

Hydrocarbon Development and the Sustainability Lifecycle: What Is the Role of the Citizen Engineer?

In a unique collaboration between Colorado School of Mines (CSM) petroleum engineering graduate students and industry partners, students investigated the role of the Citizen Engineer in sustainable development of unconventional hydrocarbon resource plays in developed and developing geographic locations. Students identified potential non-technical issues, potential interactions between those issues, and options for managing those issues. Industry partners provided two-phase feedback after submissions of case study phase one and phase two deliverables. Students researched health, safety, security, environment and social responsibility (HSSE-SR) aspects of sustainable development. In a final report and presentation, Students defined the role of the Citizen Engineer, provided an integrated case study analysis including technical and non-technical risk assessments, recommendations for sustainable development, and feasibility of the financial business case.