DOW CHEMICAL COMPANY GREEN TRANSPORTATION SUPPLY CHAIN STRATEGY

Student Team:

Chhavi Chaudhry – EGL (BSE/MSE Industrial and Operations Engineering) Alison Levy – Master of Business Administration

Project Sponsors:

Jacqueline Faseler – Global Director of Supply Chain Sustainability, EHS & Public Policy Advocacy

Faculty Advisors:

Dennis Blumenfeld – College of Engineering Jill Schloff – Ross School of Business

Beginning in 2006, The Dow Chemical Company initiated development of Sustainability Goals for each upcoming decade, with the most recent iteration taking the form of 2025 Dow Sustainability Goals. This approach has resulted in the company leading the industry globally in sustainability improvements throughout their operations. Given the increasing importance of calculating, monitoring, and reducing greenhouse gas emissions (primarily CO2), Dow would like to evaluate opportunities for further reductions in transportation CO2 within the supply chain. The Tauber team's role was to develop a green transportation strategy for Dow's global supply chain.

The Tauber team's approach was to conduct a comprehensive analysis broken down into three phases: establishing the current state of Dow's global transportation carbon footprint; benchmarking and defining goals for Dow based on industry trends and leading research; and finally, using that knowledge base to develop a green transportation strategy. Since transportation emissions are outside of Dow's direct control, the Tauber team had to develop a deep understanding of what actions Dow could take that could influence emissions reductions.

The final deliverable was a three-tiered actionable strategy for Dow, consisting of outward-facing activities to present a united front on transportation emissions to external stakeholders, internal activities to measure and actively manage the emissions footprint, and external activities that Dow could leverage to drive and promote emissions reduction initiatives. All three tiers, each of which Dow has varying degrees of control over, help Dow take actions that ultimately drive improvements in the company's global CO2 footprint.

By actively implementing the green transportation strategy developed by the Tauber team, Dow can influence fuel economy improvements in the trucking industry, resulting in a reduction of 180,000 tons in Dow's transportation CO2 emissions, and a fuel cost savings of \$27MM shared between Dow and its carriers over the next 10 years.