SOME STUDIES IN DECISION MAKING WITH OPERATIONS RESEARCH MODELS – ANALYSES AND APPLICATIONS

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OBJECTIVE

The proposed research work focuses its attention to a study on decision making models and its applications to real world problems.

- Stress the importance and need to consider topics like decision making mathematical models andsolution procedures for solving them and optimizing the cost of the variables involved in the study.
- Study the real life problem of decision makers in the area of renewable energies like solar, wind and to form suitable mathematical models, interpret them for finding optimized solution to the real life problems.

ABSTRACT

The proposed research work focuses its attention to a study on decision making models and its applications to real world problems. Mathematical models for integrating renewable energy sources, improving energy efficiency in buildings using solar PV panels and multi objective optimization model for modern dairy farm using solar PV system and hybrid power supply system for RO-Desalination plant have been presented in this thesis. Several solution procedures are developed like integer programming problem, multi objective linear programming problem to solve the mathematical models and optimizing the cost of the variables involved in the study. In particular, mathematical Software packages like LINGO, EXCEL SOLVER are also used to obtain the solutions.

CONCLUSION

This is a consolidation of a variety of Optimization models and Decision making models in a real life environment. This research work focused its attention to a study on various decision making models for maximum utilization of renewable energies with lowest cost.