



**BILFINGER**

## Press Release

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### **Mastering the Heating Revolution: Bilfinger Develops an Innovative District-Heating Concept for Municipalities and Industry**

- **Bilfinger, ProCom, and Nusser & Partner develop the new “ScaleGrid” district-heating concept.**
- **Integrating industrial waste heat into the grid lowers CO<sub>2</sub> emissions.**
- **Heating utilities and industrial firms benefit from improved efficiency and cost management.**

Obtaining district heating as a byproduct of conventional power generation from coal, petroleum, and natural gas has been the traditional approach thus far. But it is becoming less and less viable as numerous economies gradually transition towards sustainable energy, the medium-term goal being to replace fossil fuels with power from renewable sources. With a new concept known as “ScaleGrid,” three enterprises have joined forces to make district heating grids fit for the future.

Christian Strondl, Managing Director of Bilfinger Bohr- und Rohrtechnik GmbH, explains the concept: “ScaleGrid benefits all the parties involved: Municipal utility companies can enjoy greater profits from their district heating grids, municipalities can lower their CO<sub>2</sub> emissions, industrial enterprises can sell off their surplus energy, while consumers can enjoy an undisrupted and stable supply of heat at reasonable prices.”

In order to make the transition to sustainable heating attractive for all concerned, ScaleGrid calls for the integration of industrial waste heat into the district heating supply and for the application of intelligent temperature management throughout the entire grid. To achieve these goals, the industrial services provider Bilfinger cooperates with two key partners: The IT specialist ProCom from Aachen, which provides comprehensive analyses of energy markets and price trends, and the Vienna-based consulting firm of Nusser & Partner, which handles communications with the various stakeholders. Bilfinger, for its part, contributes its experience in optimizing the energy consumption of industrial enterprises and takes charge of all aspects of the project’s technical development and execution.



ScaleGrid was developed in response to the problem that ever greater volumes of electrical power are being generated with the aid of sun and wind energy. No waste heat is created in the process, unlike when fossil fuels are burned. This means that new business models have to be created if district heating grids are to operate in a cost-effective manner. In other words, the transition to sustainability on the electrical power market will have to be followed by a corresponding transition on the heating market.

The approach taken by ScaleGrid is a holistic one: An intelligent software supplied by ProCom models the district heating grid, including all the relevant framework conditions, while forecasting the expected demand volumes, weather conditions, and market prices. On this basis, the municipal utilities and the industrial enterprises can decide which form of energy generation is the most economically viable for them at any given point in time. If electricity prices are very low, for example, then it will hardly make commercial sense for municipal providers to sell off their self-generated power. The better option instead will be to convert this power into heat and have it stored in special thermal storage systems for later use.

Industrial enterprises, too, can benefit by channeling their industrial waste heat into the grid in decentralized fashion. To this end, Bilfinger optimizes the heat volumes required for their operations, identifies potential cost-savings, and evaluates whether and to what extent their industrial waste heat can be recycled. As Christian Strondl sees it, the potential in this area has barely been tapped: “In the past, not much attention was paid to waste heat, a byproduct. With ScaleGrid, we can now help companies close this efficiency gap.”

A key success factor in this context is the smooth interaction among all the relevant players. Thus, the rollout of ScaleGrid follows a defined series of steps: making initial contact with the local municipality, holding discussions with local industrial firms, performing transparent public relations work for any major construction measures involved. From the outset, the focus is placed not so much on the technical solution as on the benefits that the various stakeholders stand to gain. “This approach allows us to gain widespread acceptance and to offer a visionary and sustainable solution for the provision of municipal heat from a single source,” Strondl concludes.



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Bilfinger is a leading international industrial services provider. The Group enhances the efficiency of assets, ensures a high level of availability and reduces maintenance costs. The portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance, plant expansion as well as turnarounds and also includes environmental technologies and digital applications.

The company delivers its services in two business segments: Engineering and Technologies and Maintenance, Modifications & Operations. Bilfinger is primarily active in the regions Continental Europe, Northwest Europe, North America and the Middle East. Process industry customers come from sectors that include chemicals & petrochem, energy & utilities, oil & gas, pharma & biopharma, metallurgy and cement. With its 36,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenue of €4.044 billion in financial year 2017.

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