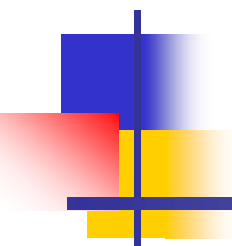
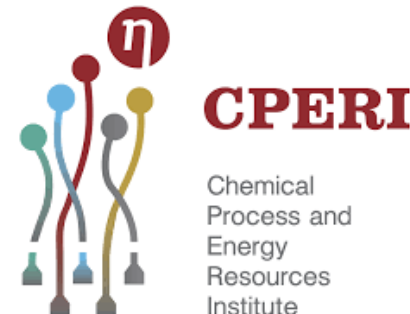




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HELLAS



Creating a CCU CO₂ hub in Greece and demonstrating a Power-to-X scheme

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Macedonia**



Business case study

Concept idea for a demo
project in W. Macedonia

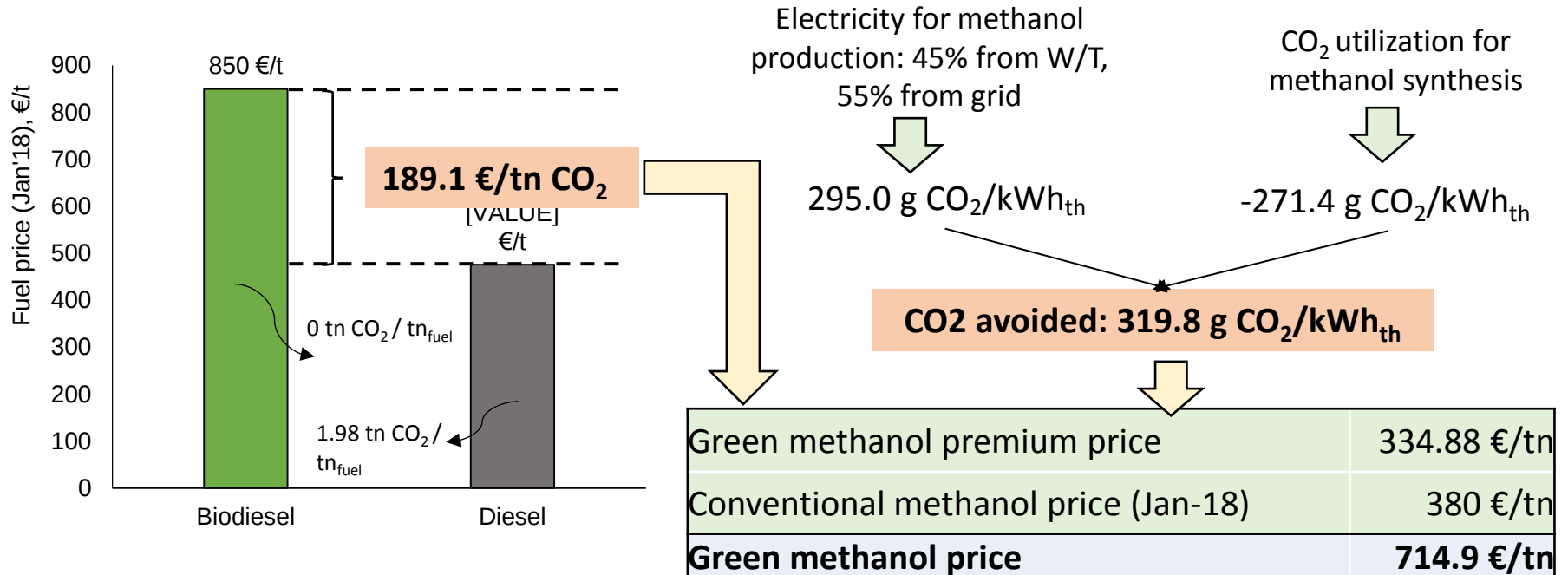


Case study main specifications

- Electrolyzer capacity: 50 MWe (12500 Nm³/h)
- 61,000 tn CO₂ captured annually using amine scrubbing technology
- 40500 tn methanol annual production
- Total equipment cost: 17,633,838 €
- Total capital cost: 106,632,857€
- Total operational cost: 23,708,206 €/y

