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| UTC Project Information | |
| Project Title | Energy and Emission Benefits Evaluation of Battery Electric/Plug-in Hybrid Electric Connected Drayage Trucks |
| University | UCR, GT |
| Principal Investigator | Kanok Boriboonsomsin Peng Hao |
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| Funding Source(s) and Amounts Provided (by each agency or organization) | CAR-TEEH (Federal): Match (Non-Federal): |
| Total Project Cost | \$ |
| Agency ID or Contract Number | Grant Number: 69A3551747128 |
| Start and End Dates | May 2017 – April 2018 |
| Brief Description of Research Project | <p>Ports are a major transportation hub for goods movement that drives several economic sectors, but also a major source of harmful pollutant emissions from diesel engines and equipment used in goods movement activities including drayage trucking. Since drayage trucks generally have limited daily mileage, return to a home base every night, and spend a large amount of time creeping and idling, they are well suited for electrification. And because drayage trucks spend a significant portion of their operation time on surface streets with a lot of traffic signals, they are also well positioned to take advantage of connected vehicle technologies that allow them to communicate with other vehicles and traffic infrastructure. As drayage truck fleets are expected to be increasingly electrified and connected in the future, it is important to understand how each of these technological advances and their convergence would impact energy consumption and emissions from drayage truck operations at and around seaports.</p> <p>This project will evaluate the energy and emission benefits of battery electric trucks and plug-in hybrid electric trucks (BETs/PHETs) over conventional diesel trucks and develop a connected vehicle (CV) application for these trucks. Then, the energy and emission benefits of deploying BETs/PHETs and</p> |

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| | <p>CV Technologies at ports under a variety of technology penetration scenarios will be estimated. The results and findings from this project can be used to inform the planning and policy development related to goods movement at and around ports.</p> |
| <p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p> | |
| <p>Impacts/Benefits of Implementation (actual, not anticipated)</p> | |
| <p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website | <p>https://www.cartteeh.org/research/focus-areas/projects/development-and-evaluation-of-connected-vehicle-application-for-alternative-fuel-trucks/</p> |