

Shorepower Truck Electrification Project (STEP) – Cumulative

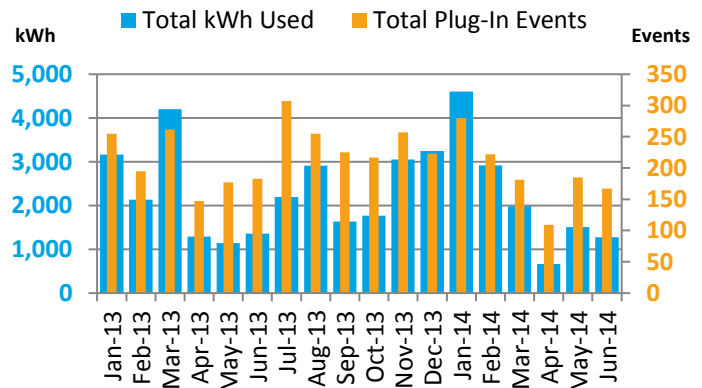
The Fleet Test and Evaluation Team at the U.S. Department of Energy's National Renewable Energy Laboratory is evaluating and documenting the use of shorepower at 50 planned American Recovery and Reinvestment Act (ARRA)-funded truck stop electrification (TSE) sites across the nation. Trucks participating in the study have idle-reduction equipment installed that was purchased with rebates through the ARRA. A total of 5,000 rebates will be approved.

Plug-In Infrastructure

Reporting period:	1/1/2013 – 6/30/2014	Number of TSE sites completed:	50
Input Power:	208/240/480 V (min 50 A) 4 wire circuit	Number of pedestals installed:	313
Output Power:	120/208/240/480 V, 20/30 A outlets	Total vehicle capacity:	1,252

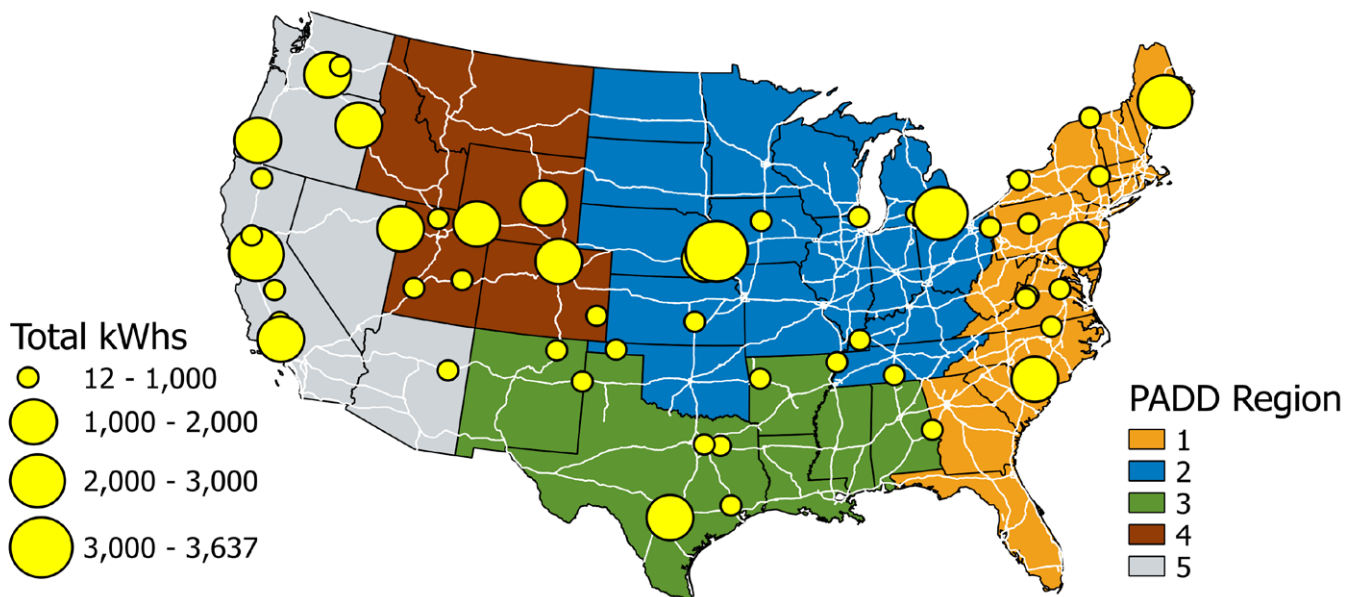
Utilization Summary

Idle-reduction rebate approvals	4,370
Completed equipment installations	4,353
Number of TSE sites with >90% uptime	50
Number of plug-in events	3,847
Total hours booked	53,979
Total kWh used	41,029
Average kWh/event	10.7
Estimated gallons of diesel fuel saved ¹	43,183
Metric tons of CO ₂ avoided ²	440



TSE Site Location/Usage Map

This chart shows the locations of all installed TSE sites. The size of each site indicator is relative to the amount of total kWh utilized there. Visit <http://www.afdc.energy.gov/afdc/locator/tse/> for additional site information.



1. Diesel fuel saved calculated using booking time x 0.8 gal/hr (EPA-420-F09-038) to estimate offset engine idle fuel use.