Lifetime: 20 years
Rate of Interest: 6%

Methodology for renewable methanol pricing





Business case study

Concept idea for a demo
project in W. Macedonia



Minimum “Green” methanol selling price: 593 €/tn < **715 €/tn**

- Total Net Present Value: 58,300,026 €
- Payback period : 9 χρόνια
- IRR: 12%

← using this as the
selling price

Sensitivity analysis

Electrolyzer capital cost, €/kW (1000/1100/1200)

575 611

CO₂ emissions price, €/tn (40/7.44/0)

558 601

Plant operation, hr/year, (8760/7446/6132)

537 672

Capacity factor 100% 85% 60%

Cost of electricity, €/MWh (20/30/40)

523 662

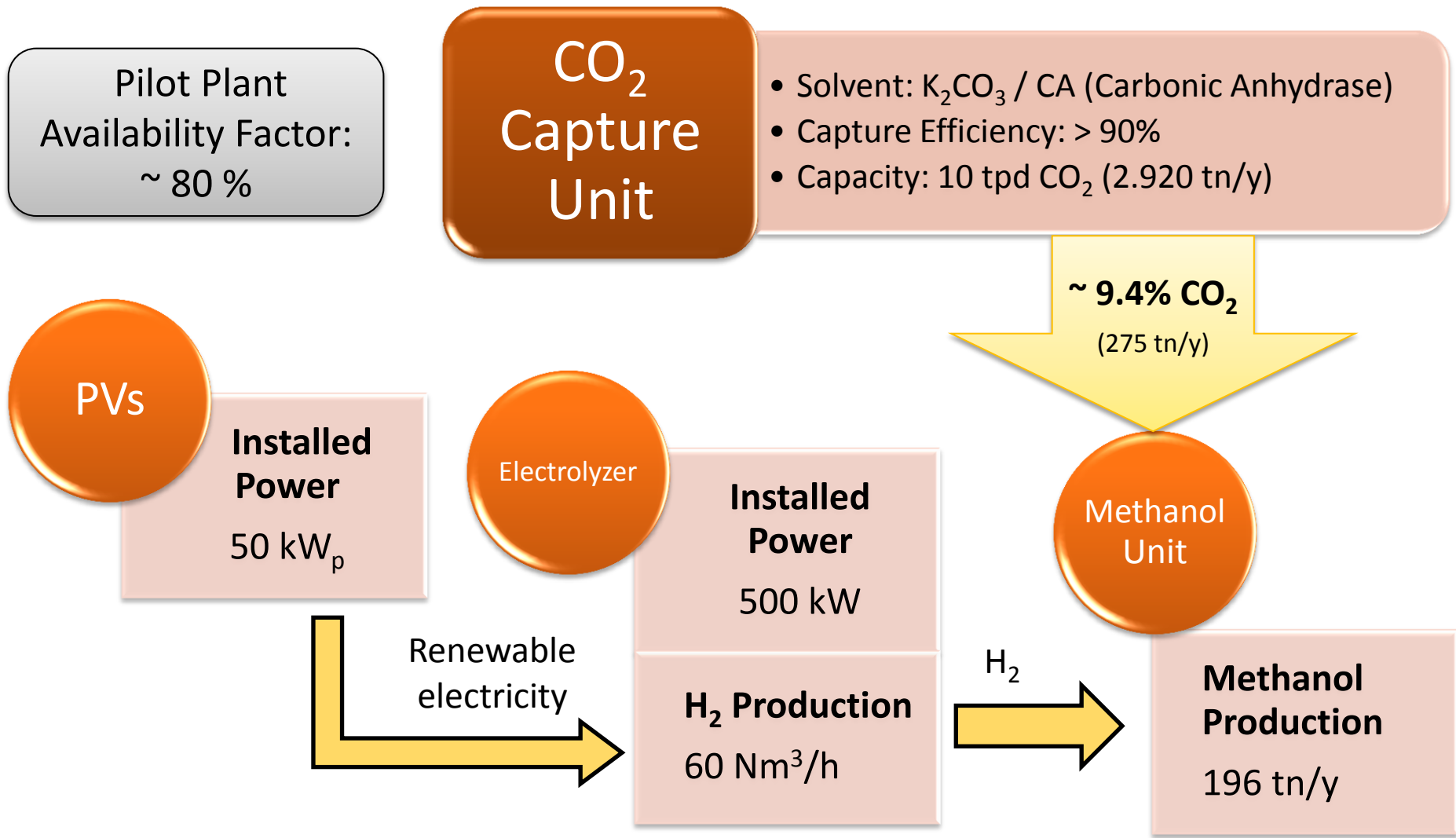
Capital cost, M€ (85/107/128)

552 633

€500 €600 €700

Minimum “Green” methanol selling price (€/tn)

A Power to Methanol concept can be
economically feasible at commercial scale!



