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Title: Multiobjective Particle Swarm Optimization for Sustainable Energy Portfolio

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Sustainable development is multiobjective by nature as it must consider social, economic and environmental aspects simultaneously. Therefore, it poses a difficult task for the decision makers to find the optimum set among the different alternatives. The particle swarm optimization (PSO) is an algorithm for finding optimal regions of complex search spaces through the interaction of individuals in a population of particles. In this research, a framework has been developed that considers all the available renewable energy resources in a region and provides the Pareto optimal front considering indices for sustainable developments. A case study of Nova Scotia is applied using this framework.