
# Technology Centre Mongstad

Anette Knarvik

*Process Engineer*

**2005** Government: No carbon based power production in Norway without CCS (carbon capture and storage)

**2006** The Norwegian government and Statoil agrees to:

1: Demonstrate and develop capture technologies (TCM)

2: Build full scale (1 million ton $CO_2$/ year) capture plant

**2009** Investment decision to create TCM

Partnership established (TCM DA)

GASSNOVA Statoil sasol reaching new frontiers

**2012** Official start-up May 2012

Five year test period started

**2017** New company started August 2017

GASSNOVA equinor TOTAL

**2020** Extension to 2023

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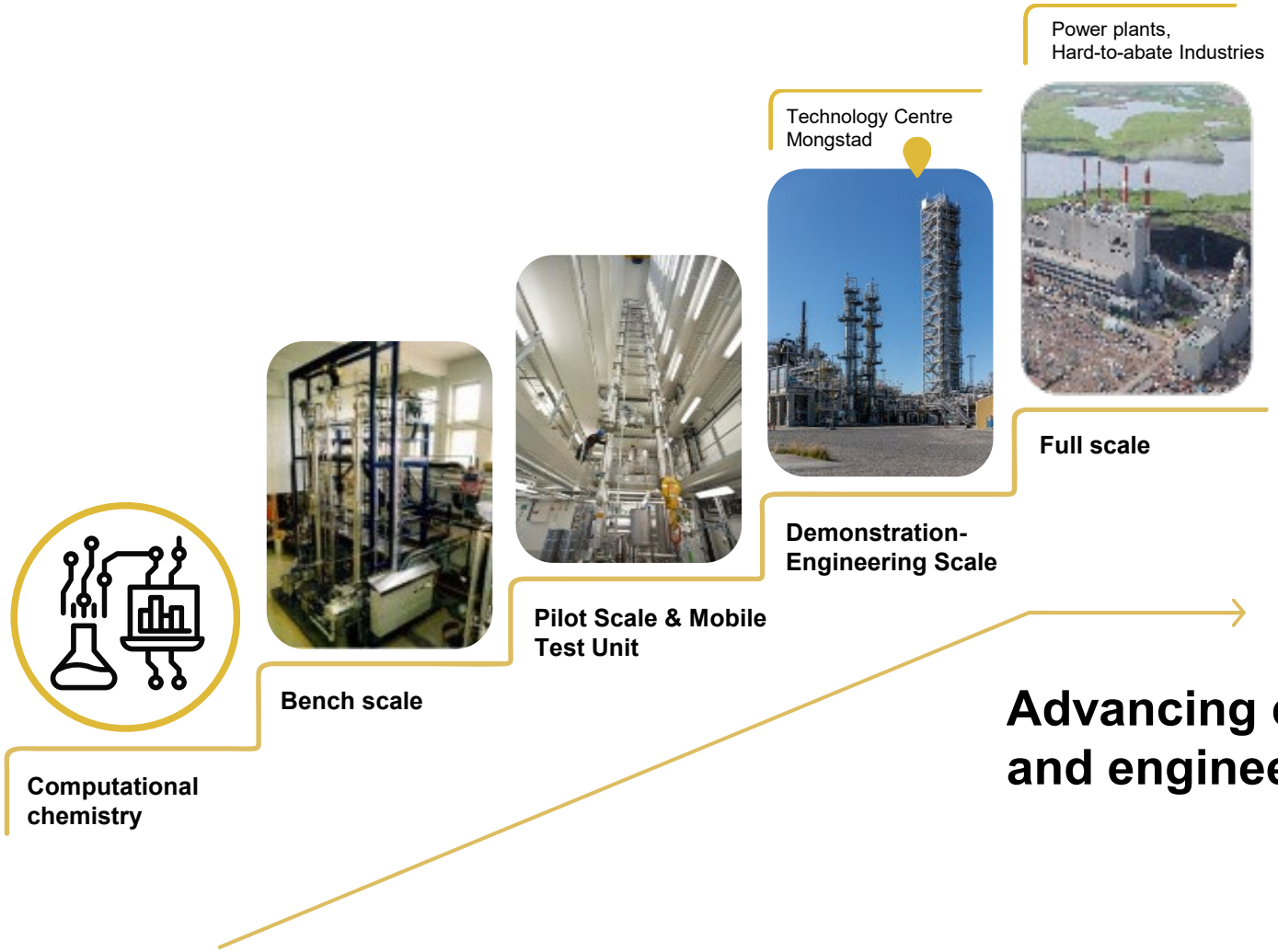
# Technology Center Mongstad –
# Last step before full scale amine technology deployment

