Energy Community Secretariat

Uniting Europe's Energy, Today

Project: Cross-Border Sustainable Renewable Energy Acceleration in Ukraine - Mapping Synergy Renewable Energy Acceleration Areas between Ukraine, EU Member States, and Moldova

Strategic Meeting: Building alliances across the European Commission, EU MS and CPs

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Criteria for identifying REAAs based on renewable energy potential and infrastructure readiness

Priority areas as defined by RED III:

1. Artificial and built surfaces (rooftops and facades of buildings)
2. Transport infrastructure and their direct surroundings
3. Parking areas
4. Farms
5. Waste sites
6. Industrial sites
7. Mines and Quarries
8. Artificial inland water bodies, lakes or reservoirs
9. Urban waste water treatment sites
10. Degraded land not usable for agriculture

RE technologies:

- ❑ **Solar**
- ❑ **Wind**

Criteria for identifying REAAs based on renewable energy potential and infrastructure readiness

Technical Suitability criteria. Solar

a. Global horizontal irradiance (GHI) - not less than 1100 kWh/m2, kWp.
b. Orientation (azimuth) – south, south-east and south-west.
c. Availability of grid connection points: cable and overhead power lines at 35 kV; 110 kV at a distance of no more than 30 km and not less than 20 m. Availability of substations and their characteristics at a distance of no more than 30 km.
d. Availability of grid connection at 6 kV and 10 kV points on a distance of no more than 5 km.
e. Availability to install BESS/PCS at small/medium-scale (60-1000kWh). The capacity is 1-3 kWh per 1 kW of power.

Legal Constraints criteria

a. National environmental restrictions in addition to the environmental criteria.

Land Use Compatibility criteria

a. Belonging to the relevant land.

Criteria for identifying REAAs based on renewable energy potential and infrastructure readiness

Technical Suitability criteria. Wind

a. Average annual wind speed at a height of 100 m, m/s, should be not less than 5.0 m/s.
b. Orographic constraints: terrain slopes greater than 15° should be excluded.
c. Availability of grid connection points: cable and overhead power lines at 35 kV; 110 kV at a distance of no more than 30 km and not less than 20 m. Availability of substations and their characteristics at a distance of no more than 30 km.
d. Availability of grid connection at 6 kV and 10 kV points on a distance of no more than 5 km.
e. Availability to install BESS/PCS at small/medium-scale (60-1000kWh). The capacity is 1-3 kWh per 1 kW of power.
f. Availability and location of roads (state importance roads (international, national, regional roads) and local roads (territorial, regional and district roads) on a distance at no more than 5 km with direct access to the site via unclassified roads.
g. The additional detailed criteria: topographic, geodesic and orographic data; geology (geomorphology and hydrogeology, soil conditions); seismic risk, groundwater, soil resistivity, and load bearing capacity.

