STRATEGY CCUS
A viable solution for a sustainable future

STrategic planning of Regions And Territories in Europe for low-carbon enerGy and industrY through CCUS

Coordination and Support Action (CSA)
Budget: 3 M€
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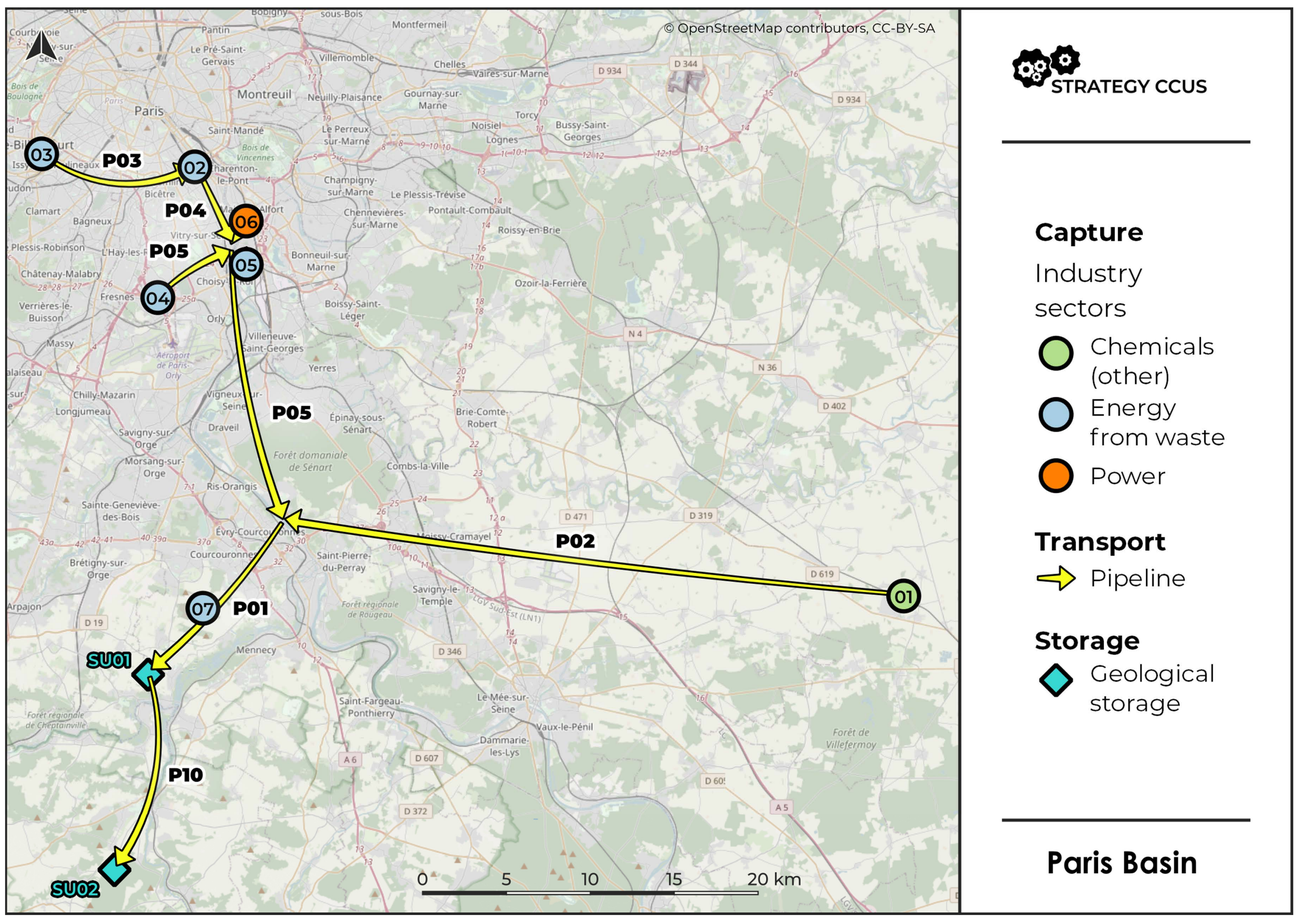
Paris Basin (France)

Main Scenario	Capture	Transport	Storage
- Period **2025-2050** **- 29,8 Mt** CO_2 captured and stored (9,1 Mt from biomass)	**- 7 emitters** (3 by 2035, and 4 more by 2050)	- 120 km of **pipelines**	**- 2 storage sites** (the second after 2035) - **Keuper** (Trias) formation

Main scenario features– Paris Basin

Chemical plant – Paris Basin



Main scenario of Paris Basin

Strategy CCUS Region KPIs (Discounted)