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**Flue gas sources:**

- CHP: 3.5% $CO_2$
- RFCC: 13-15% $CO_2$

**Technologies:**

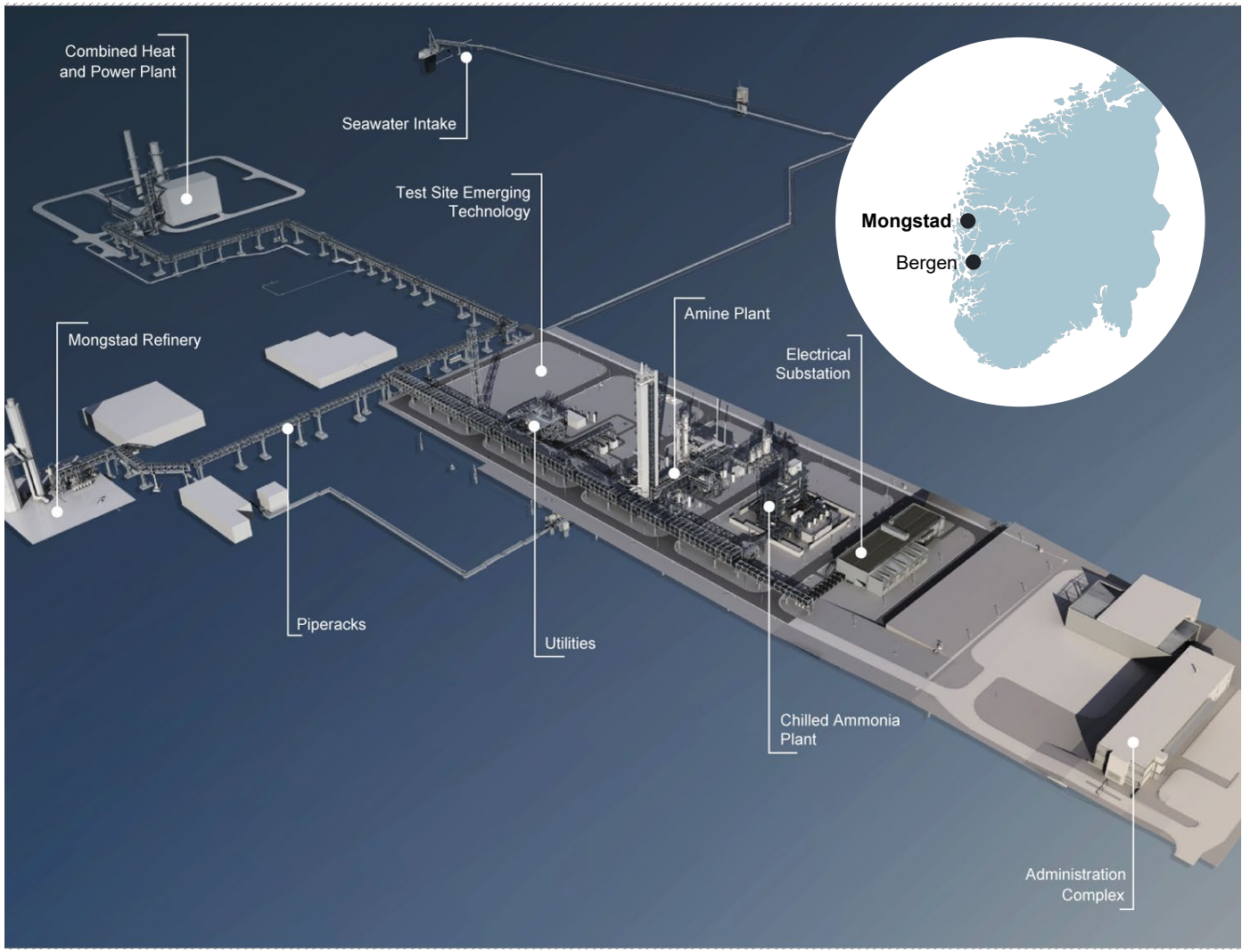
- Chilled Ammonia Plant (CAP)
- Amine Plant
- 3rd site for emerging technologies (modules)