Legal Constraints criteria

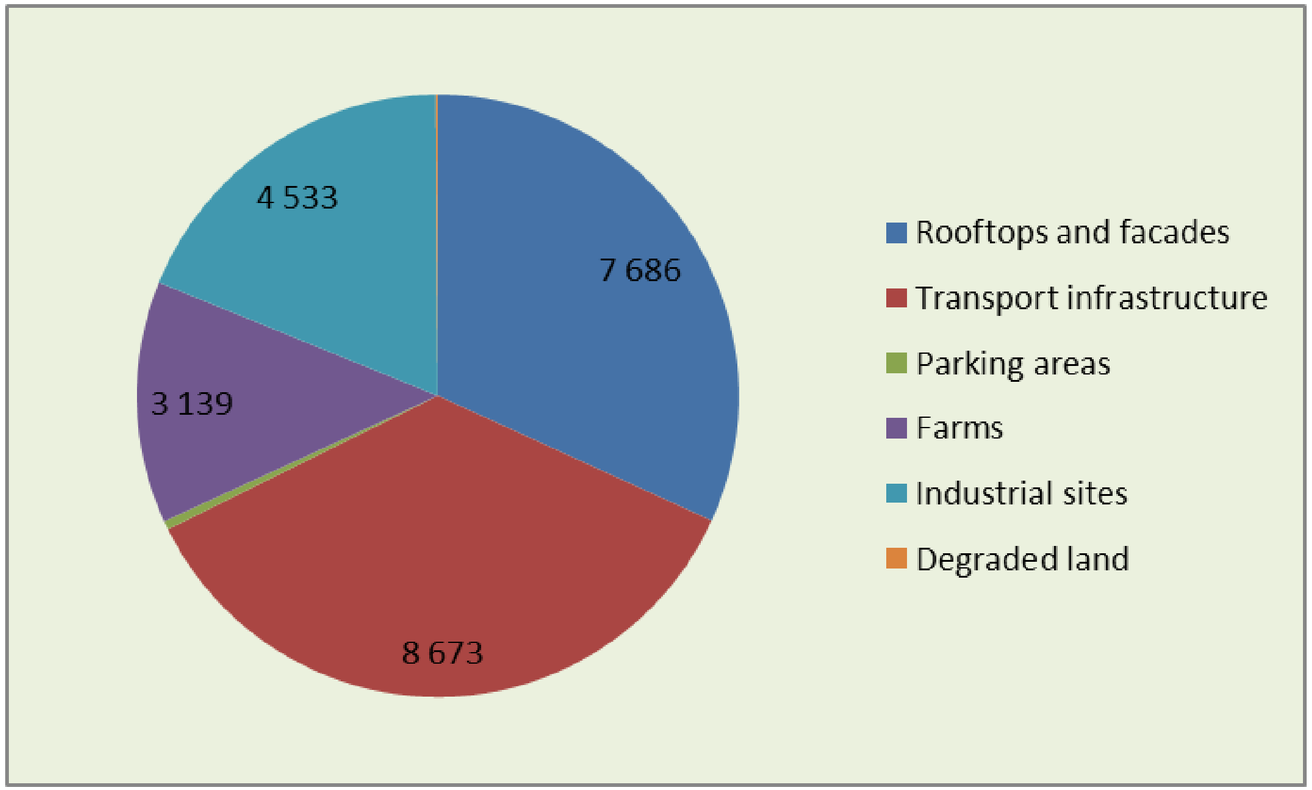
a. National environmental restrictions in addition to the environmental criteria.

Land Use Compatibility criteria

a. Belonging to the relevant land.

