METHODOLOGY AND PROCEDURE FOR THE CALCULATION OF TECHNICAL CAPACITY

Gasunie Deutschland Transport Services GmbH (GUD) publishes its procedure for calculating the technical capacities in accordance with the requirement in Section 23c (5) No. 4 of the Energy Industry Act (Energiewirtschaftsgesetz) and in accordance with the publication obligation of the transmission system operators pursuant to Article 18 (6) of Regulation (EC) No. 715/2009 and point 3.1.2 m) of Annex I of Regulation (EC) No. 715/2009 in the version of July 1, 2022. GUD determines the technical capacities on the basis of fluid mechanical flow simulations. This involves checking whether the existing technical and contractual boundary conditions can be met for severe network-loading scenarios. In addition to the technical parameters of the transport infrastructure (such as pipe lengths and diameters, pipe roughness, compressor drive power and compressor maps as well as pressure gradients due to cleaning, measurement and control), technical limits (such as flow velocity and transport temperature) are also influential parameters. Contractual boundary conditions are primarily given by agreed transfer pressures, which must be adhered to in order to ensure the linking of gas flows.

Load scenarios are determined on the basis of defined variable input parameters. In addition to the contracted capacities of the bookable or orderable entry and exit points, the scenarios also take into account cross-network area load flows in order to achieve market area-wide validity. The various entry and exit points were assigned to point classes that allow the consideration of different load flow behavior and thus the implementation of load flow assumptions.

The simulation calculation described above ensures that GUD can represent the firm capacity contracted by the transport customer.