

Abstract Submitted  
for the MAR10 Meeting of  
The American Physical Society

**On the recuperation and production of electricity from scattered sources of energy** SIMON BERKOVICH, The George Washington University — Massive production of electricity from renewable sources encounters a number of complications. Thus, among the various ways of transforming solar radiation into electricity would be to heat compressed air as directly as possible for expansion. Employing a regular steam cycle is complicated and incurs high-maintenance costs. Stabilizing a delicate influx of energy from solar, winds, and wave sources is resolved similarly to computer processing with component of different productivities, namely with buffering and pipelining. Actually, the pipelining scheme for heating the air is somehow used to make the heating process more thermodynamically efficient. However, because of timing misbalance it may contribute to the temporal variations of the main working cycle. All these temporal variations problems can be handled by “buffering” scheme, in the way similar to processing of intensive information flows with relatively slow computers. Most effective embodiment of this scheme would be generating electricity from the surf waves as they do not suffer from intermittent interruptions. This can be done for storing and recuperation enhancement of energy by using liquid nitrogen.

Simon Berkovich  
The George Washington University

Date submitted: 18 Nov 2009

Electronic form version 1.4