Analysis of the CCS system

Total CCS value chain	
CCS value chain (€/tCO2 avoided)	-39,4
Total CAPEX per block	**-9,2**
Cost of Capture (€/tonCO2 avoided)	-4,2
Cost of Transport (€/tonCO2 avoided)	-0,7
Cost of Storage (€/tonCO2 avoided)	-4,3
OPEX per block	**-30,2**
Cost of Capture (€/tonCO2 avoided)	-20,3
Cost of Transport (€/tonCO2 avoided)	-0,3
Cost of Storage (€/tonCO2 avoided)	-9,6
Transport cost (€/tonCO2 transported)	-1,0
Utilisation (income from CO2 sales) (M€)	0,0
EUA/ETS credit savings in the region (M€)	2581,2

Analysis of CO2 volumes (Mt)

Total CO2 Captured	29,8
CO2 utilized	0,0
CO2 for mineralization (perm. avoided)	0,0
Stored	29,8
Total emitted with CCS	10,4
Total avoided emission	29,7
BIO CO2 captured, neg. Emissions	9,1
Total CO2 fed into transport network	**30**
CCUS National Objectives	320
Share in national objectives	9,3 %

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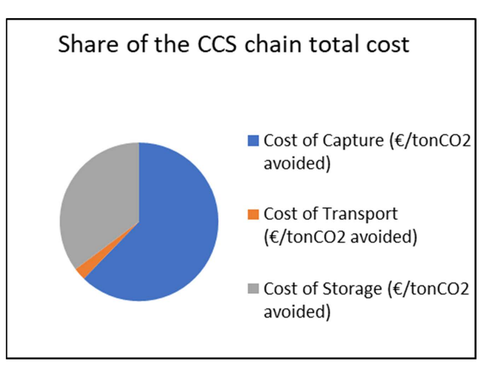
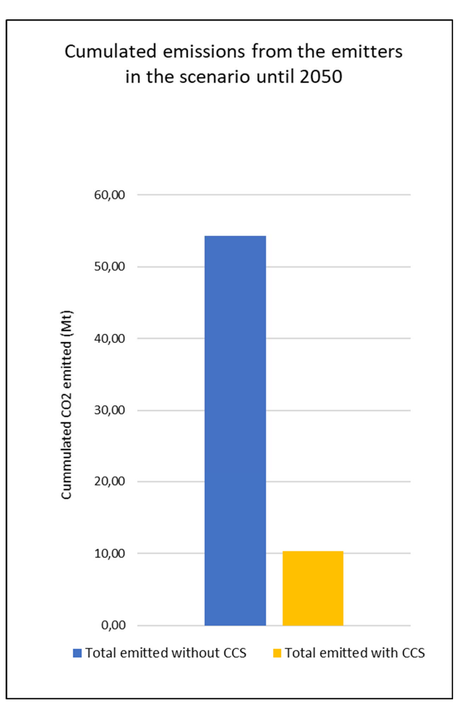
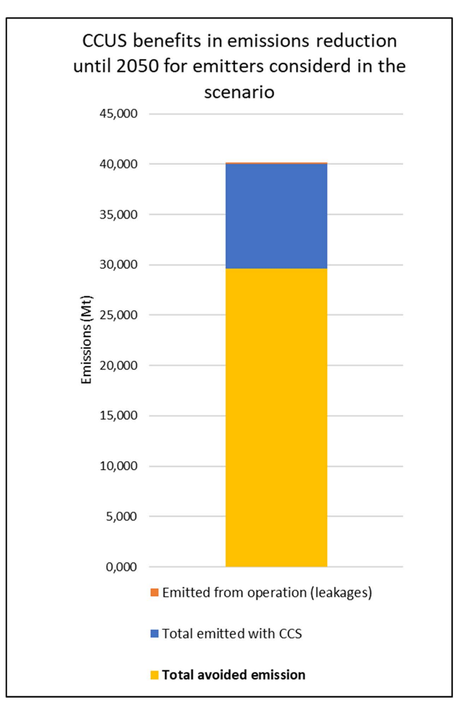
Analysis of ETS allowances

EU ETS parameters	
Price of allowances in 2025 (€/tonCO2)	70
Price of allowances in 2045 (€/tonCO2)	212
Whole regional expense without CCUS:	
ETS costs without CCUS (M€)	3 566,9
Whole region expense with CCUS	
ETS costs with CCUS, remaining emissions (M€)	985,7
Cost of CCUS (M€)	1 169,3
TOTAL costs with CCUS (M€)	**2 154,9**
Cost difference, with minus without CCUS (M€)	**-1 412,0**
Average yearly energy need, TWh/year	**1,04**
Peak energy need, TWh/year	**1,62**
Breakeven CO2 price (€/tonCO2)	42
First year of profit	2028

Economic evaluation results for Paris Basin (Main scenario)







STRATEGY CCUS Regional Event FRANCE
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