

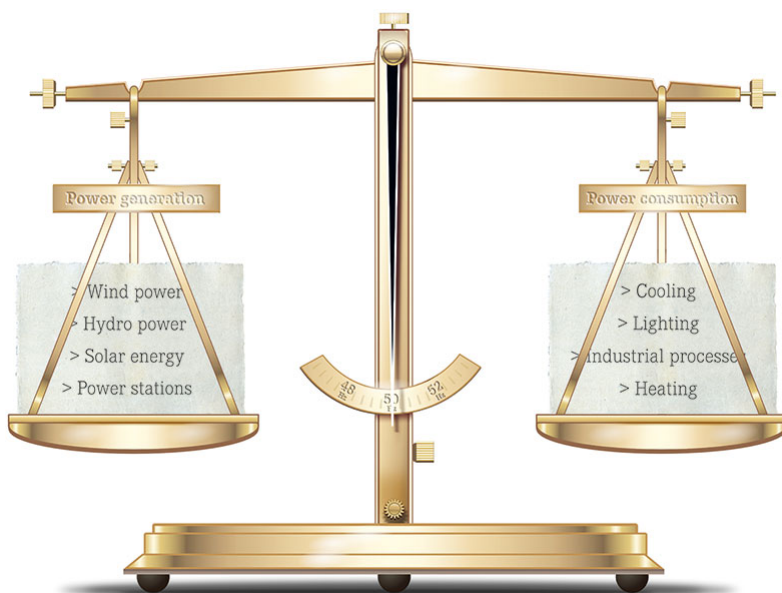


Balancing Act

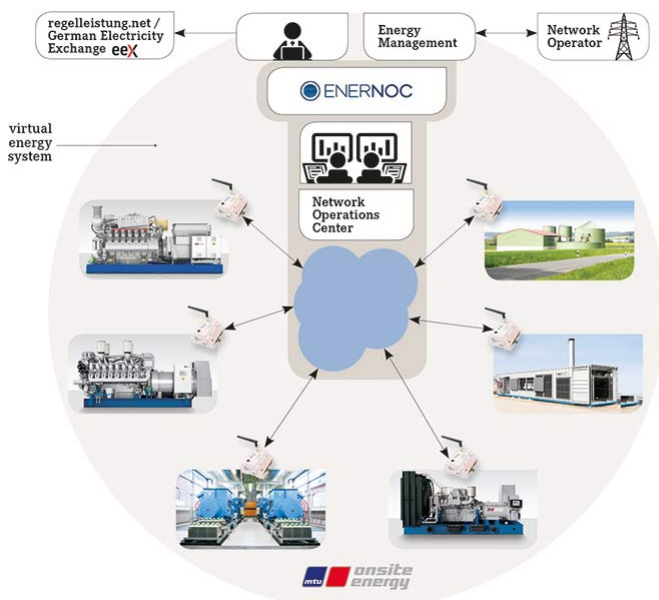
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Tags/Keywords

In 2011, Germany announced the energy turnaround, ushering in a new era with greater focus on renewable energies. Since then, however, the public grid has been prone to fluctuation. When the wind is still and the sun has disappeared behind the clouds, people still need to consume power, yet that is precisely the moment when Germany's public grid can start to falter. More power is consumed than generated, and the grid frequency drops. Conversely, very strong winds and sun can lead to more power being produced than is actually needed. In both cases, the required compensation is provided by what is called 'operating reserve'. MTU Onsite Energy and EnerNOC, the energy intelligence software provider, joined forces to develop a solution that benefits all parties – grid operators, consumers, and power plant operators.



NPPs in Germany are going off grid step-by-step up to 2022. At the same time, the share of renewable energies is growing, which makes it increasingly difficult to maintain a public grid frequency of 50 Hz. When the power being fed into the grid is less than the demand, operating reserve is needed to stabilize it. This is where [MTU Onsite Energy](#) und [EnerNOC](#) have joined forces: genset operators now have the opportunity of linking up their plant to a virtual EnerNOC energy system. When the public grid needs more electrical power, a signal is emitted via this link for feed-in of the power, which stabilizes the grid and allows the operator to earn extra money. "This brand new facility brings additional benefits to our customers by making their power plants even more profitable, and improves grid stability at the same time," explained Matthias Vogel, Head of Power Generation Business at MTU Onsite Energy.



When winds are high or the sun is beating down and more power is being generated than consumed, the frequency of the public grid can exceed 50 Hz. That often means that the power input has to be reduced for a brief interval. This is known as negative secondary control power and can be provided by biogas systems or CHP modules driven by natural gas, again with lucrative cash rewards for the operators. But how does it all work? Companies operating MTU Onsite Energy gensets have the option of having an interface ('E-Box') mounted on their power plant and linked by a safe VPN connection to EnerNOC's control centre. EnerNOC controls several power plant pools containing both power generation plants and large-scale power consumers in trade and industry. When operating reserve is required, the genset in question receives a signal via the E-Box and, if it is available, automatically increases or decreases its output. EnerNOC markets this system service on the German, Austrian and Swiss operating reserve markets. By way of remuneration, a monthly credit note is issued to the participating company. "We are extremely satisfied to have found a strong, competent partner like MTU Onsite Energy with whom we can embark on long-term co-operation to achieve success," said Oliver Stahl, managing director for Europe at EnerNOC.

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