

Evaluation Summary

The ProGrid Evaluation was coordinated by Dr. Clem Bowman recent winner of the 2008 Global International Energy Prize. Eight individuals experienced in the energy field agreed to participate in the evaluation on a voluntary unpaid basis, to assist the inventor in identifying strengths and weaknesses in the concept and in defining potential next steps. All evaluators noted the novelty of this early stage concept. None stated that the underlying principles violated any known laws of science. Many major advances in science have arisen from ideas that were clearly “out-of-the-box” at the time of initial introduction.

Selected Evaluator Comments

This pathway is absolutely unique and I strongly recommend it for R&D. It produces no GHG, it cools the atmosphere, and allows the recovery of a significant fraction of the waste heat produced at any large installation. If it can be proven to work with a large body of water as the heat source, it would produce seasonally unlimited amounts of energy. This pathway can also be expected to be even better in tropical regions. I recommend that it be funded at the highest possible level that your agency can afford.

The atmospheric vortex engine is a radically new invention for generating electricity. It represents a paradigm shift in how to extract electrical energy from heat available at ambient atmospheric conditions, by creating a thermodynamic engine that rejects heat in to the upper atmosphere. The atmospheric principles on which it is based are well borne out by the existence of tornados. The thermodynamic principles on which it is based are long established and well understood. Significant development effort is still required to commercialize this invention. However, given the promise of the technology it should be strongly supported.

If successfully commercialized the expected impact of this invention is almost unimaginable. This technology promises to allow electricity generation by extracting energy from ambient air, directing this air to the cooler upper atmosphere through an atmospheric vortex. It can be applied to increase the efficiency of existing power plants to generate electricity from the waste heat. It may also be applied to oil refineries and petrochemical plants allowing electrical power generation from waste heat and possibly allowing more production through increased cooling capacity. Because Canadian resource industries are particularly energy intensive, the availability of renewable electricity would contribute to the continued growth of the Canadian economy.

The vortex engine concept does not defy known physics. It will take time and perseverance to develop knowledge relating to the creation of an artificial atmospheric vortex such that it can be repeatedly created and controlled. Further, the concept does not require any new or novel technology. The impact upon society world wide of successful development of the vortex engine will be enormous. Without an energy source which is non-polluting, all nations developed or otherwise face the necessity of social adjustment greater than the adjustment to the industrial revolution of the 18th century; and far greater in magnitude than any adjustment in the history of mankind.