**Capacity:**

- Amine + CAP = 100 000 ton $CO_2$/year
- 3rd site: 18 000 ton $CO_2$/year

**Measurement:**

- 4 000 online instruments
- 100 manual sample points

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**Proprietary testing**

**> 20 000 hours**


**Open testing**

**> 14 000 hours**

**Advisory services**

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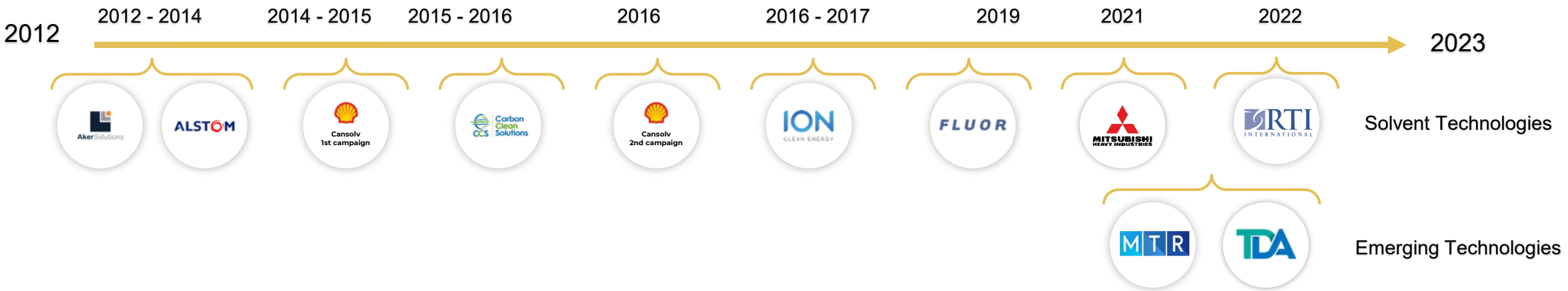
# Conducted Test Campaigns

**Proprietary Campaigns > 28,000 hrs**




**Open and Public Campaigns > 20, 000 hrs & > 50 scientific publications**

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# Our Advisory Services Clients

