

First Chain Zero-Carbon Energy Demonstration Project in Hunan

Recently, Wuling Power Office Integrated Intelligent Energy Demonstration Project, located in Qingyuan Street, Tianxin District, Changsha City, was put into operation. The Project is the first chain zero-carbon energy demonstration project in Hunan Province, covering power source, power grid, power load, power storage and power utilization. The Project takes advantage of technologies, explores the potential of shallow geothermal energy, and innovatively builds prefabricated energy modules to realize zero-carbon energy supply and enhance the level of resource utilization.

Mr. Long Hao, GM of SPIC Hunan Integrated Intelligent Energy Co., Ltd, the executive of the project, introduced that power source means use of renewable energy from the source, including geothermal, photovoltaic, wind power, etc.; power grid means power grid connection through the integrated intelligent energy control platform; power load means load shifting; power storage means energy storage at valley load and energy release at peak load; and power utilization means availability at any time.

"Short construction period, high energy efficiency and zero carbon energy supply are the main advantages of the project," Mr. Long Hao said. The project has an energy-saving efficiency of 50%, and can reduce CO₂ emissions by about 1,236 tons/year only in Wuling Power Office Park.

At present, the main energy source for heating and cooling in Wuling Power Office Park is shallow geothermal energy, based on a ground source heat pump (GSHP) system, which uses shallow geothermal heat from the earth (soil, strata) as a heat source in a 130 mm wide and 100 m deep geothermal well in a suitable plot of land."One geothermal well can provide heating and cooling for an area of 80 m² to 120 m². There are 100 geothermal wells in Wuling Power Office Park, and the construction of the project will take half a year," Mr. Long Hao said.

In order to achieve the national strategic goal of peaking carbon dioxide emissions by 2030 and achieving carbon neutrality by 2060, SPIC Hunan Integrated Intelligent Energy Co., Ltd, actively develops and explores the integrated intelligent energy needs of power users and industrial parks, and creates the Wuling Power Office Integrated Intelligent Energy Demonstration Project.