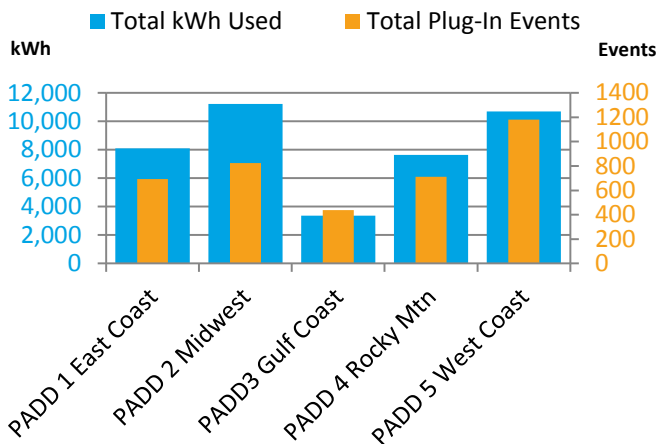
2. Metric tons of carbon dioxide calculated using U.S. EPA greenhouse gas guidelines of 10,180 g CO₂ / gallon of diesel.

Monthly Utilization Data

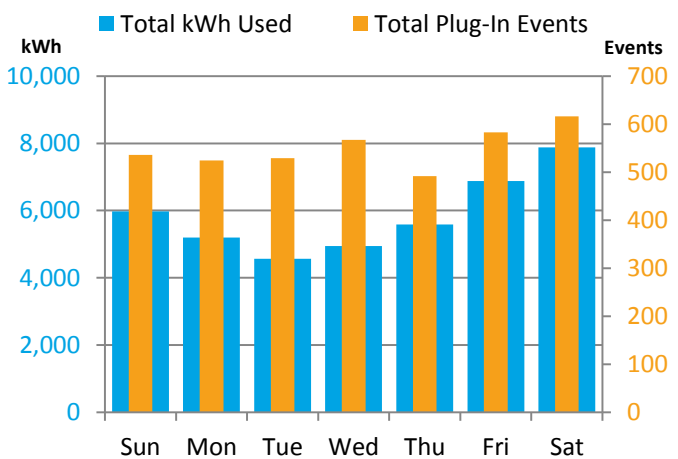
	2013-Q1	2013-Q2	2013-Q3	2013-Q4	2014-Q1	2014-Q2
Number of plug-in events	712	507	787	697	683	461
Number of plug-in events using STEP IDs	46	39	62	34	NA	NA
Total hours booked	14,251	6,560	10,452	9,477	8,263	4,976
Total kWh used	9,504	3,790	6,731	8,065	9,503	3,436
Average energy used per event (kWh)	13.3	7.5	8.6	11.6	13.9	7.5
Average power per event (kW) ³	0.667	0.578	0.644	0.851	1.150	0.691

Utilization Data

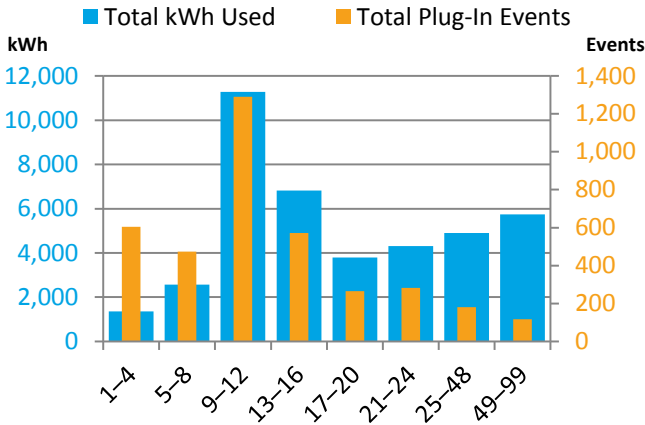
Geographic Utilization



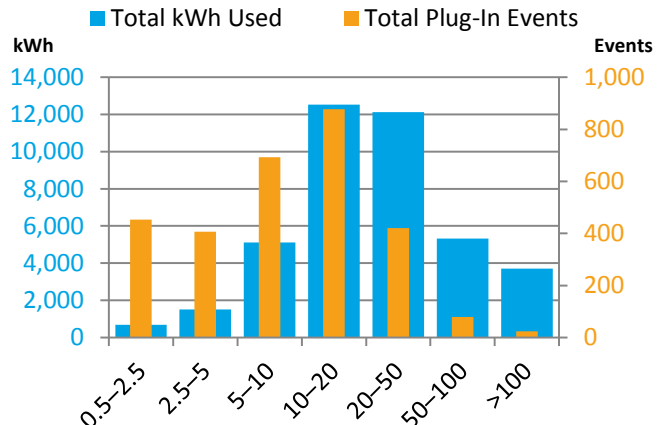
Day of Week Utilization



Booking Time Utilization



kWh Utilization



Hours Booked Per Event

kWh Used Per Event



Energy Efficiency & Renewable Energy

For more information, visit: vehicles.energy.gov

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3. Calculated based on booking time and total energy consumption.