FlexPower

Publieke samenvatting / Public summary

Aanleiding

The pace of implementing industrial electrification, despite rapid technological advancements, remains slow. Several barriers such as high electricity prices compared to natural gas, grid congestion, and limited grid connections persist. Additionally, the variability of renewable energy supply further complicates the situation and compounds the challenges. Government bodies and grid operators view demand-side flexibility—i.e., the ability of industrial processes to adjust their electricity consumption—as key to addressing these challenges. However, for industrial companies, the economic viability of flexibility remains unclear. The FlexPower project aims to bridge this gap by enabling companies to identify where and how they can integrate electrification and flexibility solutions efficiently.

Doelstelling

With this aim the FlexPower project supports the MOOI Mission Industry, particularly in theme 1: “Process innovation through electrification and chain innovations,” subtheme 2. FlexPower is designed to create the conditions necessary for efficient and flexible industrial electrification. By enhancing the understanding among stakeholders in the energy value chain (including industrial companies, grid operators, and renewable power generators), the project will deliver the knowledge, tools, and insights needed for all to act effectively: • Industrial companies will gain clarity on how to integrate technologies that enable efficient and flexible electrification. • Grid operators will be better equipped to plan accelerated grid reinforcements

Projectinformatie / Project information

Projectnummer / Project number
MOOI324035
Subsidiebedrag / Grant amount
€ 1.746.011,00

Algemene informatie / General information

Penvoerder / Secretariat
Stichting Ispt

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and predict/manage grid congestion by sourcing flexibility, thus facilitating industrial electrification. • Renewable power generators will better understand the industrial market demand for electricity, enabling them to strategically invest in new wind and solar parks to accelerate the industry's electrification.

Korte omschrijving

FlexPower will develop tailored scenarios and solutions for four industrial cases, Key activities include: • Translating realistic future scenarios for power generation, energy supply, energy and grid tariff and other financial incentives to relevant input for elaborating industry cases. • Developing efficient solutions for electrification & energy buffering for the cases based on the future scenarios, and assess the options for flexible operation. • Assessing the relationship between total electricity use, peak use and flexibility potential of the (economically) most feasible solution and the characteristics of the future energy scenarios • Facilitating systemic solutions for connecting renewable energy supply with industrial demand through improved energy value chains. The project adopts an agile iterative approach to adjust future scenarios based as to steer economically driven industrial choices towards the most sustainable solutions for the whole energy value chain, thus avoiding split-incentives.

Resultaat

Via an evidence-based dialogue between industry, grid management, energy sector and government the project will deliver critical knowledge and insights enabling the acceleration of industrial electrification. These knowledge, data, scenario's and insights will be used to develop concrete action perspectives for all stakeholders in the energy value chain, towards the following results: • Energy system & market conditions for industry and industrial cases • Industrial case-specific flexible/efficient electrified process solutions • Strategies for demand-side flexibility for industrial cases • Systemic solutions for flexible/efficient industrial energy value chains

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
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