

# SEED

Building Energy Management System

Johnson Controls



# SEED – Structure Energy Efficiency Dashboard

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SEED is an analysis tool developed by Johnson Controls producing charts and reports to evaluate energy usage in buildings, campuses and other facilities.

- Data sources: Metasys ADS, BACnet Devices/Meters, OPC Devices/Meters
- Master meters and Virtual Meters with Expressions
- Multiple Energy Report Types
- Export Reports to Excel and PDF
- Web-Based UI to provide an optimal viewing and interaction experience across a wide range of devices from desktop computer monitors to mobile phones
- REST API to be integrated by other systems
- Optional Amazon AWS Cloud Deployment
- Energy Usage Alarms
- Asset Management



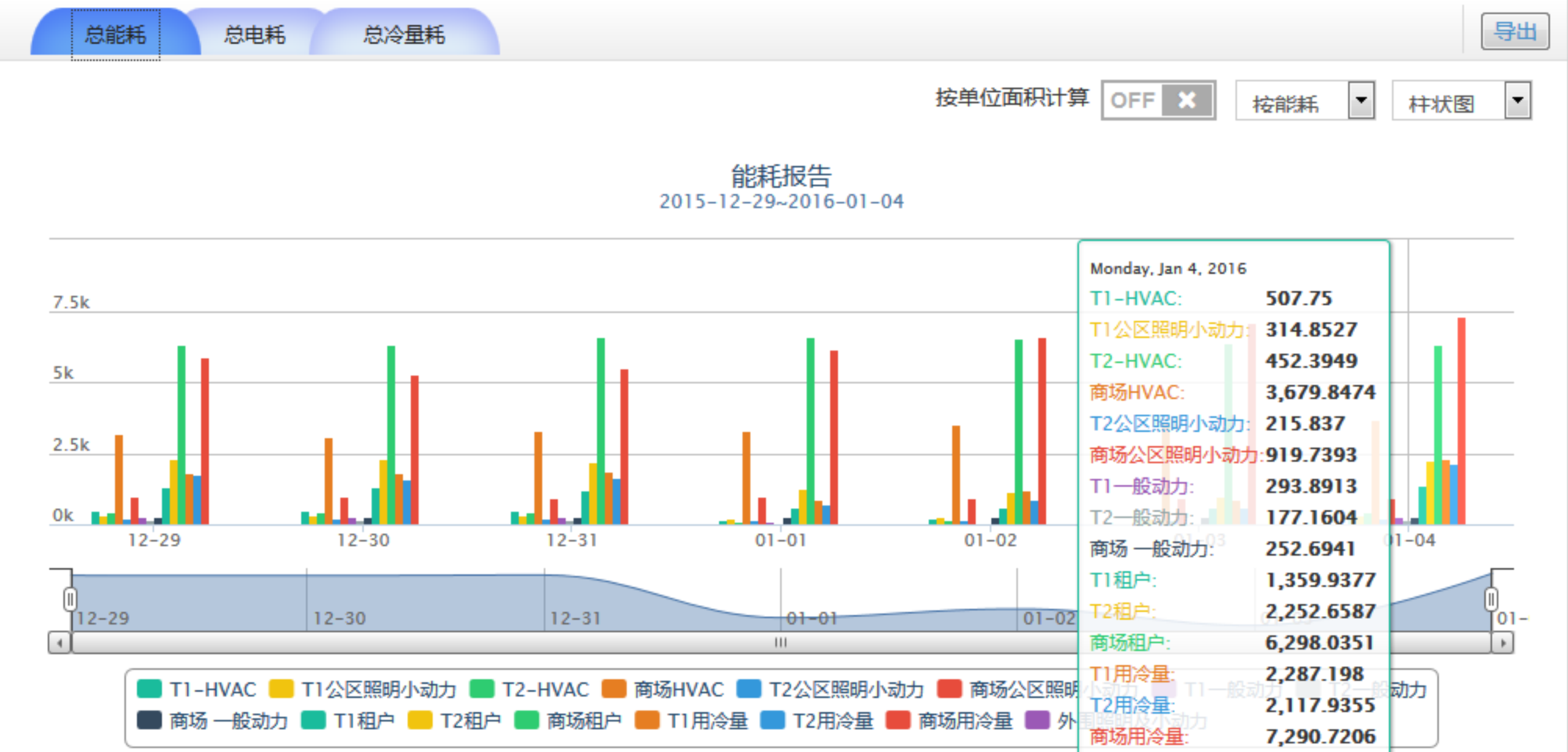
# Energy Dashboard

- displays summary of energy use and costs



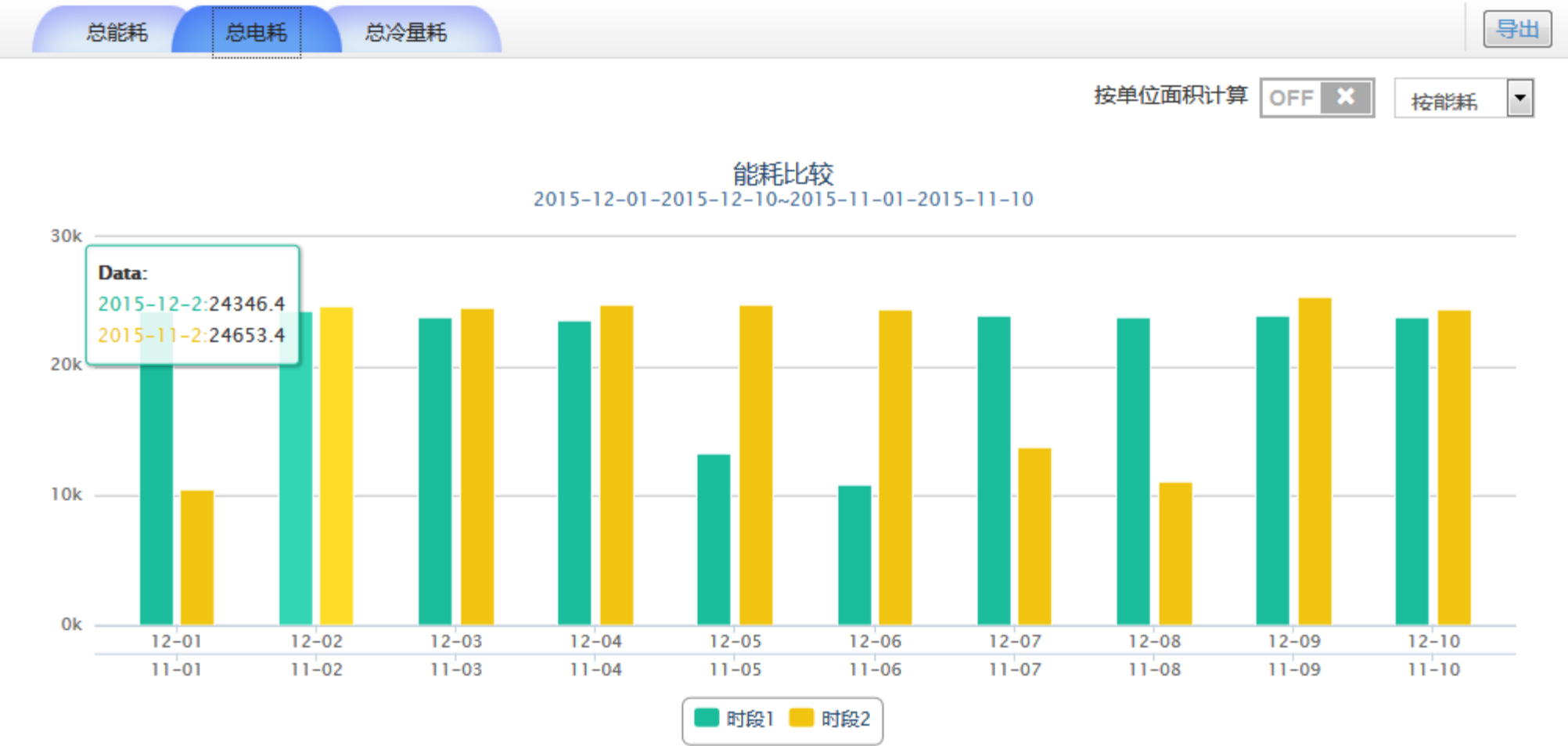
# Energy Profile Report

■ shows energy use and costs of selected spaces and meters