OGCI
OIL AND GAS CLIMATE INITIATIVE

HEIDELBERG CEMENT

Statkraft

sse

Hafslund Oslo Celsio

TDA

CRODUX ENERGETIKA

中英（广东）CCUS 中心
UK–China (Guangdong) CCUS Centre

RTI INTERNATIONAL

vallourec

Net Zero Teesside

WÄRTSILÄ

DAIMYO

PHILLIPS 66

HÖEGH LNG

kva linth
energie + recycling

ZAR
STIFTUNG ZENTRUM FÜR NACHHALTIGE ABFALL- UND RESSOURCENNUTZUNG

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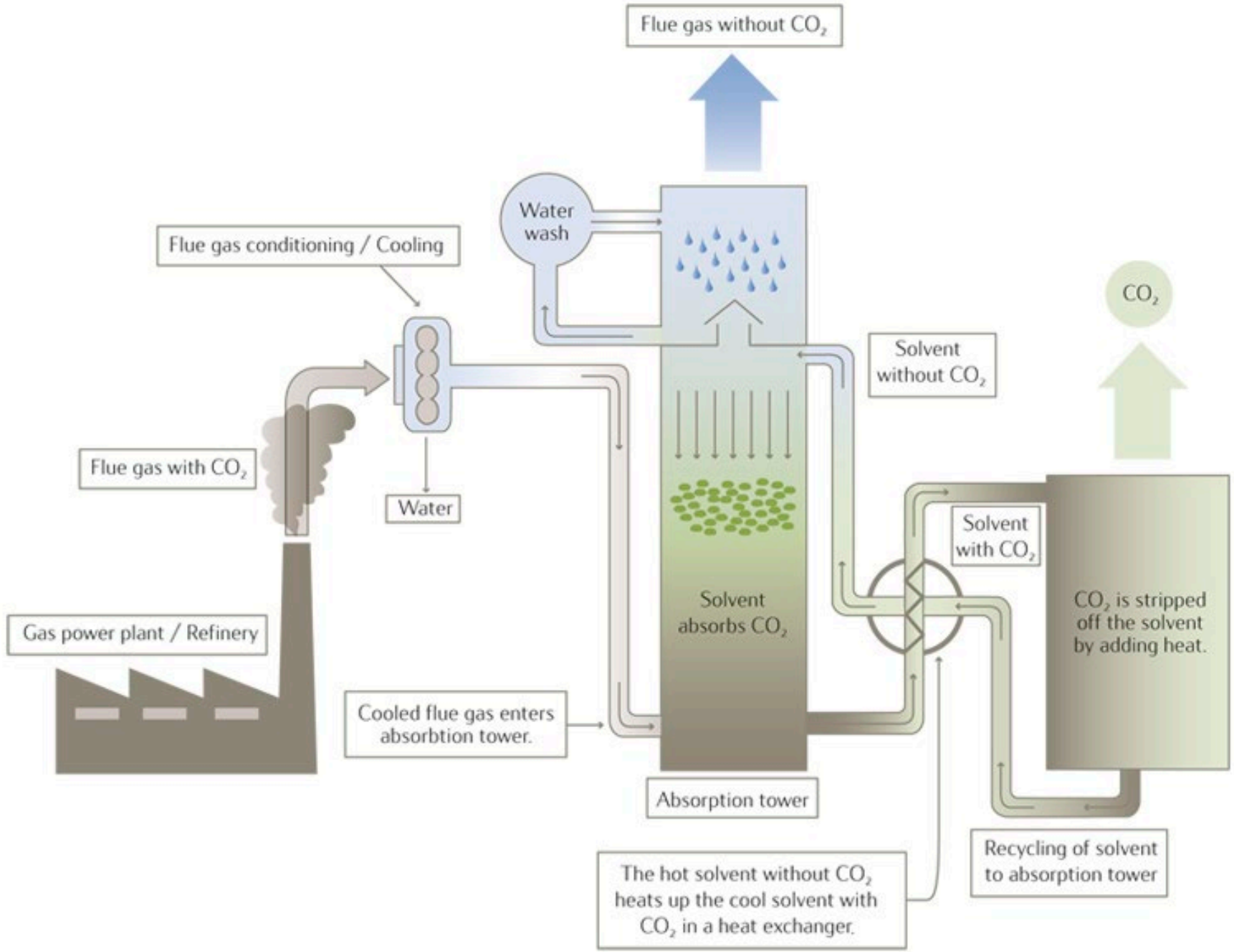
