

Liander Opens Data

Case description for Media Future Week 2013



Summary

Liander manages the energy distribution network in a large part of The Netherlands. It has a responsibility to society to provide transport of natural gas and electricity, at a low cost. Liander is thinking about future innovations, but is limited in doing so because of regulations.

Liander wishes to explore how to make better use of the data Liander has, through Open Data. Liander has lots of data, but is not allowed to use this data in applications due to the above mentioned legal limitations. Nevertheless, this data could be used by third parties in applications, for instance to facilitate the energy transition towards a more sustainable energy future.

With Open Data, Liander ventures into uncharted territory for itself and its customers. Will its networks remain as reliable when data about them is made public? Will this lead to a faster and better energy transition and will it create new possibilities for society as a whole?

As a result of the Media Future Week Liander likes to see a number of concepts and demos of applications using open energy data, as well as a roll-out scenario for these applications to specific target groups. In addition, it would like a step by step plan describing which datasets to roll out when. Via www.liander.nl/opendata, Liander will offer several datasets to inspire and develop your concepts and demos.

Who is Liander?

Liander is the energy distribution network operator in the Dutch provinces Noord Holland, Flevoland, Gelderland and in large parts of Zuid Holland and Friesland. We are responsible for construction, maintenance and operation of electricity and natural gas connections. The electricity network in the Netherlands is very reliable. On average, supply failure is extremely rare in the Netherlands. In fact, our network is one of the most reliable in the world!

Liander has been an independent network operator since July 2009, when it emerged from the splitting of the energy supply and network operating divisions of Nuon NV. Consumers of electricity and natural gas cannot change to a different network operator. Hence, our customers cannot make a deliberate choice for us, similar to making a choice for a particular energy supplier. This puts us in a special position: we more or less have our income guaranteed. To prevent network operators from abusing this position, the Dutch government has taken several precautions, such as maximizing our tariffs and creation a "fictitious competition" with other network operators. The network operator performing best is allowed to charge slightly higher tariffs than the other network operators, and thus gets better chances to innovate. Such innovations, however, are bound to certain restrictions, in order to prevent us from abusing our monopoly position. Our tasks are restricted to installation and operation of the energy network for natural gas and electricity and we are not allowed to develop and exploit products and services for services that do not directly support this goal. We are allowed, however, to perform research and development into innovations, but this should always benefit the quality, security and/or sustainability of our energy network operations. On the one hand, this keeps the costs of network operations within limits and makes sure that the tariffs we charge to customers

are directly related to network operations. On the other hand, this makes sure the market for innovations remains open for third party suppliers, such as consultancy firms.

What is our challenge

Being part of and owned by society, Liander would like to contribute to a sustainable future. In particular, Liander wishes to contribute to the energy transition, away from an economy based on central fossil energy sources, towards a self-sustained economy based on decentralized sustainable energy sources, electrified transport, etc. One of the challenges in this energy transition, however, is to achieve a better (local) balance between varying yields from local sustainable energy sources with (local) energy usage patterns. At Liander, we have various sources of data that could be usefully applied in the energy transition.

At Liander, we consider the Open Data approach a promising way to make our data useful to society. Open Data is a development worldwide in which organisations make data publicly available for anyone. Its main characteristics are:

- raw data (no, or only limited processing has taken place);
- freely available via the internet;
- data is machine readable;
- applications are not provided (but third parties are allowed to make such applications).

We expect we can contribute to the energy transition – in an indirect way – by making our data openly available.

In 2013, Liander will start to make Open Data available. For starters, Liander has published a dataset containing anonymized data aggregated at postal code level for all ‘small’ energy customers in a large part of Liander’s area in 2011. Data published includes the average standardized use of electricity and natural gas, the number and type of connections, the percentage of connections with a smart meter and the percentage of connections on which energy is also fed back into the network (e.g. energy generated from solar panels). Currently, Liander provides this as a downloadable dataset; in the future, such data may be provided more often, more real-time and perhaps even in a way that allows e.g. households to access their own – non anonymous – data in a secure fashion.

Open Data is an exciting development for Liander. As a company, we are used to providing secure, reliable services: natural gas supply should remain pressurized, cables should be in working order, and meters should be measuring properly. What will happen if we start making our data available? Will all developments be desirable? Besides enthusiasm about Open Data, we also observe scepticism. Therefore, it is important for us that our first step into the world of Open Data is a step in the right direction.

This is where you come in. We'd like to ask you, not only as future media designers, but also as users of the energy we transport:

What should Liander do to make open (anonymized) energy data a success, for users of energy and for other parties involved in the energy transition?

- Which parties will be the users of our open data and who will be the end users of the applications created with open data?
- How should we go about reaching both types of users?
- How do we discover what these users want?
- Is it desirable to open our energy data also in a (near) real-time fashion?
- Is it desirable to be able to make energy data available of a single connection– i.e. not anonymous and in a secure fashion – for users of that connection?
- What are the things we should definitely NOT do (and why)?
- Which other (open) data can our data be combined with usefully?
- How can we make your life as an energy prosumer (i.e. as a consumer of energy that may be a producer at the same time easier)?
- How can we at Liander contribute to the energy transition via Open Data?

What we expect as a result:

At the final presentation of the Media Future Week we would like to see:

- A scenario to roll out open data for a particular target group of users (both users and end-users), covering, amongst others, internal and external PR, costs, and threats.
- A plan to open (other) data in a stepwise fashion.
- One or more concepts and/or demos of applications that could be made with such open data. Make clear how this contributes to better network operation and/or to facilitating the energy transition.

Sources

We offer a few datasets from Liander to inspire you. These can and may be used in a concept and/or demo, but we'd like to ask the teams to think further: if this is possible now, what will also be possible in the future? We'll make the data available to student teams via www.liander.nl/opendata and/or at the briefing.