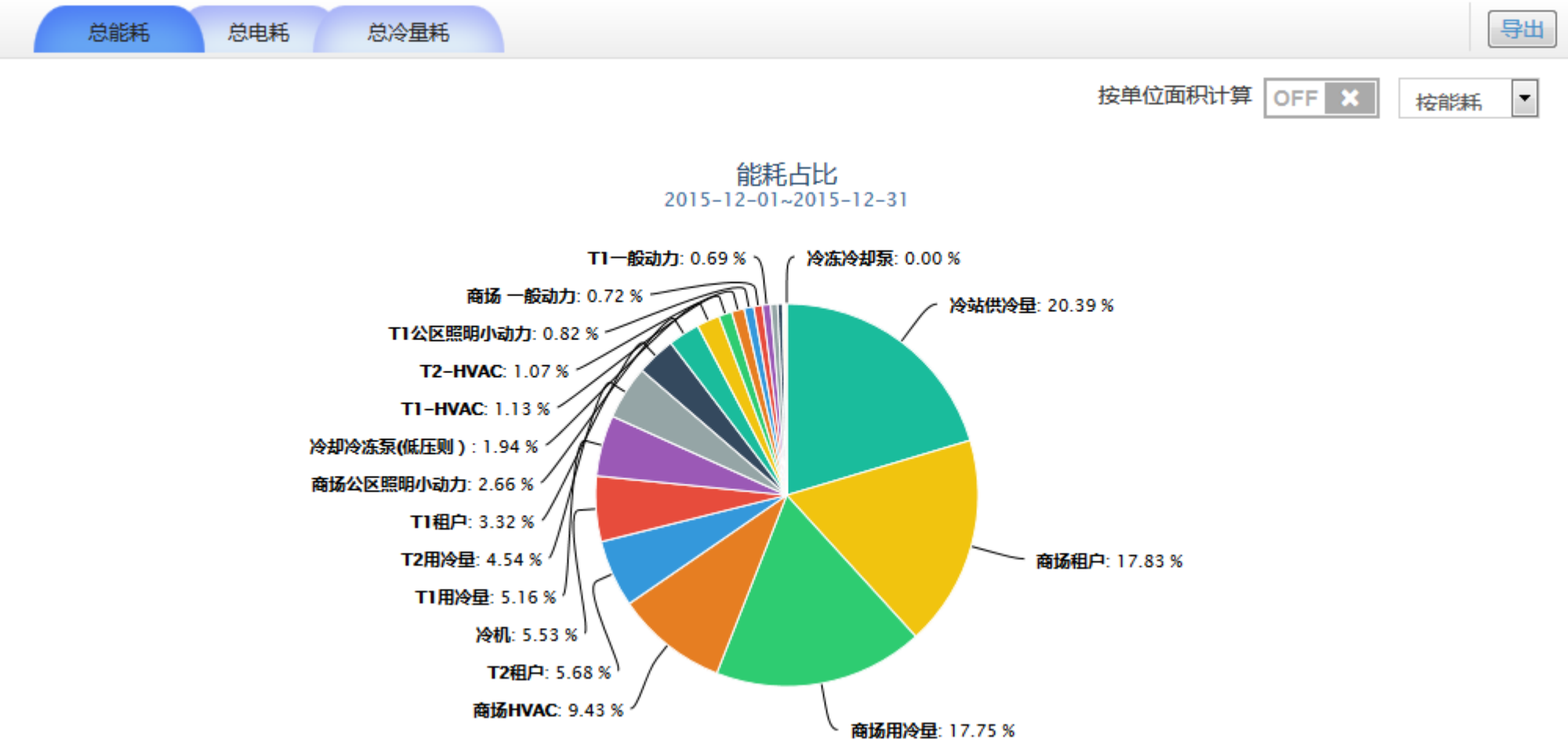
# Energy Comparison

■ shows energy use versus different time periods or different sources



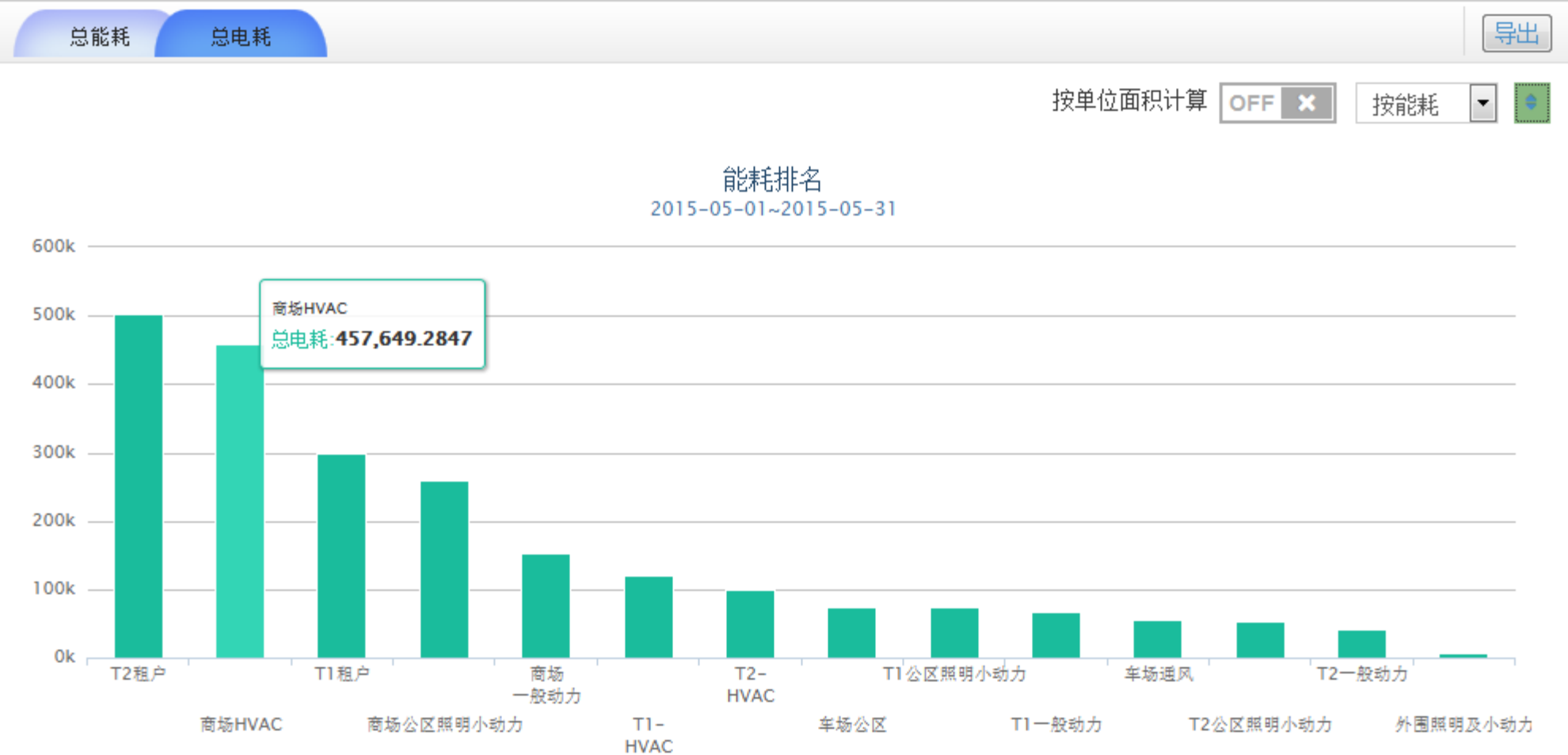
# Energy Proportion

■ shows energy use percentage for all selected sources



