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## NASA, DOE AWARD CONTRACT FOR STIRLING ENGINE DEVELOPMENT

NASA and the Department of Energy (DOE) have jointly announced the signing of a contract with Mechanical Technology, Inc. (MTI) of Latham, N.Y., to develop the Stirling engine for passenger cars.

The contract, awarded through NASA, provides for a major review and assessment at the end of 18 months. Maximum value of the contract which could run seven and one-half years is \$95 million.

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This is the second Stirling engine development contract funded as part of DOE's effort to develop alternative automobile engine systems. The first was signed with the Ford Motor Co. last September.

The two competitive engine development teams, MTI and Ford, together with various engine technology development contractors and the Stirling Engine Project Office at NASA's Lewis Research Center, Cleveland, Ohio, make up the DOE Stirling Engine Development Program. Lewis Center provides project management for the DOE program and conducts supporting in-house research.

The contract with MTI calls for development of a complete Stirling engine system, engine performance data and production cost information that are needed by the automobile industry so that it can determine the feasibility of putting the engine into commercial production. Other members of the team led by MTI are United Stirling of Sweden (USS), Malmo, Sweden; and AM General, a wholly owned subsidiary of American Motors Corp., Detroit, Mich.

The Stirling engine has the potential of providing high fuel efficiency, flexibility of choice of fuels, inherently low noise and pollution emissions and good driving characteristics.

A Stirling-powered automobile is expected to be at least 30 per cent more fuel efficient than current vehicles yet give similar road performance. Potentially the Stirling cycle could be even more efficient as technical improvements are made.

Under the MTI contract, three generations of Stirling engines are to be developed and tested. The baseline engine, developed earlier by USS, serves as the proven hardware starting point on which the fuel economy, performance, reliability and weight and cost improvements are to be made, demonstrated and documented.

Approximately half the contract funds will be paid to MTI, which is responsible for program management and business development, technology transfer, component and analytical tool development and licensing. USS is responsible for developing and supplying engines and components for test and evaluation and will receive about one-third of the contract funds. The balance will go to AM General and others. AM General is responsible for engine-vehicle integration, test and evaluation, auto marketing and compiling trend information.

The contract calls for transfer of Stirling engine technology to a U.S. engine manufacturer and for royalties to be paid to the U.S. Government until two and one-fourth times the contract costs have been recovered.

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