

Toyota Mobility Foundation and NOW GmbH launch online platform for creating scenario including hydrogen for regions in Germany

TMF has joined forces with its partners, Spilett GmbH, BBH Consulting AG & ENDA GmbH & Co. KG to launch an online platform for scenario development

Regions can configure and compare scenarios for local energy systems with hydrogen

Developed with the Steinfurt region & applied in the 15 HyStarter regions, the platform is now available free of charge to all regions in Germany

Berlin, Germany (26 April 2023) - The Toyota Mobility Foundation, the National Organization for Hydrogen and Fuel Cell Technology (NOW GmbH) jointly launched the platform for the development of scenarios for a regional hydrogen economy today.

The open-source online tool "H2Scout" is based on an idea by Spilett and the regional actors from the district of Steinfurt (NRW). The prototype of the H2Scout was developed by Spilett (concept), BBH Consulting (energy system modelling), Münster University of Applied Sciences and the Energielandwerkers (Regional Configuration Steinfurt), Energieland2050 (Steinfurt actors in the regional energy transition) and ENDA (software implementation).

The "H2Scout" facilitates the discussion on the integration of hydrogen into the regional energy transition by identifying and comparatively evaluating alternative, cost-optimized infrastructure systems for hydrogen supply from regionally available resources (renewable energies, water, residues).

The energy security of the identified infrastructure system is ensured on an hourly basis and is based on the region-specific demand curves of the individual sectors.

The regions can define an unlimited number of scenarios that differ in terms of resource use, assumptions about (future) costs and willingness to accept, as well as energy and climate strategies. The H2Scout enables regional actors to understand the effects of the different framework conditions and assumptions on the system performance of the infrastructure system (energy and material flows, costs and profitability, land requirements, regional value creation, climate, and environmental protection effects).

Since there are no blueprints for the energy transition yet, framework conditions and assumptions are part of dynamic processes. To understand the impact of changes during H2 infrastructure uptime, regions can change selected assumptions about costs, sales volumes, or willingness to pay and apply them to an existing scenario. The resulting effects on the 12 most important system key figures give a first impression of possible risks and adjustment areas for a potential profit maximization. The H2Scout can be accessed by regions via the following link: www.hy.land/h2scout

Andy Fuchs, Head of Toyota Mobility Foundation - Europe:

"We are very pleased that today, together with our partners, Spilett, BBH Consulting, ENDA & the National Organization for Hydrogen and Fuel Cell Technology (NOW), we can provide regions with a tool that helps to visualize the integration of hydrogen in the regional energy transition and make it tangible. It is particularly important to us that as many regions as possible can access this open source-based free analysis tool. Based on the experience in the development with 15 HyStarter regions in Germany, we see great potential to be able to support other regions online.

Kurt Christoph von Knobelsdorff, CEO & Speaker NOW GmbH:

"We are very happy that with the H2Scout, the Toyota Mobility Foundation is supporting exactly the regional approach we are pursuing in the HyLand program. With the scenario calculator, the regions now have a tool that they themselves can use to calculate the operational potential of hydrogen and fuel cell technologies."

About the Toyota Mobility Foundation

The Toyota Mobility Foundation (TMF) was established in August 2014 by the Toyota Motor Corporation (TMC) to support the development of a more mobile society in which everyone can move freely. The Foundation underscores TMC's on-going commitment to continuous improvement and respect for people. It utilizes Toyota's expertise and technologies to support strong mobility systems while eliminating disparities in mobility. TMF works in partnership with universities, governments, non-profits, research institutions and other organizations, creating programs are aligned with the UN Sustainable Development Goals (SDGs) to address mobility issues around the world.

About NOW GmbH

NOW GmbH is working for the future of emission-free technologies in an integrated energy system. The climate targets set by the federal government are the guiding principle. As a state-owned GmbH, NOW GmbH receives contracts from so-called highest federal authorities, i.e. federal ministries, in the field of sustainable mobility and energy supply. In addition, it also accompanies strategic stakeholder processes, shapes international cooperations and is committed to the acceptance of alternative technologies in society.

The founding mission of NOW GmbH is the National Innovation Programme Hydrogen and Fuel Cell Technology (NIP). To this day, this origin is carried on in the name: NOW – National Organization Hydrogen and Fuel Cell Technology.

The order portfolio has expanded significantly since its foundation in 2008. Not least because of the increasing social and political importance of clean, efficient mobility based on renewable energies. Technologically, the tasks today include the areas of hydrogen, fuel cells, batteries, renewable fuels and liquefied natural gas – both on the drive and fuel side, as well as on the infrastructure side. In December 2019, for example, the National Charging Infrastructure Control Centre was founded under the umbrella of NOW GmbH.