

How is your data used by the grid operator?

When you share your sustainability plans in Data Safe House, what will happen with your data, and what is in it for you?

1. Increased chances of realising the right energy infrastructure

We cannot provide guarantees, but by participating in Data Safe House, you significantly increase the chances that grid operators can timely provide the right infrastructure, in the right place, for the appropriate energy carrier, to enable the sustainability projects of your industry cluster.

2. Dialogue between industry and grid operators

Based on the data in Data Safe House, in-depth discussions and scenario explorations will be held in the Data Boards (participant councils) at cluster level. Grid operators explain how they arrive at their investment plans and their relevance to your organisation.

The more grid operators understand which transition path the industry will take in the coming years, the better they can handle uncertainties. This leads to better investment decisions and allows us to accelerate the sustainability process together.

Examples of dialogue questions:

Grid operator

What triggers you as a company to invest in sustainability? What will hold you back?

Grid operator

In which scenario will you switch to more hydrogen or more electricity?

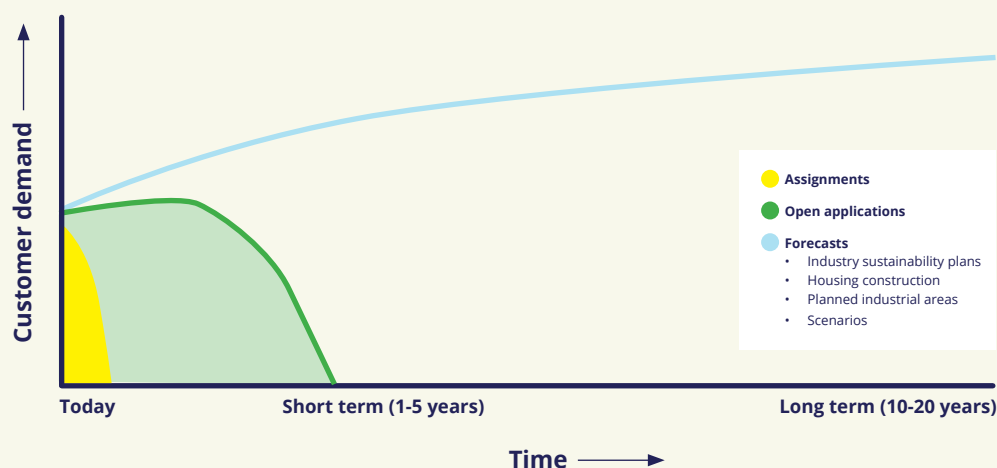
Industrial party

Is there still a healthy business climate for my sustainable, innovative company?

Industrial party

What level of flexibility can we provide as a company (e.g., temporarily less energy), and in what form?

Determining investments in the energy infrastructure



Mutual dependency

Data Safe House provides an overview of the entire energy infrastructure. Instead of a ten-year customer forecast for a single energy carrier, grid operators now have a comprehensive view. This is crucial as everything is interconnected. In some cases industrial parties also exchange energy among themselves. For instance, if you switch to hydrogen, what gas or electricity demand will drop, and what does this mean for other parties?

A real-life example:

A fertilizer producer makes ammonia using gas. Due to the energy crisis, they are forced to reduce production and temporarily switch to importing ammonia. This increases electricity demand among regional horticulturists who used the residual heat and CO₂ from the fertilizer producer to heat their greenhouses. This sudden rise in electricity demand is something grid operators cannot quickly accommodate. However, this energy supply is crucial for their business and our food supply.

By sharing this data in Data Safe House and looking integrally at all energy carriers, the interdependencies of energy flows become clearer for grid operators. This provides a better understanding of potential risks and highlights unforeseen chain effects that may arise from changes in the energy balance.

How grid operators determine where to invest

Grid operators prioritise capacity expansions of the energy infrastructure using an objective framework. Simply put, they give bottlenecks a risk score: what is the likelihood that a station outage will actually lead to an interruption in the energy supply to customers, and what is the impact? This impact is quantified in terms of consumer minutes, outage duration, unserved energy, and outage compensation.

Each bottleneck receives a risk profile. Anything with a high risk (red) must be addressed as soon as possible. This way, grid operators can plan and prioritize bottlenecks, taking the current investment's implementation phase also in consideration.



Risk assessment

	Low:	No measures needed; monitoring required.
	Medium:	Measures desired.
	High:	Measures necessary.

Comprehensive view with Data Safe House

Until now, grid operators relied on generic data about industry sustainability, trying to map it as accurately as possible to the regional situation, based on their insights and those of stakeholders.

By processing data from a single source, the quality of the scenarios improves, allowing grid operators to determine where and when capacity bottlenecks occur more accurately. The prioritization aligns better with expected realities. The sooner – and further ahead - grid operators can anticipate, the less likely grid congestion will occur.

You are part of the solution!

The energy transition is a shared challenge. By taking the initiative as an industrial party and sharing your sustainability plans in Data Safe House, you gain more control over the sustainable energy infrastructure of tomorrow. During the pilot phase in the Rotterdam-Moerdijk cluster, industrial parties and grid operators implemented 90 sustainability projects. Together, they represented 70% of the electricity demand in the Rotterdam port area, and this number and percentage are rapidly growing. Imagine the added value of Data Safe House now we implemented it nationwide! The more data we have, the better grid operators can tailor their investment decisions to the industry's infrastructure needs.

Join us and share your sustainability plans in Data Safe House!

