Case: Use data to improve sustainable energy supply

Overview

The energy system in the Netherlands is currently undergoing radical changes due to the transformation to more sustainable energy in the future (fewer fossil fuels). The result is that there are changes in both supply (energy comes from sources that are more and more dependent on both wind and sun), but also demand (basically, more electricity is needed).

The Rijksvastgoedbedrijf[1] is a stakeholder in both supply and demand. We are currently renovating buildings, which results in a different demand for energy. This demand, however, cannot always be met because of limited space on the energy network. At the same time, we are creating supply by both renting and leasing plots to make solar parks or windmills possible.

Background and challenges

What is needed to get a more sustainable energy system is the following:

- More capacity (e.g. more cables), which is expensive and has a limit.
- Better balancing in time (e.g. by placing batteries to save the energy that is used during the day for use in the evening)
- Preventing transport that is not needed by making more local connections (e.g. a direct line between a solar park and an office).

To help tackle this there are multiple handlebars. There is a program about the Energie Hoofdstructuur[2] which provides the basic policy lines regarding the energy transition in the coming years. We have data on the amount of energy that our buildings need, or will need in the near future. There is also data on the expected investments the systems operators (netbeheerders) are planning to make, both locally and nationally. We also have GIS data of the real estate in our portfolio (both buildings and plots).

Core Challenges

The main challenge we are facing at the moment is that the data of supply and demand on the energy network, which is available, needs to be translated into special terms, where you take into account the three possible solutions as mentioned before.

Potential EPA-related products

We are wondering what would be the best way to use our assets (both buildings and plots) in order to get the best result in organising a more sustainable energy system in the future (for the Netherlands as a whole). Which role could we, apart from what is allowed now, what our ministry asks etc, take that is the most effective considering the real estate that we own?

What would help for that is a map that gives insight into possibilities (now and in the foreseeable future) from where we can start in discussion with policy-makers within the Dutch government. We are looking for a clear, analytic and open-minded approach to opportunities.

[1] The organisation within the Dutch government which is responsible for most the real estate of the government, for example palaces, prisons, airports, arable land, ministries etc).

[2] https://www.rijksoverheid.nl/documenten/kamerstukken/2024/03/04/aanbieding-definitief-programma-energiehoofdstructuur

References

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