Hydrogen fuel: poised for growth

ExxonMobil is planning a world-scale "blue" hydrogen plant at its Baytown, Texas, integrated refining and petrochemical complex. When combined with carbon capture and storage (CCS), this hydrogen production will support the company's commitment to reducing emissions across its operations. Here's a look at how it works:

Hydrogen production:

Natural gas and steam undergo a series of reactions and separation to make H₂ and CO₂

**STEAM-METHANE REFORMING**

Once isolated it can be used for heating, transportation and industrial uses

**CARBON CAPTURE AND STORAGE**

One of world’s largest carbon capture and storage projects

CO₂ is transported to suitable locations nearby where it is injected into deep underground rock formations miles below the surface for safe and permanent storage.

**HOW HYDROGEN + CARBON CAPTURE AND STORAGE WORK TOGETHER:**

**BRINGING HYDROGEN TO BAYTOWN, TEXAS**

WHAT IT MEANS: Replacing natural gas with hydrogen to fuel our olefins plant could reduce site-wide CO₂ emissions by up to 30% compared to current operations.

ExxonMobil's initial contribution to the cross-industry effort to capture and store

UP TO 10 MILLION METRIC TONS OF CO₂ STORAGE EACH YEAR. This would enable the company to meet its carbon reduction goal: 60% reduction from 2005 levels by 2030.

**MONT BELVIEU PLASTICS PLANT**

"BLUE" HYDROGEN

UP TO 1 BILLION CUBIC FEET OF BLUE HYDROGEN PRODUCED PER DAY

**ETHANE FEEDSTOCK TO MAKE PLASTICS**

Baytown Olefins Plant

**HIGH PERFORMANCE POLYETHYLENE**

Ethylene

**LOW-CARBON PRODUCTS**

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