



## **EARSC Statement. Consultation on the EU strategy for solar Energy**

The European Association of Remote Sensing Companies (EARSC) is a trade association based in Brussels, representing the European downstream services sector. EARSC counts more than 135 members across 25 countries of Europe.

EARSC welcomes the proposal for a strategy for solar Energy which ensures it achieves its full potential in helping to meet the European Green Deal's climate & energy targets.

In the context of the zero-pollution vision for 2050<sup>1</sup>, the use of digital solutions is becoming increasingly important to meet the European Union's climate targets. Earth observation information, such as data coming from the European flagship programme Copernicus<sup>2</sup>, will be a key dataset for a making the EU solar energy system more competitive & resilient.

*"...we all know that only what gets measured gets done"*, said President of the European Commission Ursula von der Leyen at announcing the Global Methane Pledge at COP26 in Glasgow<sup>3</sup> and Earth observation satellites are always watching our planet from space. Earth Observation has the advantage of large spatial coverage and can provide a continuous and global view of the Earth parameters.

In the solar energy industry, but also in the real estate sector, services for investment decisions and plant management are needed to ensure the quality and sustainability of thermal and photovoltaic (PV) solar plants. The Earth observation sector has operational use cases which can help unlocking the solar energy's potential, therefore contributing to the European Green Deal's climate and energy targets,

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<sup>1</sup> Zero pollution action plan at [https://ec.europa.eu/environment/strategy/zero-pollution-action-plan\\_en](https://ec.europa.eu/environment/strategy/zero-pollution-action-plan_en)

<sup>2</sup> Copernicus programme: Copernicus is the European Union's Earth observation programme coordinated and managed by the European Commission in partnership with the European Space Agency, the EU Member States and EU agencies. It aims at achieving a global, continuous, autonomous, high quality, wide range Earth observation capacity ([www.earsc.eu](http://www.earsc.eu))

<sup>3</sup> Speech by President von der Leyen on the launch of the Global Methane Pledge (02/11/2021)

building on the legislative package presented last year and the ongoing implementation of the clean energy package.

Satellite-based Earth Observation (EO) data inform the public on potential impacts and opportunities of renewable energy installations by allowing visualizations to graphically represent relevant data or forecasts contributing to better understand potential impacts, community benefits, or justification for a new project (for example identifying the boundaries of communities when assessing the development of large-scale solar installations or concerning solar energy nowcasting & short-term forecasting systems<sup>4</sup> combined with numerical weather models based (e.g. from Copernicus CAMS and EUMETSAT/Meteosat) with the propose upstream monitoring, for site selection analyses for large-scale solar farms, and downstream or influence of meteorological factors for the nowcasting<sup>5</sup> and short-term energy yield forecasting.

The increasing need for energy<sup>6</sup> can be addressed adequately by urban PV technologies and it is of special interest to the high-resolution solar cadastre. The high photovoltaic penetration at urban scale<sup>7</sup> addresses this topic. Urban PV systems can be implemented on different scales –the individual PV system on a rooftop or a set of larger PV installations on big urban surfaces such as the roofs of supermarkets, parking shades, etc. This means identifying available spaces with strong solar potential and high efficiency for installation of PV in the city, with a corresponding solar resource evaluation for each, considering the shadow effect and the local orientations of the roofs. The variability induced in the urban electric by PV is addressed through providing forecasts on short-term scales, allowing distribution system operators and households to make informed and efficient grid management decisions.

Other emerging trends such as the use of bifacial PV modules using both the direct sunlight and its reflection off the ground to capture more light or installation of floating PV plants in water bodies<sup>8</sup> are also being investigated by the EO sector.

Solar irradiance measurements of the required accuracy, availability, and resolution are quantified based on daily business experience. Earth Observation data and added-value services provide capabilities for modelling and scenario analysis and allows for the measurement of progress and the assurance of data while providing a foundational tool to ensure the sustainable transition is data-driven and evidence

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<sup>4</sup> nextSENSE: solar energy nowcasting & short-term forecasting system (e-shape project)

<sup>5</sup> weather forecasting on a very short-term mesoscale period of up to 2 hours

<sup>6</sup> around 75% of the global energy supply is consumed in urban environment

<sup>7</sup> high photovoltaic penetration at urban scale (e-shape project)

<sup>8</sup> Where Sun Meets Water : Floating Solar Market Report

based. These operational cases show one path helping to accelerate the deployment focussing on the potential and the barriers for market-driven deployment and the ways to promote solar energy as much as possible.

Therefore, EARSC believes that the strategy for solar energy should consider that EO data and services are operational solutions to assess the feasibility of renewable energy systems and prospecting for resources helping to optimise the contribution of solar energy to the achievement of the European Green Deal objectives, including in terms of growth and jobs. EARSC remains at your disposal to work together on this objective.