Energy grid

A platform where home owners can view their energy production and consumption and where energy network operators can manage the total energy production and consumption.

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Technology Impact Cycle Tool

Energy grid

Impact on society

What impact is expected from your technology?

What is exactly the problem? Is it really a problem? Are you sure?

home owners and Energy network operators don't have insight into the total amount of energy produced and consumed.

Are you sure that this technology is solving the RIGHT problem?

Because we will give home owners and energy network operators insight into the energy production and consumption.

How is this technology going to solve the problem?

Because we will give home owners and energy network operators insight into the energy production and consumption.

What negative effects do you expect from this technology?

If energy network operators are given incorrect data this might result in problems like black-outs.

In what way is this technology contributing to a world you want to live in?

We want to live in a world where everyone has perfect insight into their energy usage and production. We contribute to this by making a platform where people get this insight.

Now that you have thought hard about the impact of this technology on society (by filling out the questions above), what improvements would you like to make to the technology? List them below.

The technology doesn't fully exist yet. So none so far.

Hateful and criminal actors

What can bad actors do with your technology?

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

An employee with sufficiënt access to the system could potentially cause harm the the energy grid.

Can fakers, thieves or scammers abuse the technology?

No, there is no interaction between users.

Can the technology be used against certain (ethnic) groups or (social) classes?

this kind of information is not present in the system.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.

They cannot.

How could bad actors use this technology to subvert or attack the truth?

They cannot.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.

There are no improvements we want to make.

Privacy

Are you considering the privacy & personal data of the users of your technology?

Does the technology register personal data? If yes, what personal data?

Yes, name, address, email, energy production and consumption data.

Do you think the technology invades the privacy of the stakeholders? If yes, in what way?

It does not invade privacy.

Is the technology is compliant with prevailing privacy and data protection law? Can you indicate why?

Yes, all GDPR rules are implemented.

Does the technology mitigate privacy and data protection risks/ concerns (privacy by design)? Please indicate how.

Yes, only the minimal amount of data needed for the system to work is stored.

In which way can you imagine a future impact of the collection of personal data?

No future features that apply to users are planned so no additional data will be collected.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

None.

Human values

How does the technology affect your human values?

This category is not applicable for this technology.

Stakeholders

Have you considered all stakeholders?

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by answering these questions.

Name of the stakeholder
Energy network operator

How is this stakeholder affected?
They are the main user of the technology

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Home owner

How is this stakeholder affected?
They can use this technology to track their energy consumption and production

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Large scale producer

How is this stakeholder affected?
Their energy production data is collected.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Large scale consumer

How is this stakeholder affected?
Their energy consumption data is collected.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?

Name of the stakeholder
Balance responsible party

How is this stakeholder affected?
They need to manage the energy balance on the energy grid.

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Other energy network operators

How is this stakeholder affected?
We buy and sell energy to these to balance the energy grid.

Did you consult the stakeholder?
No

Are you going to take this stakeholder into account?
No

Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.
Nee.

Data

Is data in your technology properly used?

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in the technology?
Yes.

How does the technology organize continuous improvement when it comes to the use of data?
Yes, improvements of the usage of data is planned.

How will the technology keep the insights that it identifies with data sustainable over time?
Yes, energy data and weather data will be available on a long term basis.

In what way do you consider the fact that data is collected from the users?
The energy data collected from users is already available to the main stakeholder.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.
none.

Inclusivity

Is your technology fair for everyone?

Will everyone have access to the technology?

No, only to the energy network operator and home owners in the region of the operator.

Does this technology have a built-in bias?

No, anyone with a home in the region managed by the operator is allowed to use it.

Does this technology make automatic decisions and how do you account for them?

It only displays information, it makes no decisions.

Is everyone benefitting from the technology or only a a small group? Do you see this as a problem? Why/why not?

It is used to balance the energy grid, everyone benefits from this.

Does the team that creates the technology represent the diversity of our society?

No, but the group creation was not up to us.

Now that you have thought hard about the inclusivity of the technology, what improvements would you like to make? List them below.

None.

Transparency

Are you transparent about how your technology works?

Is it explained to the users/stakeholders how the technology works and how the business model works?

The technology is subsidised by the government.

If the technology makes an (algorithmic) decision, is it explained to the users/stakeholders how the decision was reached?

Home owners are not directly impacted by any descisions any algorithm makes.

Is it possible to file a complaint or ask questions/get answers about this technology?

nvt

Is the technology (company) clear about possible negative consequences or shortcomings of the technology?

nvt

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

None.

Sustainability

Is your technology environmentally sustainable?

This category is not applicable for this technology.

Future

Did you consider future impact?

This category is not applicable for this technology.