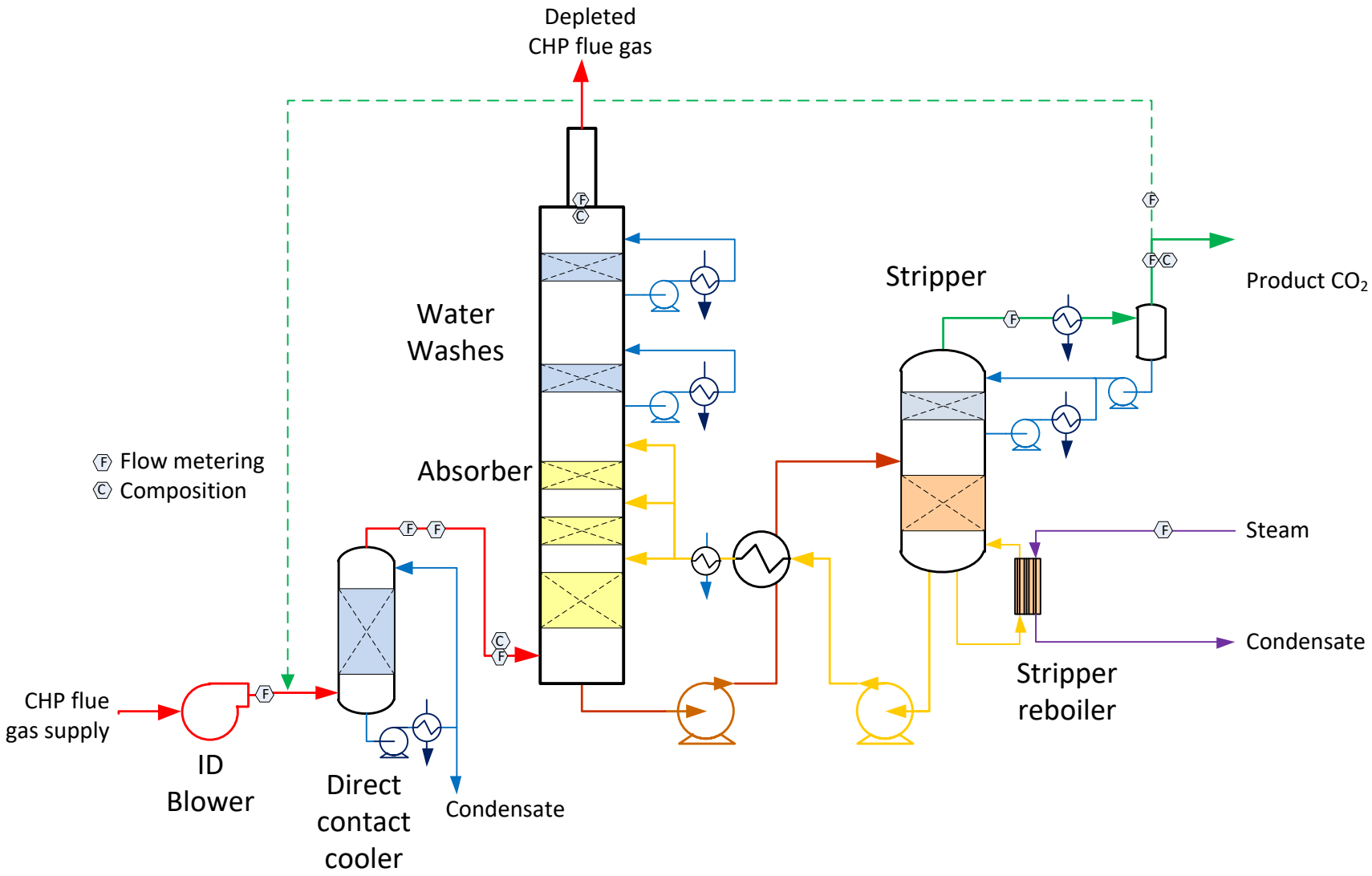
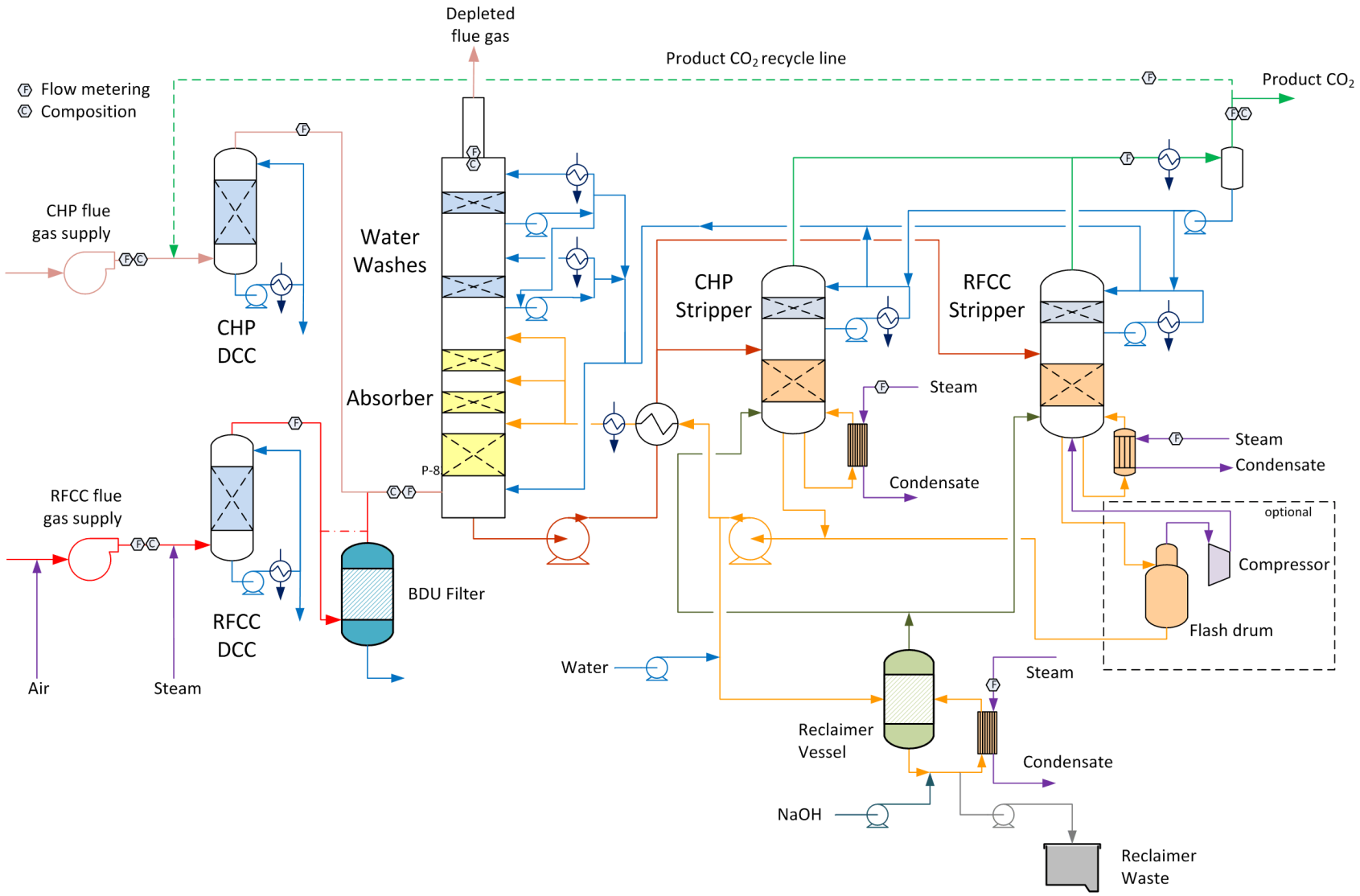
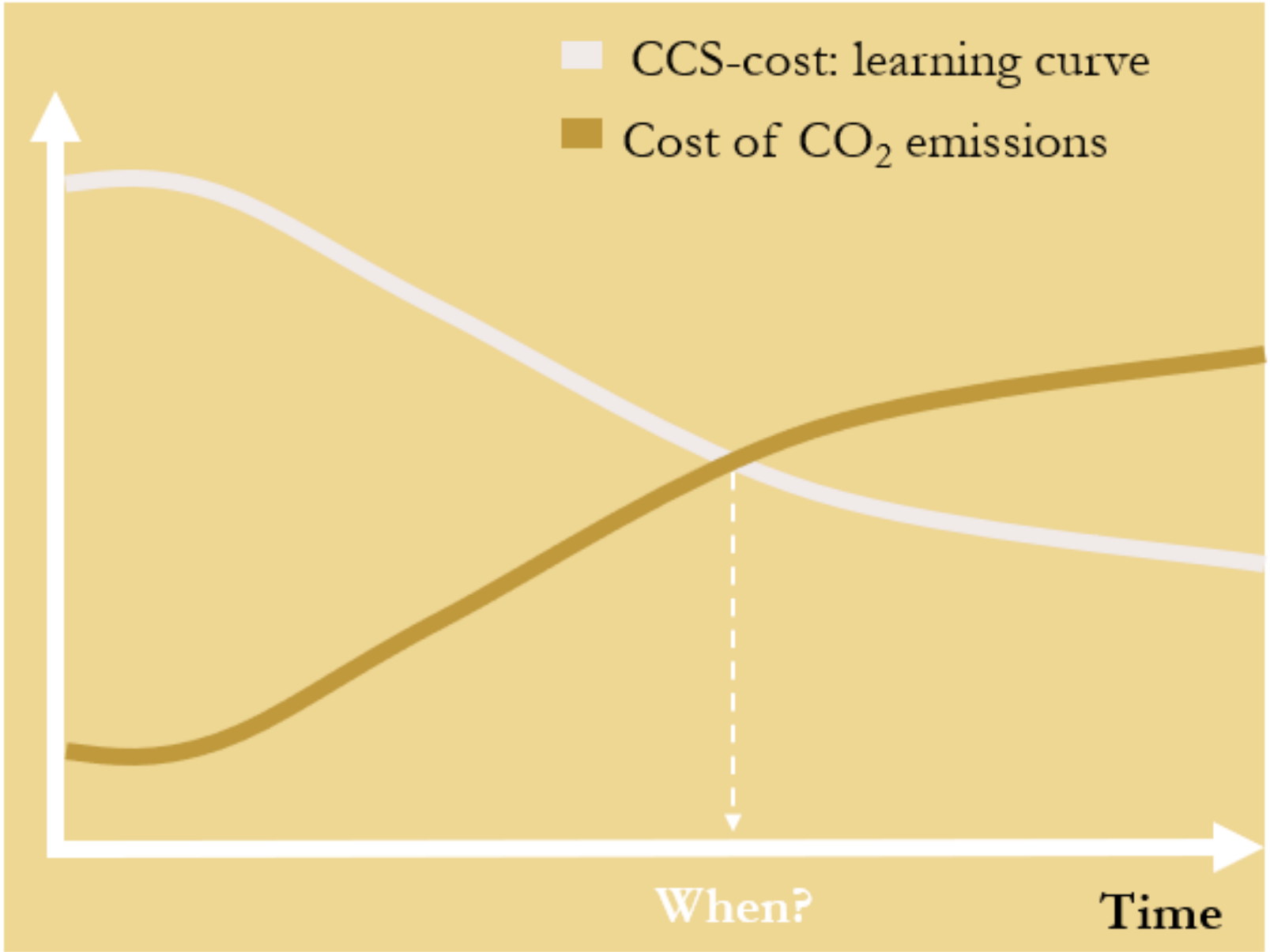


