

Climate and Infrastructure Friendly Hydrocarbon Fuels and Chemicals via CO₂ Recycling

Day 2 Opening Remarks

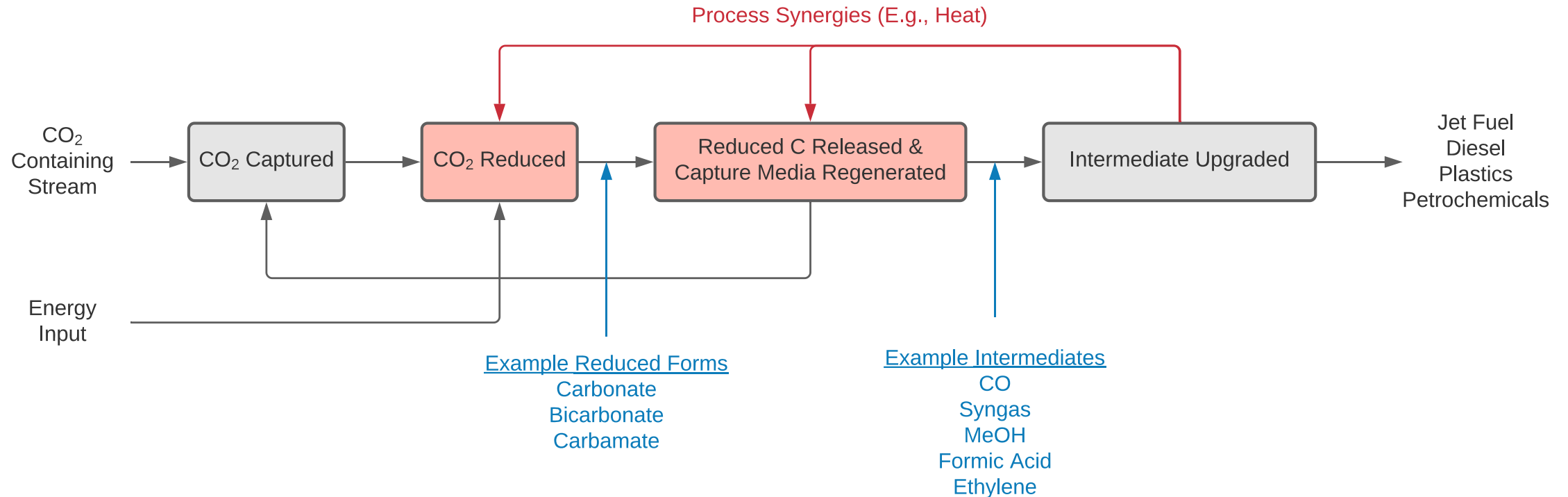
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Feb 3, 2022

Objective, Nominal Process & Today's Focus

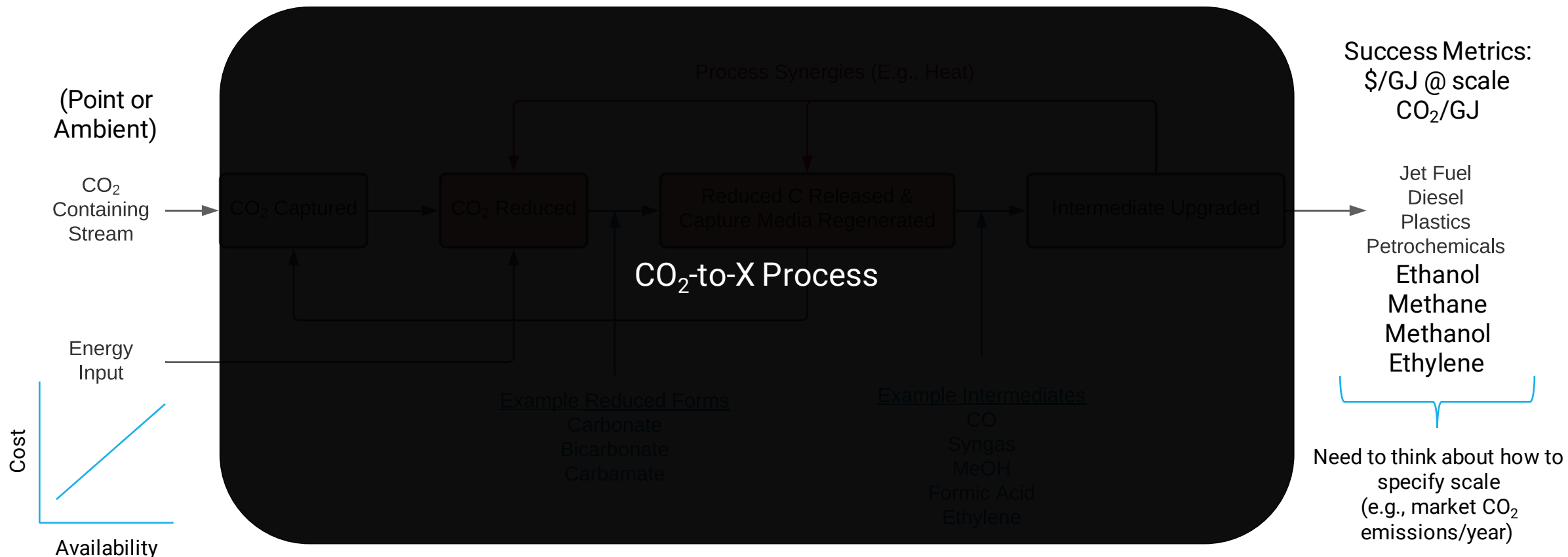
Objective: Economically-attractive climate-friendly hydrocarbon fuels & chemicals (X)



Today's Focus: CO₂-to-X technology options

Lessons Learned from Day 1 – Problem Definition

Caveats: Many smart engineers with many more good ideas, very limited synthesis time with ARPA-E team



Objective: Economically-attractive climate-friendly hydrocarbon fuels & chemicals (X)

Today's Technology-Specific Breakout Sessions

Thermal Synergies, Thermochemical, Electrochemical x 2, Biochemical, Plasma-Catalytic

- ▶ Are ARPA-E's **hypotheses** on target? (Front-end focus with synergies)
- ▶ Are there “**back-end**” or **synergy** opportunities?
- ▶ What **combined CO₂ capture and reduction** processes should we consider?
- ▶ What **intermediates** are most attractive?
- ▶ What intermediate **quality/compatibility** considerations are important?
- ▶ What are expected **CAPEX and OPEX** drivers?
- ▶ Where are we now? What **progress** can be made with 3 years/\$5M?

Today's Agenda

Start (ET)	Event	Presenter
12:00 PM	Day 2 Opening Remarks	Dr. David Tew
12:10 PM	Electrochemical CO2 Utilization	Prof. Ted Sargent Northwestern University
12:40 PM	Reactive Carbon Capture: Status, Challenges, and Opportunities	Dr. Josh Schaidle NREL
1:10 PM	Break	
1:30 PM	Breakout Session 2 - Potential Technology Solutions for Carbon to X	
2:30 PM	Reactive CO2 Capture DAC-DFM	Dr. Raghubir Gupta Susteon Technologies
3:00 PM	National Carbon Capture Center: Building a Successful Test Collaboration	Frank Morton
3:30 PM	Break	
3:45 PM	Industry Panel	
4:30 PM	Wrap-up and Breakout Readout	Dr. Jack Lewnard