

## **Conception and implementation of Power System Digital Twin.**

**Abstract-**The digital construction of power systems is an important focus for promoting the development of the low-carbon energy transition. This speech focuses on the concept and applications of the digital twin of the power system. In addition, a concept structure of the digital twin object is introduced, based on which the supporting technologies are also elaborated. Afterward, a prototype of the digital double studio is proposed, which is developed from the CloudPSS simulator. Standardized procedures are defined for creating a dual digital application. Finally, case studies on full life cycle management of substations using digital twins are presented. Such cases may also be regarded as technical references for the digital management of other power equipment.