

Use of Defence Land



Description of Technology

The defence sector of every Member State possesses significant areas of land and infrastructure. Land and infrastructure that belongs to/ is administered by the defence sector includes land on Navy, Air and Land Forces bases, shooting ranges & training areas, storage and service areas, accommodation and office buildings, different structures such as bridges and tunnels, safety areas, transportation hubs, CIS nodes, heliports and airports, dry-docks, etc.

A large part of this land is unpopulated and uncultivated due to operational, safety, training and environmental restrictions. The lands are well spread across the country and often within unpopulated regions due to harsh environmental conditions, bad roads, weak CIS and energy supply infrastructure. Similarly, the infrastructure offers large open areas such as roofs, walls, towers, fences, shielding, etc.

Applicability to Defence

Use of renewable sources of energy on the land and infrastructure that belongs to/ is administered by the Armed Forces, can be exploited for energy production (solar PV-panels, small and micro hydro, wind, geothermal, biomass) and / or for energy storage.

Benefits to the Defence Sector

The use of locally available renewable energy sources improves security of supply of energy for the defence sector, as well as for the civilian population. In case of natural disasters, it offers a solution for electrical energy supply when the nationwide energy supply grid is disturbed.

Production of biomass that is collected during the maintenance of green areas can be increased by cultivating more effective plants for harvesting biomass without ruining the purpose of area. On shooting and training areas this can

be the only possible cultivation due to polluted environment as a result of the nature of defence activities.

Financial benefits over time are evident when investing in local renewable energy production with or without connection to the national energy grid.

Feasibility

The technology is available and ready to exploit on defence land and infrastructure. It is mature and wide spread in civilian areas. There is no need to implement special versions of renewable energy harvesting technology on the land and infrastructure that belongs to/ is administered by the Armed Forces.

Scope of Work

Motivation and political will can trigger wide use of defence lands as areas for different renewable energy sources. There are also opportunities in multinational projects.

Examples

Solar Photo-Voltaic power plant 23 kW at Irish Defence Forces base



Solar Photo-Voltaic and Wind energy harvesting at CIS Node (*LagoSolar*)



Study of the electric power productivity framework in the Hellenic Air Force for the installation of biomass station and proposal for implementation.

Small Hydro Power Plant



Geothermal energy harvesting at the Military Academy – Amadora Quartering, Portugal



Two of the existing wells with potential for use of groundwater as a heat source.



100 kW using streams on training area, 10 kW installed in sewage pipe.

Utilisation of biomass resources in the Hellenic Armed Forces



Wild artichoke known as cardoon.

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