## GLOBAIL Services Solutions

## **EXECUTIVE SUMMARY**

Global Services & Solutions Inc. (GSS) is an environmental solutions and renewable energy organization with a strong vision for socially responsible, safe, and cost-effective solutions. GSS intends to carry out R&D work on a number of projects ranging from solid waste management to renewable energy and auto engine efficiency. Presently GSS is working on the development of a high efficiency, flex-fuel, poly-hybrid engine that can significantly reduce dependence on the dwindling supplies of fossil fuel resources. It would also have the potential to make the U.S. a net exporter of fossil oil in the next ten years, along with significant reduction in green house gas emissions. The project will be completed in three phases, spreading over a period of about one year. The first two critical phases will be completed in six months at a cost of about three hundred ninety thousand dollars, with ninety thousand as reserve money. Most of the money will be spent on real estate and R&D workshops. After the completion of the first two phases, GSS will be in a better position to invite venture or bank capital on better terms. Following is a brief description of the three phases of the project.

Phase	Time period	Cost
PHASE I – STATIONARY TRIAL	Three months	\$250,000
I-1. Setting up of a mechanical workshop	One to two months	
I-1a. Purchase of real estate property	One month	\$100,000
I-1b. Development & Equipments purchase, etc.	Two/three weeks	\$75,000
I-1c. Setting up of R&D w/shop	Two weeks	\$20,000
I-2. Fabrication of the first prototype for stationary trial	About one month	\$20,000
I-3. R&D work for development of new fuel mixtures, based on a new approach.	Work will start in phase I and continue during phase II, III, and beyond.	\$35,000
PHASE II - ROAD TRIAL	Three months	\$50,000
II-1. Development of second prototype, rectifying problems/defects in the first prototype	One month	\$25,000
II-2. Fitting of improved prototype in a used automobile	One month	\$15,000
II-3. Road trial, using renewable fuels and carbon based fuel mixtures	One month	\$10,000
PHASE III- TRIAL BY EXTERNAL EVALUATORS	Three to six months	\$1 to 5 million
TRIAL BY EXTERNAL EVALUATORS OR MAJOR STAKE HOLDERS (after trouble shooting all problems)		

Phase III would cost about one to five million dollars, and bank loan or venture capital will be sought for the comprehensive trial, by independent external evaluators. External evaluator may be one of the major transport/shipment businesses like UPS, FEDEX, US POSTAL SERVICE, Grey Hounds, Am track, etc. It would be a lot easier to convince such businesses when they are shown that their fuel cost can be reduced to less than one half, (or the cost of the new vehicles can be met almost by the fuel savings alone). This strategy will greatly help to keep the overhead costs very low. About half a dozen good condition automobiles will be fitted with the newly developed engines, along with all the sub components. New engine performance, along with all the sub components, will be critically evaluated for dependable, safe and trouble-free functioning. All problems identified by external evaluators would be carefully investigated to find the best solutions. External advice and expertise of the best experts in the engine technology will be sought. Mass production of the new engines will start in Phase IV, only after the complete satisfaction of all the performance parameters. This process may take a little longer, but once the performance and fuel saving capabilities of the FP engines are practically established, its marketing would become a lot easier. GSS intends to license the manufacturing rights to auto makers at very low royalties (about 1% of sale price). Engines may also be produced for retrofitting in automobiles less than three years old in most models and makes, even hybrid models.

**Note**: I am apprehensive that other countries may be able to develop this kind of engine technology before us. Simple and time-tested technology will be used in a logical and efficiency-enhancing sequence, involving innovative energy losses control and recovery techniques. Existing expensive hybrid engine technologies are not efficient at energy losses control and recovery. Similarly cheaper fuel additives will be introduced in the fuel mixtures, based on a new approach, and that is where the real profit potential lies.