  
**Ministerio de Economía y Finanzas**

**Oficina de Planeamiento y Presupuesto**  
**Ministerio de Transporte y Obras Públicas**  
**Ministerio de Vivienda y Ordenamiento Territorial**  
**Ministerio de Defensa**

[www.hidrogenoverde.uy](http://www.hidrogenoverde.uy)



# H2U PROGRAM

5

WORKING  
LINES



**CAPACITY BUILDINGS**

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**REGULATION**

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**INVESTMENTS**

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**INFRASTRUCTURE**

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**CITIZEN DIALOGUE**

# ANNOUNCED PROJECTS



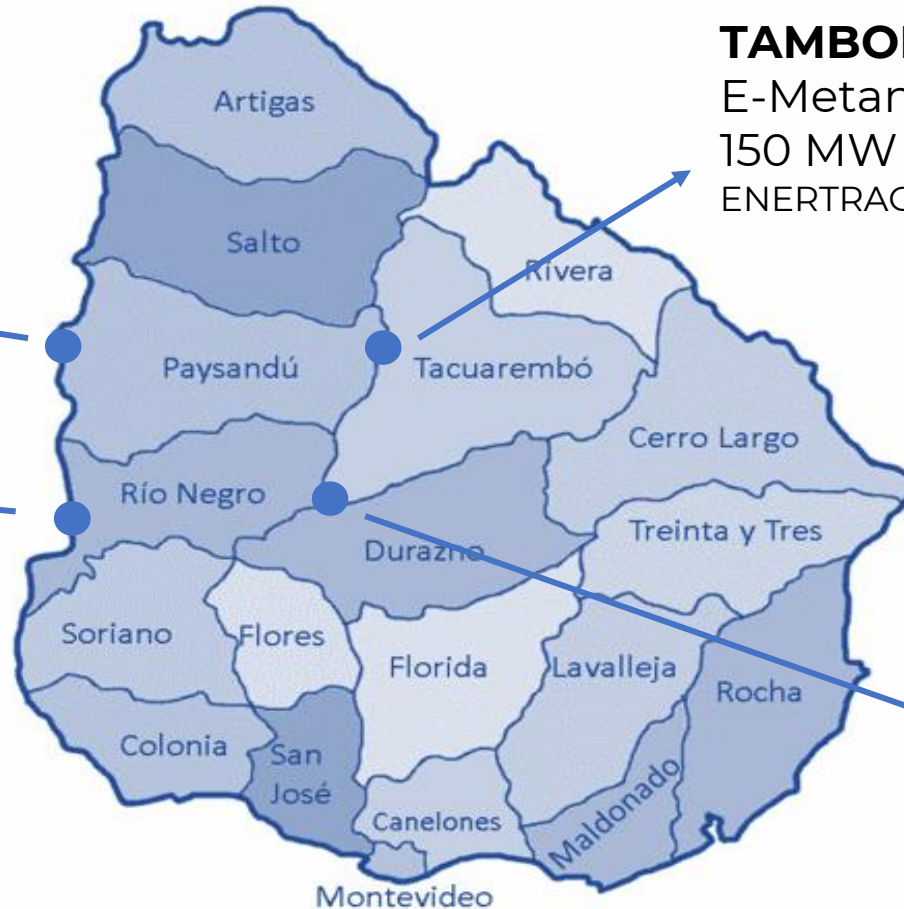
## HIF PROJECT

E-Metanol + E-Gasoline  
1 GW Electrolyzer  
ALUR/ANCAP auction



## KAHIROS PROJECT

Heavy Duty Transport  
2 MW Electrolyzer  
Ventus, Fidocar, Fraylog



## TAMBOR PROJECT

E-Metanol  
150 MW Electrolyzer  
ENERTRAG Company



## PILOT PROJECT H24U

Transporte pesado  
5 MW Electrolyzer  
SACEEM/CIR/FRAYLOG  
ANII/LATU/MIEM auction

# THANK YOU

[miem.gub.uy](http://miem.gub.uy)

[ben.gub.uy](http://ben.gub.uy)

[certificacion-energiarenovable.miem.gub.uy](http://certificacion-energiarenovable.miem.gub.uy)

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