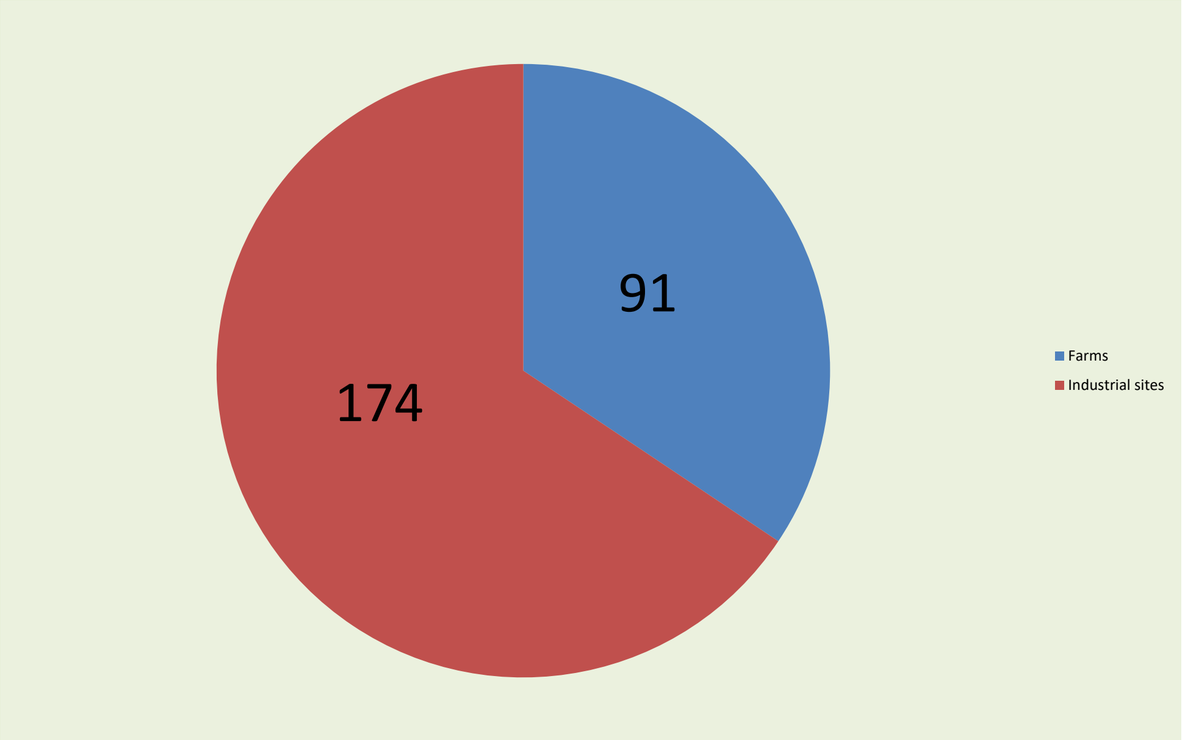
REAAs solar potential in 5 oblasts

REAAs	Capacity, MW
Rooftops and facades	7 686
Transport infrastructure	8 673
Parking areas	111
Farms	3 139
Industrial sites	4 533
Degraded land	24,63
Waste sites	4,69
Mines, quarries	4,69
Artificial inland water bodies	3,52
Waste water treatment sites	0,00



