Special Report

CNPC in the Era of Intelligent Energy

CNPC integrates the latest internet information technology into the traditional oil and gas industry, and applies new technologies such as cloud computing, big data and Internet of Things (IoT) to the whole process of production and operation. While reducing costs and enhancing efficiency, it provides consumers with much cleaner, safer energy with lower carbon emission and higher efficiency.
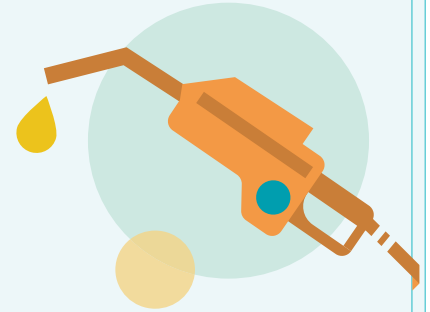
Digital Oilfield

The widespread use of IoT technology makes it possible to build digital oilfields. CNPC widely has used IoT technology in the building of oilfields such as Daqing, Changqing, Tarim, Xinjiang and Dagang, realizing cross-regional cooperation and information sharing among the oilfields. Specifically, Dagang Oilfield worked hard to build digital oilfields using IoT technology, and integrated the thinking of IoT in all processes including technology, production and management. As a result, it has realized unattended operation at medium and small stations and few-man operation at large stations, significantly reducing costs of manpower and vehicle operation.

Intelligent Pipeline

Taking the Eastern Route of the Russia-China Gas Pipeline as a pilot project, CNPC is dedicated to the construction of intelligent pipelines featuring comprehensive and unified data, visual and perceptive interaction, system integration and interconnection, accurately matched supply, intelligent and efficient operation, and controllable forecast and warning. Intelligent analysis and decision-making support can be provided through the "mobile client + cloud computing + big data" system by integrating the full life circle data of the pipelines; the quality, work pace, and safety control of engineering projects can be substantially improved through the IoT and intelligent sites and other means; and an intelligent oil and gas pipeline network can be gradually built by such means as intelligent equipment management and overall optimization of the pipeline network.

Intelligent Gas Station

In the field of sales, based on the traditional gas station sales system and the internet, while using big data, cloud computing, Internet of Vehicles, IoT, mobile payment and other internet technologies, we provide consumers with more convenient and considerate services. Based on mobile payment and refueling card services and focusing on the notion of "People, Car and Life", CNPC e-station APP provides consumers with an efficient, convenient and intelligent automotive service platform. Its core functions include gas station navigation, mobile payment, online refueling card recharge, and refueling card inquiries. In particular, the mobile payment function allows consumers to pay for gasoline or diesel without leaving their vehicles.

Intelligent Environmental Management

CNPC applied "Internet +" to its environmental management. Our HSE information system (Version 2.0) became operational, forming a globally integrated HSE platform and risk control platform, which fully cover HSE management business both at home and abroad. This can serve as the platform for the Company's HSE decision-making and early warning, management work, real-time monitoring, and problem handling and follow-up measures.