



## **Power Grids and Climate Information: supporting transmission system operators**

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The activities of electricity transmission system operators (TSO) may be affected by weather conditions and for this reason the availability of accurate information about past and future states can be useful for power grids management. ENEA is supporting Terna (Italian TSO) since 2012 providing them weather and climate information related to electricity demand and renewable energies management. The first task has been an assessment on the use of weather and climate information to predict electricity demand at short (1-5 days) and long (1-3 months) time scales. The second task was focused on the possibility to estimate and predict the electricity production coming from photovoltaic (PV) using different data sources (satellite, reanalysis, weather stations, climate models). The outcome of this collaboration has been two-fold: i) we had the occasion to evaluate the "quality" of weather/climate information considering power grid operational aspects and ii) more challenging questions, not considered at the beginning, have been raised, providing further interesting research goals.