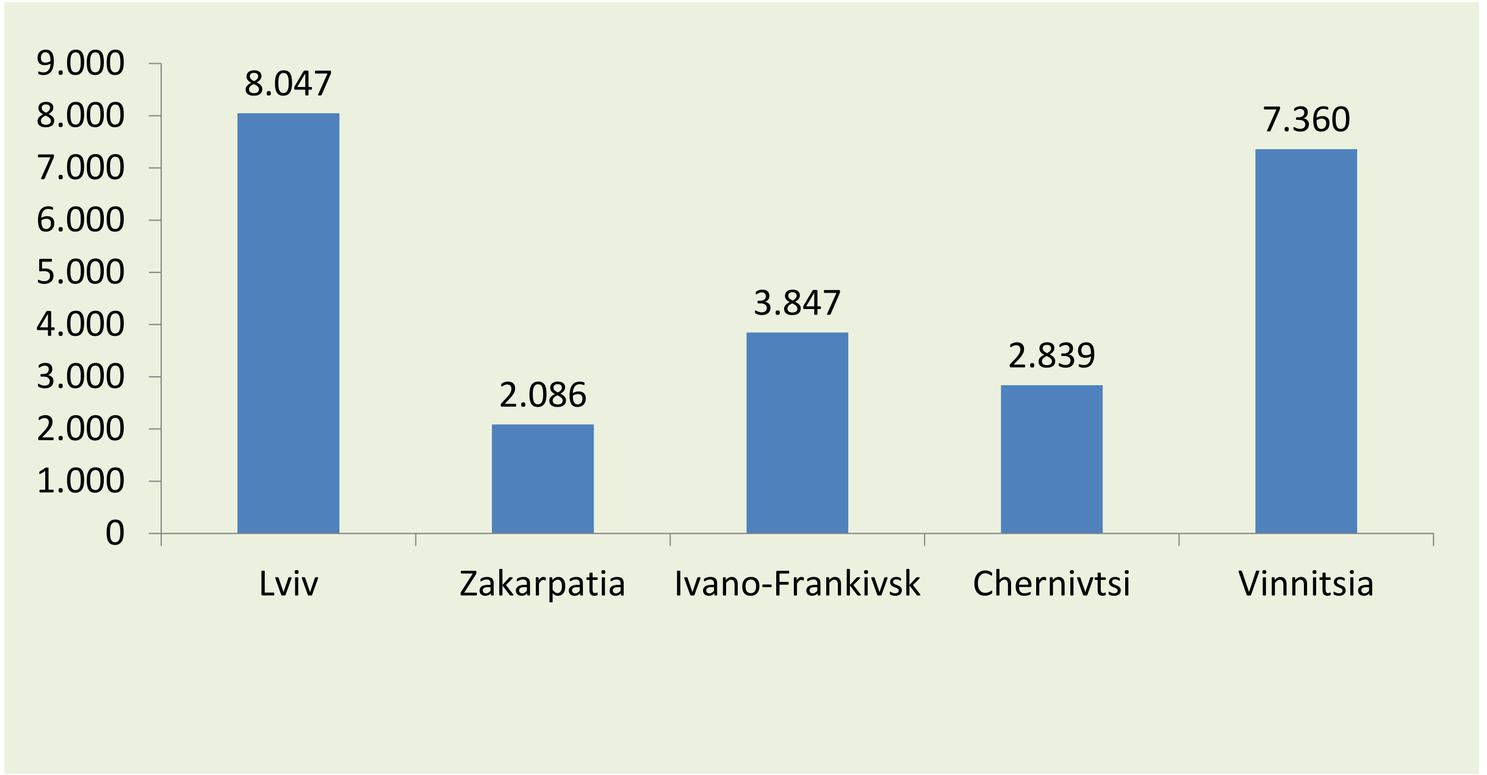
REAAs wind potential in 5 oblasts

REAAs	Capacity, MW
Farms	91
Industrial sites	174
Total	265



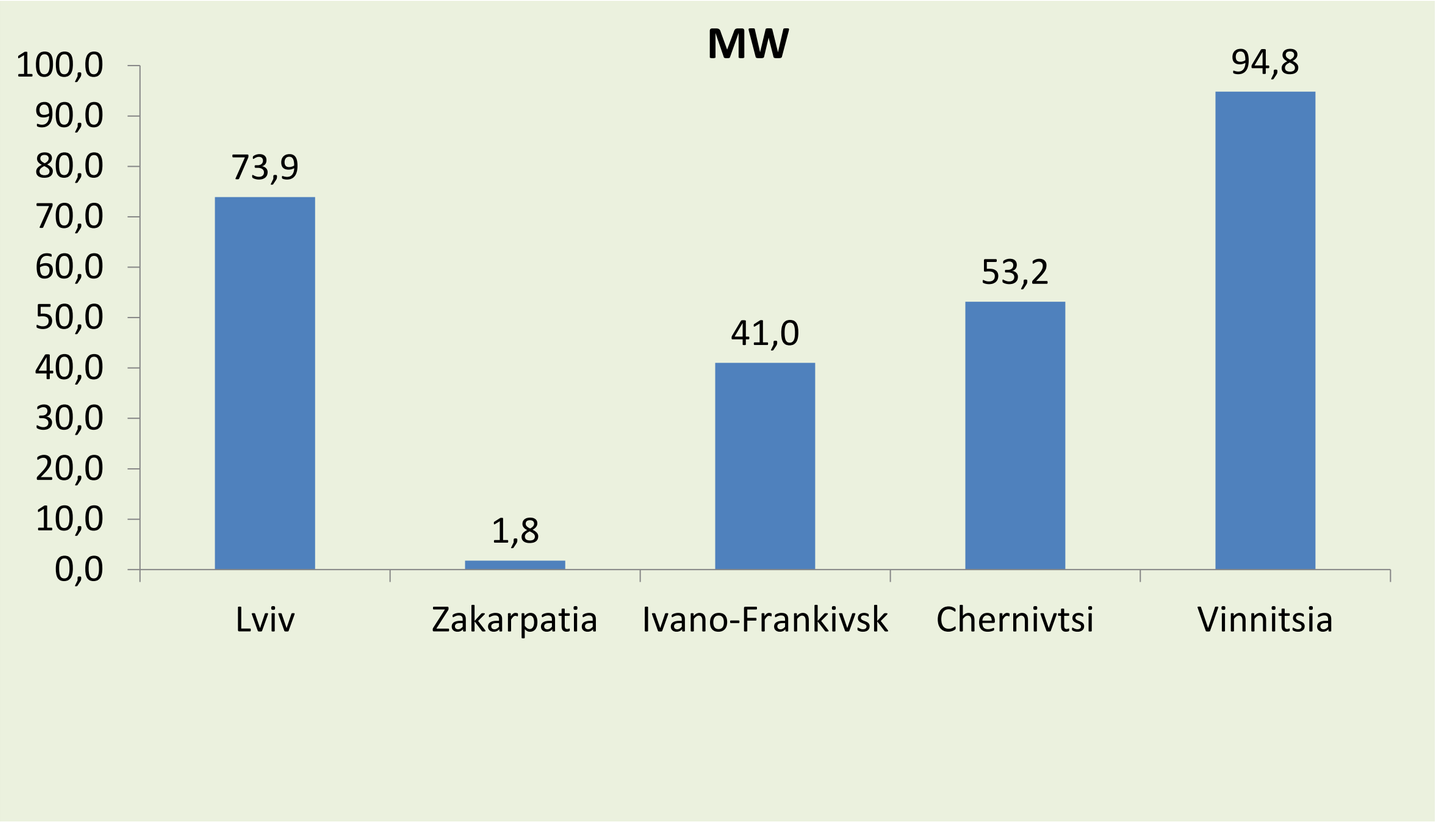
REAAs solar potential

Oblasts	MW
Lviv	8 047
Zakarpatia	2 086
Ivano-Frankivsk	3 847
Chernivtsi	2 838
Vinnitsia	7 360



REAAs wind potential

Oblasts	MW
Lviv	73,9
Zakarpatiia	1,8
Ivano-Frankivsk	41,0
Chernivtsi	53,2
Vinnitsia	94,8



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THANK YOU!

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