

# Achieving Deep Reductions of CO<sub>2</sub> Emissions from Transport: Assessing the Role of Carbon Management

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Carbon management (CM)-the use of fossil energy without emissions of CO<sub>2</sub> – is emerging as an important energy path that may minimize both climatic change and cost of mitigation. Most analysis has focused on CM in electricity generation; yet, deep reductions in CO<sub>2</sub> emissions will require transportation sector participation. We compare the use CM/hydrogen systems across modes, computing costs, end-to-end energy efficiencies, and emissions of CO<sub>2</sub> and criteria pollutants. We identify marine shipping as an important mode for early entry of CM: technological and economic (network effect) barriers are low and opportunity for reduction of criteria pollutants is high.