Presenter's Name

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Is the person submitting this form (Submitter) also the Presenter?

Yes - I am both the Submitter and the Presenter

If your abstract is accepted, will you be able to present?

Yes

Job Title

Research Scientist, Energy & Sustainability

Company Name

HARC

Presentation Title

Data Science for Life Cycle Assessment of Dual Fuel Diesel Engine Technology

Summary of Proposed Presentation (1500 character max)

In a highly competitive business environment, data science provides advanced predictive tools for decision support. By converting data into insights for action, data science can be applied to improve safety, efficiency and sustainability while reducing cost.

The HARC Environmentally Friendly Drilling Systems Program (EFD) will utilize data science in a Life Cycle Assessment (LCA) of dual fuel diesel engine technology. LCA offers a comprehensive approach to analyzing a multitude of economic and environmental aspects in a coherent framework for decision support. Data from field testing and other sources will be used to build a comprehensive, predictive LCA model to support planning and decisions involving high-horsepower dual fuel engines for drilling and hydraulic fracturing service.

Scientists will mine, evaluate, and harmonize large sets of data from disparate sources to develop a cohesive data set. The model will ultimately provide tools to address planning uncertainties such as fuel costs, sourcing, transport, and environmental factors.

Major elements of the project will include:
• Gathering data from field testing, public open sources and industry partners
• Harmonize data, fill data gaps to assure high-quality, unbiased prediction
• Modeling to extract insights and actionable information

JIP participants can access a wealth of valuable information currently unavailable from any other source.

Robot Test

17