

**Project Information Form**

Project Title:	A Stochastic Multi-Agent Optimization Model for Energy Infrastructure Planning Under Uncertainty and Competition
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Total Project Cost:	\$80,165.68
Agency ID or Contract Number:	UCD-DOT-203 DTRT13-G-UTC29
Start and End Dates:	October 1, 2015 – September 30, 2016
Brief Description of Research Project:	This paper presents a stochastic multi-agent optimization model that supports energy infrastructure planning under uncertainty. The interdependence between different decision entities in the system is captured in an energy supply chain network, where new entrants of investors compete among themselves and with existing generators for natural resources, transmission capacities, and demand markets. Directly solving the stochastic energy supply chain planning problem is challenging. Through decomposition and reformulation, we convert the original problem to many traffic network equilibrium problems, which enables efficient solution algorithm design.
Describe Implementation of Research Outcomes (or why not implemented): Place any photos here	
Impacts/Benefits of Implementation (actual, not anticipated):	
Web Links <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	<a href="https://ncst.ucdavis.edu/project/stochastic-multi-agent-optimization-model-for-energy-infrastructure-planning/">https://ncst.ucdavis.edu/project/stochastic-multi-agent-optimization-model-for-energy-infrastructure-planning/</a>