

SBIR 06.2 PHASE I - AWARD DETAILS	
ORGANIZATION	TARDEC
TOPIC NUMBER	A06-218
CONTRACT NUMBER	
YEAR OF AWARD	
AWARD START DATE	
AWARD COMPLETION DATE	
PROPOSAL NUMBER	A062-218-3259
TITLE	1.5 - 2.5 kW Diesel-Hybrid Power System for SUGVs
PROJECT MANAGER	S. Paul Dev (203) 925-7630 SPaulDev@DStarEngineering.com
COMPANY	D-Star Engineering Corporation 4 Armstrong Road Shelton CT 06484-4721 Minority Owned: Yes Veteran Owned: No Number of Employees: 8
KEYWORDS	UGV hybrid power diesel JP8 heavy-fuel kW
ABSTRACT	The project aims to engage in detailed definition and preliminary design of the 1.5 to 2.5 kW heavy-fuel diesel-hybrid power system and its subsystems, performance analysis for the subsystems and the system, exploration of its feasibility including costs and risks, comparative performance analysis and assessment of other competing power and energy technologies, and preparation of a plan for development of the hybrid power unit.
BENEFITS	Benefits from the proposed system include about 7 x better power/volume and 7 x better power/weight compared to conventional diesel generator sets. The system will also avoid wet-stacking, and will minimize R&D and production costs by creating M-COTS versions of high-performance small utility gasoline engines to operate them on heavy fuels. Anticipated commercial applications include : back-up power for the smaller emergency and commercial establishments such as clinics, schools, hotels, restaurants, retail stores and gas stations, back-up power for residences, prime power for smaller hybrid-electric vehicles such as personal city vehicles, and boats or other recreational vehicles for their electrical and kitchen loads.