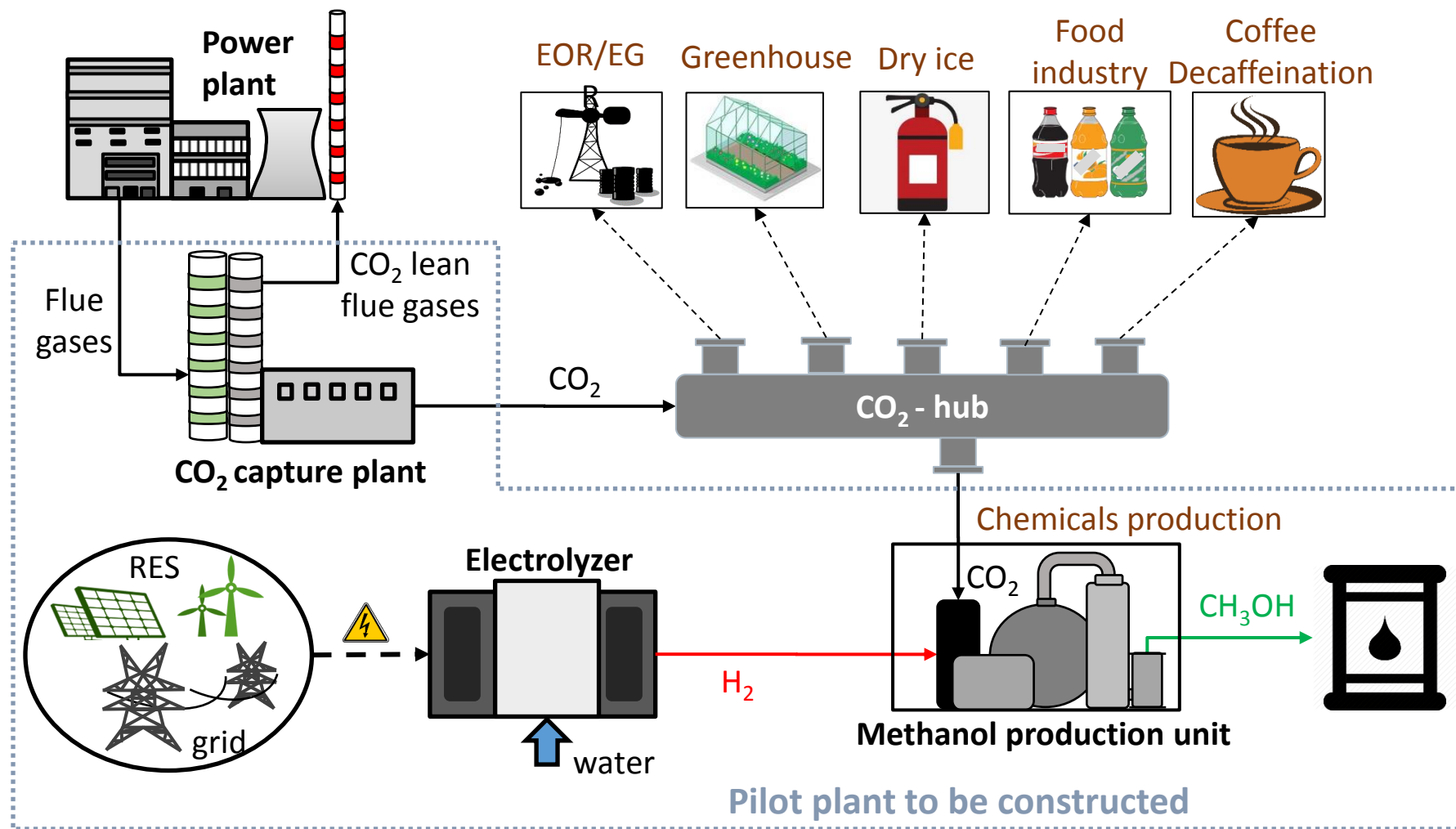


Business case
study

Concept idea for a demo
project in W. Macedonia



Our vision





Thank you for your attention!