

Description of integrated pilots/demonstrations/field tests/existing practices

1. Night Wind

2. What is integrated with DSM

DG

Energy storage

Smart grid technologies

3. What is the level of commercialization

Research project

Demonstration

Field test

Existing practice

4. Where to find more information?
<http://www.nightwind.eu>

5. Objectives of the case

The Night Wind project aims to store wind energy produced at night in refrigerated warehouses, and to release this energy during daytime peak hours.

6. Business rationale/model

7. Technologies used

Wind turbines and cold storage capacities.

8. Short description of the case

The Night Wind project wants to use consumers with cold storage capacity in order to help matching the electricity consumption and wind generation

9. Achieved/expected results (operational savings, CO₂, efficiency enhancement)

Integrate renewable energy resources into the European energy service network by providing new facilities for energy storage

Increase the economic value of wind energy by providing means to deliver the energy at peak demand hours.

Description of integrated pilots/demonstrations/field tests/existing practices

Increase the competitiveness of SME Cold Storage facilities by providing adding “energy storage” as an additional service to be provided for the European energy service network.

Offer a solution to integrate wind energy with energy storage in the European electrical grid, giving space to a further growth in the use of wind energy worldwide and a contribution to the Kyoto targets at the same time.

10. Lessons learnt

Night Wind Control System will save 40% in energy costs compared to normal operation, and 15% compared to "Night Charging". Note that here, the NWCS controls the cold storage only according to the hourly market price.