

Off-Grid Generator for Energy Autonomy







Time to power is too long and costly

The grid is at capacity and no longer an option to supply high power needed for business expansion such as EV charging services.



Decarbonization impacts profitability

Strong environmental regulations representing hundreds of M€ per year for a supermarket company because of EU RED III directive (Renewable Energy Directive)



Water shortage causes disruptions

Car wash and related services revenue down by 25% on typical year







Baseload 300 kW / 100 MWh storage within days

Avoiding connection costs and huge delays with the utility companies

>1M € in cost avoidance, resilience, and increased revenue over 10 yrs



Uses 100% renewable energy vector + captures biogenic CO2

Using renewable feedstock triggers government incentives. Biogenic CO2 captured via ethanol production + 2.2Mt emissions avoided over 10 years

1M € to 2M € in grants and CO2 credits over 10 yrs



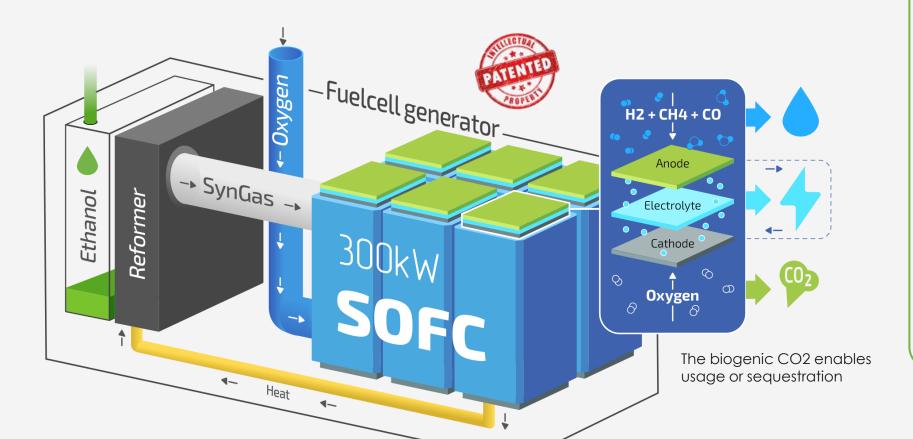
Produces pure / deionized water every day and avoids draught restrictions

Car wash and related services revenue down by 25% on typical year due to drought

500k € over **10 yrs**



The Magic: high efficiency electricity production using ethanol & modular approach



Why ethanol?

- Made from residue and waste, 100% renewable
- Access to 36 TWh
 equivalent of ethanol
 produced each year in
 Europe same as 4
 nuclear reactors!
- Best energy density vs other green feedstocks
- Easy and safe transport and use
- Low-cost commodity
- Waste heat sufficient to reform ethanol























kiwa elcogen Naloeo Evyon © CELECTIS



Fuel cell system





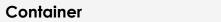
Battery











Power electronics



Use Cases – all benefiting from 100MWh per 30m³ tank



Power: 300kW – 1MW co2: certified credits

Water: cleaning / car Wash Industries: retail, EV fleets CPO



Power: 100kW – 900kW
CO2: certified credits
Water: deionized (cooling)

Industries: Al



Power: in GWh / ha

CO2: own consumption own consumption

Industries: greenhouse, agriculture



Power: 300kW – 1MW
CO2: certified credits
Water: own consumption

Industries: shipping



Power: 300kW – 2MW
CO2: certified credits
Water: pure (tools cooling)
Industries: construction, mining



Power: 300kW – 1*M*W

Operation: silent

Water: cleaning

Industries: army, air force



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Thank you!

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