

862 - Planning the distribution network of the city of Omis conditioned by the need to build electric vehicle charging stations and analysis of a mobile electro-hydrogen generator an alternative solution

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01 **Climate neutrality goals**

Importance of EV infrastructure 02

Hydrogen Power Generator (GEH2) Technology

Unique challenges of Croatian coastal cities 03



Methodology

2



ADVANTAGES

- Environmental benefits
- Scalability and flexibility
- Suitability for remote locations
- > Off-grid capability

DISADVANTAGES

- > High cost
- > Infrastructure limit
- Safety concerns

SCENARIO 2

With EV Charging Gompertz Growth Law for forecasting

Economic Viability

4% - discount rate

2.7 MILLION EUR - NPV

4.91% - IRR

CA. 23 YEARS - modified return period

Conclusion

 \blacktriangleright Estimated daily demand = 3,000 vehicles per day Expected maximum load = 22.35 MW Infrastructure implications – High investments required

> GEH2 as a strategic alternative High costs & infrastructural limitations Innovative future solution

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