

ENVIRONMENTAL IMPACT AND COST OF USING LIQUIFIED NATURAL GAS AS A HEAVY VEHICLE FUEL

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Liquefied natural gas (LNG) is under development as a heavy vehicle fuel. The main reason for developing LNG as a vehicle fuel is to reduce our dependency on imported oil. However technical and cost barriers, as well as safety concerns, have limited the commercialization of LNG as a heavy vehicle fuel. To overcome these barriers and concerns the U.S. Department of Energy, Office of Heavy Vehicle Technologies has been actively supporting several (LNG) research and development projects. In particular DOE has provided funds for: clean up and fuel delivery

systems, small scale liquefiers, on-board storage tanks, low cost refueling stations, and studies on siting/permitting of LNG facilities. The objective of the DOE program is to reduce the vehicle's fuel conversion cost while improving system reliability, efficiency and public acceptance. However before any new technology is widely accepted, its impact (air quality and global warming) on the environment must be determined. This paper reviews the safety, environmental impact, and cost of converting heavy vehicles to run on LNG.