# Amine plant – CHP flue gas

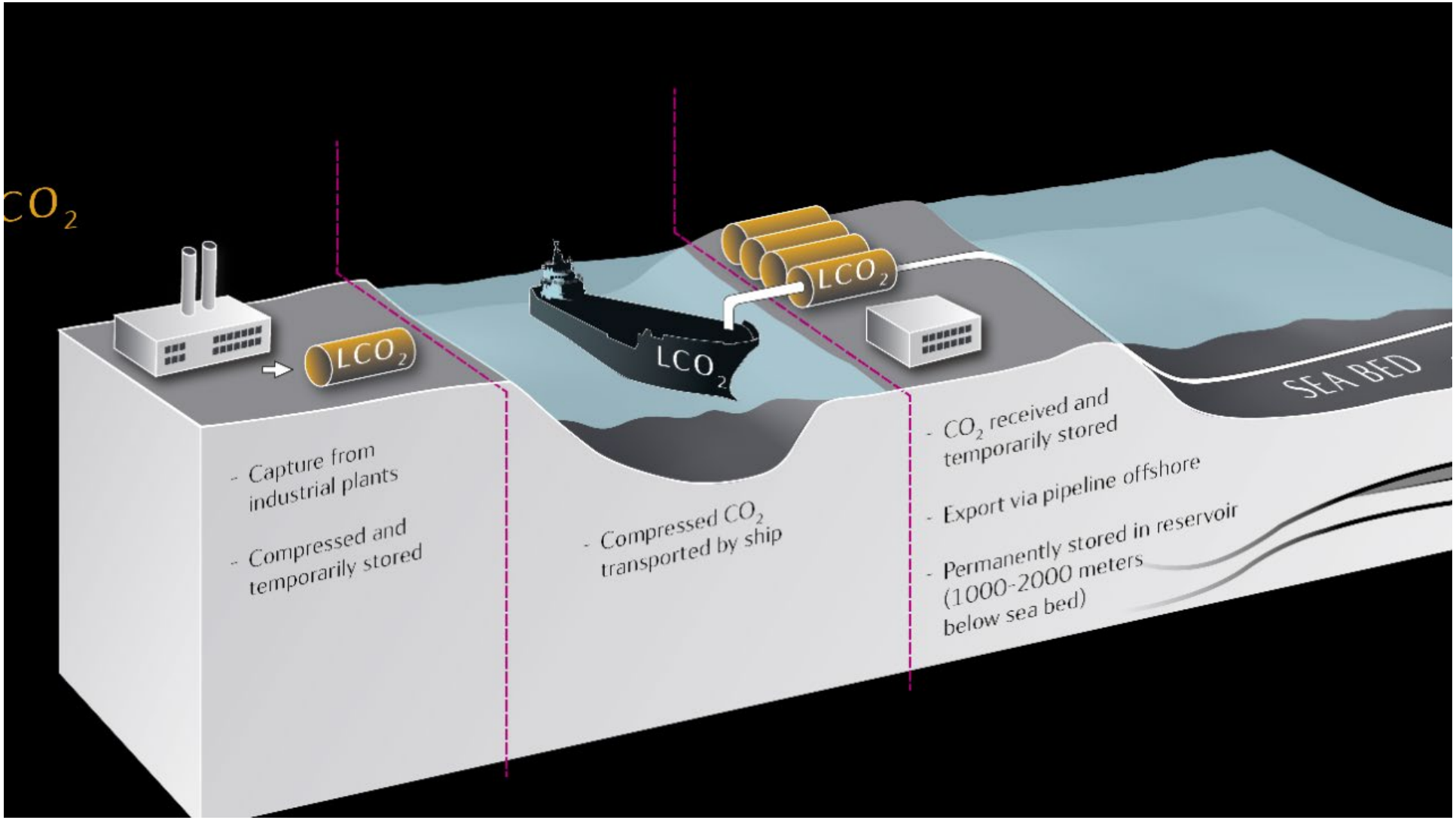


# Amine plant – CHP and RFCC flue gas





# Capture, transport and storage

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