Press release

September 10th, 2025

Rețele Electrice România invested 19 million lei in the modernization of the IRUM transformer station in Deva municipality

Deva – Rețele Electrice România, part of the PPC group in Romania, has completed the modernization works for the 110/20kV IRUM substation, in Deva municipality, to streamline the electricity distribution activity in the area. The investment, totaling over 19 million lei, was made entirely from its own sources, as part of the company's strategy to develop the electricity distribution network, considering the principles of quality and resilience.

The IRUM substation was put into operation in 1980 and, currently, 45 years later, it serves approximately 14,000 customers, both through low voltage and medium voltage lines, through 33 km of 20kV underground power lines, but also 53 20/0.4kV secondary substations. Also, the station is the main back-up for the 110/20kV Deva CFR and Decebal substations, both located in Deva municipality.

„*The modernization of the 110/20kV IRUM substation marks an essential step in our commitment to build a more reliable, efficient and resilient energy system. Through this complex project, we are not only improving the critical infrastructure, but we are also responding concretely to the current challenges of the grid – from increasing the degree of digitalization, to adapting for the integration of renewable energy sources. This project brings visible benefits to the local community by reducing the duration of outages and increasing the security of the electricity supply, contributing to improving the quality of the service offered. The modernization thus contributes to the stability and sustainable development of the area, providing solid premises for economic and social progress,*"said Mihai Pește, General Director of Rețele Electrice România.

The IRUM 110/20kV transformer substation has an installed power of 50 MVA and is equipped with two 110/20kV 25 MVA transformers. The complexity of the station modernization project was given both by the need to structurally consolidate the entire building and by the need to replace with the latest generation equipment. Thus, the process was carried out in stages.

In the first stage, the focus was on the modernization of the 20 kV primary equipment. They serve the 13 cells intended for medium voltage lines, including 2 measurement cells, 2 cells for transformers for own services, 2 cells related to the medium voltage part of the 110kV/MV transformers, but also 2 20 kV longitudinal coupling cells. Also in this first stage, one of the two 110/20kV transformers was replaced with a new one and the neutral treatment part of the medium voltage network was modernized by installing 2 transformers and 2 self-adjusting extinguishing coils.

The relay protection system, related to both the medium voltage network and the high voltage network, has been modernized, by replacing the old electromechanical relays with numerical protection terminals.

The second stage was aimed at modernizing the station building, as well as 110 kV primary equipment. These include the 110 kV collector bars, the 2 transformer cells, and the 2 line cells. The stage also included the replacement of the second transformer of 110/20kV. In addition, in order to increase safety, sensitivity and selectivity in operation, the relay protection systems related to the two 110kV lines, IRUM-PESTIS and IRUM-PAULIS were completed with numerical terminals also having the function of longitudinal differential line protection.

The IRUM substation is made up of equipment located both inside the building and outside. Thus, through the modernization project, the continuity of the integration of this building into the urban landscape of the area is ensured.

The company **Rețele Electrice România** operates networks with a total length of about 134,000 kilometers in three major areas of the country: Muntenia Sud (including Bucharest), Banat and Dobrogea, covering one third of the local distribution market, and is developing an investment program to improve the quality of service, safety and performance of the networks and local implementation of the PPC Group's environmental standards. The electricity networks operated by Rețele Electrice Romania include 289 transformer stations and over 25,000 secondary substations.