

ABSTRACT

WIND ENERGY CONVERSION SYSTEM

5 A wind energy conversion system 10 for a building comprises
one or more wind powered turbines 12, a pitched roof
structure 14 having a first pitch on which the turbines 12
are mounted, and, a cover 16 supported on the pitched roof
structure 14 above the turbines 12. The cover 16 has a
10 second pitch that is less than the first pitch. The cover
16 and roof structure 14 together create a wind tunnel 28
that directs wind to flow through the turbines 12.
Cowlings 14 are also provided for each of the turbines 12.
Each cowling 34 surrounds an upper portion of a
15 corresponding turbine 12. The cowlings 34 are
aerodynamically shaped and configured to concentrate air
flow across or through a wind rotor 30 of its respective
turbine 12. The cowlings extend in a vertical direction
between the cover 16 and the roof structure 14.

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Figure 1