EO services contributing to SDGs

Solar panel mapping and monitoring

- User: policy makers, energy solution companies and investors, and utility sector
- Challenge/Needs: information on the recent and past numbers (increase over time) of installed solar panels plays and important factor in policy and activities regarding the energy transition. Conventional data sources do not provide full insight into these numbers due to level of detail or incompleteness.
- initiative: NEO has developed a service in which solar panels for the full area of the Netherlands are being monitored using aerial and satellite imagery. To manage the scope, NEO has developed deep learning models for solar panel classification that have been integrated into a monitoring system. The service contains locations with easy to use relations to national key registrations, as well as power output estimations. The data is used for various purposes, such as: to design or validate government policies involving renewable energy, monitor net capacity risks, monitor risks involving gas pipeline proximity, as input for energy transition advisors.
- Results: 1) detect the installed solar panels on roofs using deep learning 2) estimate the installable capacity and generated yearly power potential 3) building the online environment to visualize the mapping and results and provide ease of access to clients
- Impact: the service is used by several parties that work on a national level in the Netherlands, several Dutch provinces and a large number of municipalities. Depending on their needs, these clients either get the data on request when an action is scheduled, or have a contract to receive several updates per year.
- Service Provider: NEO BV

NEO Solar panel monitoring service:
https://zonnepanelen.neo.nl/landing

Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services.

Rooftop solar panels

EARSC
European Association of Remote Sensing Companies