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SGC has put in place plans to begin testing a new method of firing up boilers without the use of fuel oil at thermal power plants in the Krasnoyarsk and Novosibirsk regions. SGC's plans to extend its electrochemical ignition technology (ECIT) to CHPPs in other cities of the company's operation in the near future, the company announced on September 1.

One of the experimental sites for the introduction of electrochemical technology will be the Krasnoyarsk CHPP-2. The contractor plans to start installing oil-free ignition equipment on Boiler No. 2 this September. In October, experts will begin testing the new system at the station, and in 2021 — to use it in normal mode. This project is expected to reduce the annual volume of CHPP emissions by more than 6.5 tonnes.

Sibtekhenergo, one of the pioneers of this technology in Russia, was chosen as the contractor for the Krasnoyarsk CHPP-2.

Today, most thermal power plants use the thermal method of fuel ignition, which uses fuel oil. Some of the disadvantages of this method are that it is uneconomical, poses a fire hazard, and is ecologically unsubstantial: local residents have complained about black smoke being emitted from the CHPP's chimneys when the boilers are fired up.

Electrochemical technology uses a 20 kHz high-frequency current under a voltage of 10 kV to create an electric arc ignition of coal dust entering the burner device of a boiler unit. Fuel-free ignition of boilers using electric arc plasma torches and systems for electrochemical ignition of coal fuel is today the most advanced technology in the energy sector in terms of efficiency and reliability, as SGC experts have notes.

In Novosibirsk, SGC is negotiating with developers of oil-free ignition systems to adapt this technology to the equipment of the city's thermal power plants. One of the major engineering companies in the regional energy market has offered SGC its own patented equipment for pilot implementation of the new development. The parties are currently discussing the specifics of application of the technology and legal issues, as well as deciding on which CHPP to set up a production site for the pilot project.

At the Novosibirsk Branch, experts estimate a 2.1-tonnes per year reduction in the gross emissions of fuel oil ash from all five CHPPs in the region. The stations also expect to save on the maintenance of fuel oil farms and the purchase of fuel oil once the new technology is introduced. The experience of the two CHPPs will be studied and applied at other SGC stations in different cities. The company plans to switch to fuel-free ignition over time in all regions of its operation.

"*We plan to completely abandon fuel-oil ignition at our stations. Different technologies are being considered. By shifting away from fuel oil, we are ensuring that no more black smoke, which scares many people when firing up boilers, will be released. We will also be improving our stations' economic efficiency and production fire safety,*" SGC's Technical Director Oleg Petrov said earlier.