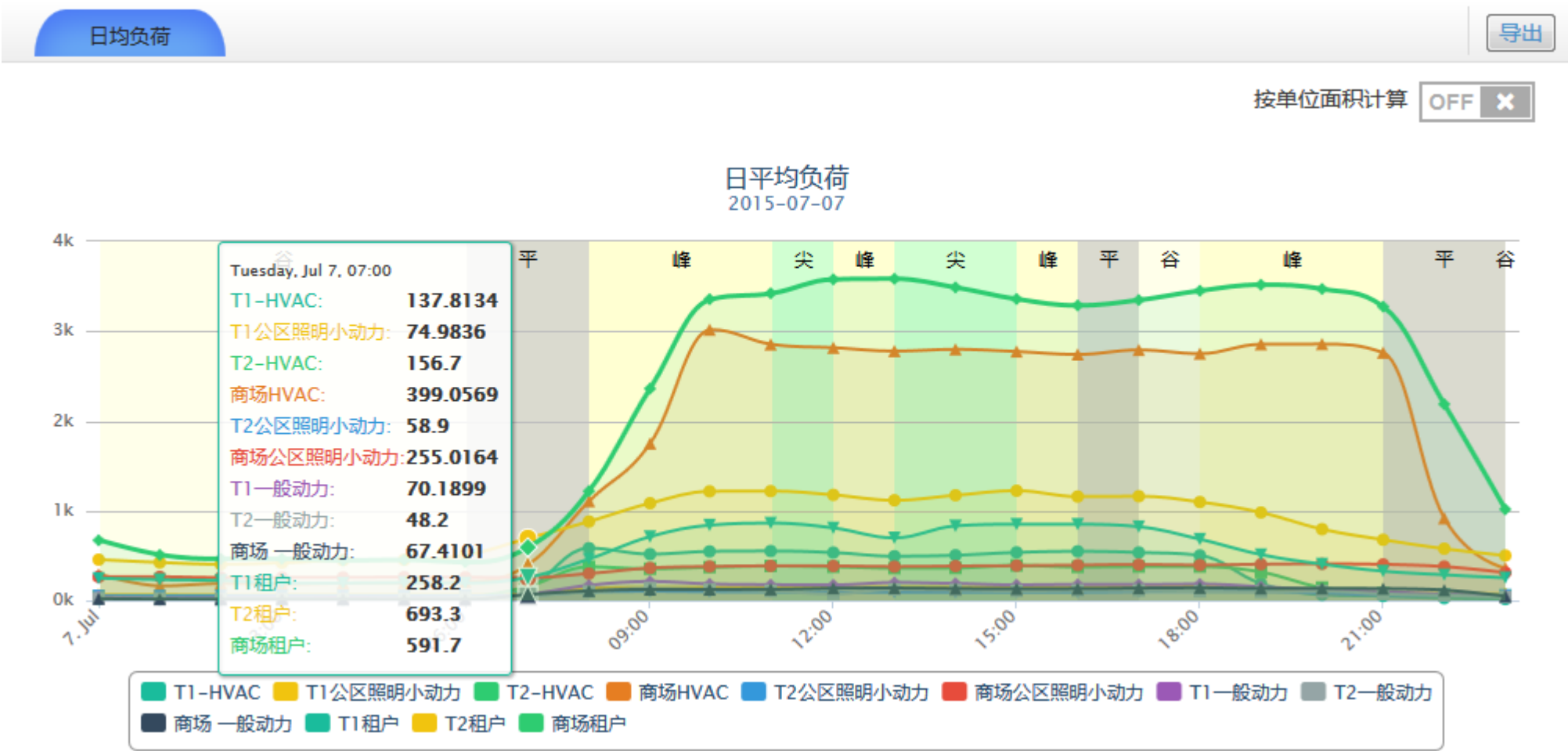
# Energy Ranking

- displays energy in descending order for the selected period



# Average Daily Energy Report

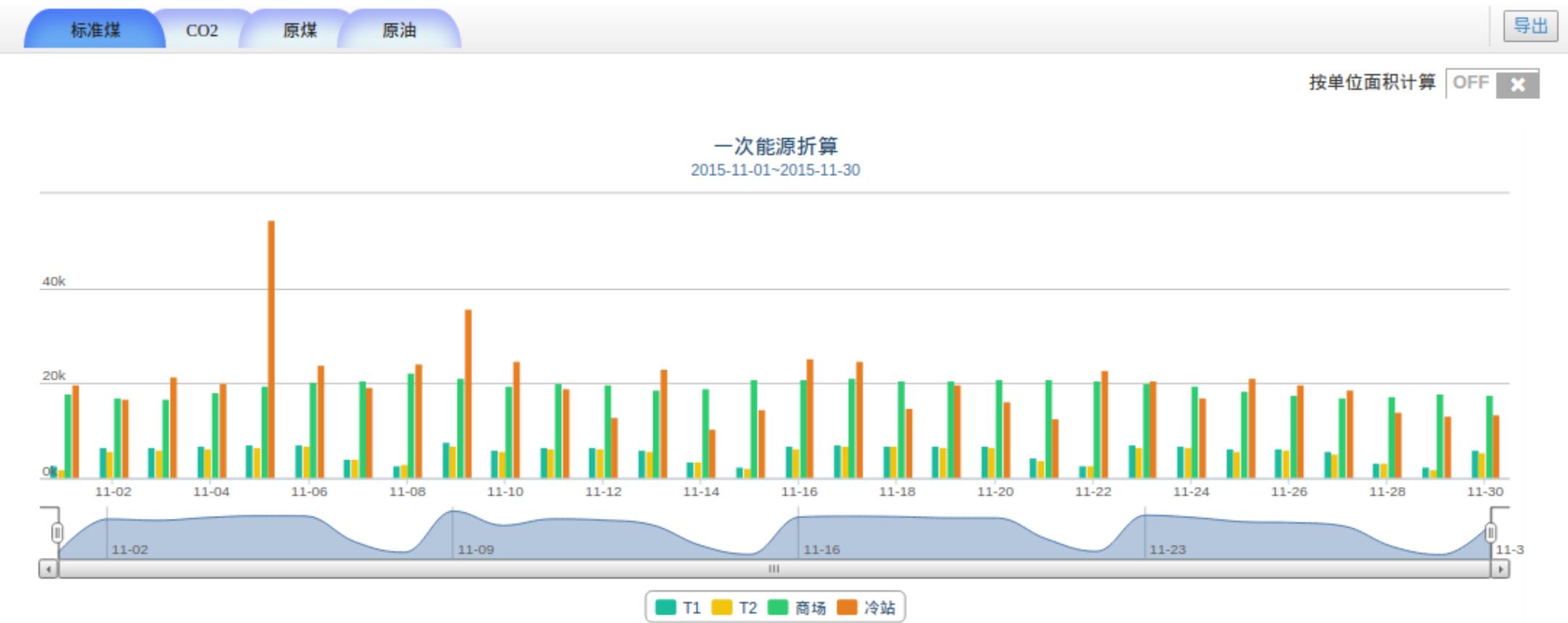
■ shows energy use over a given day





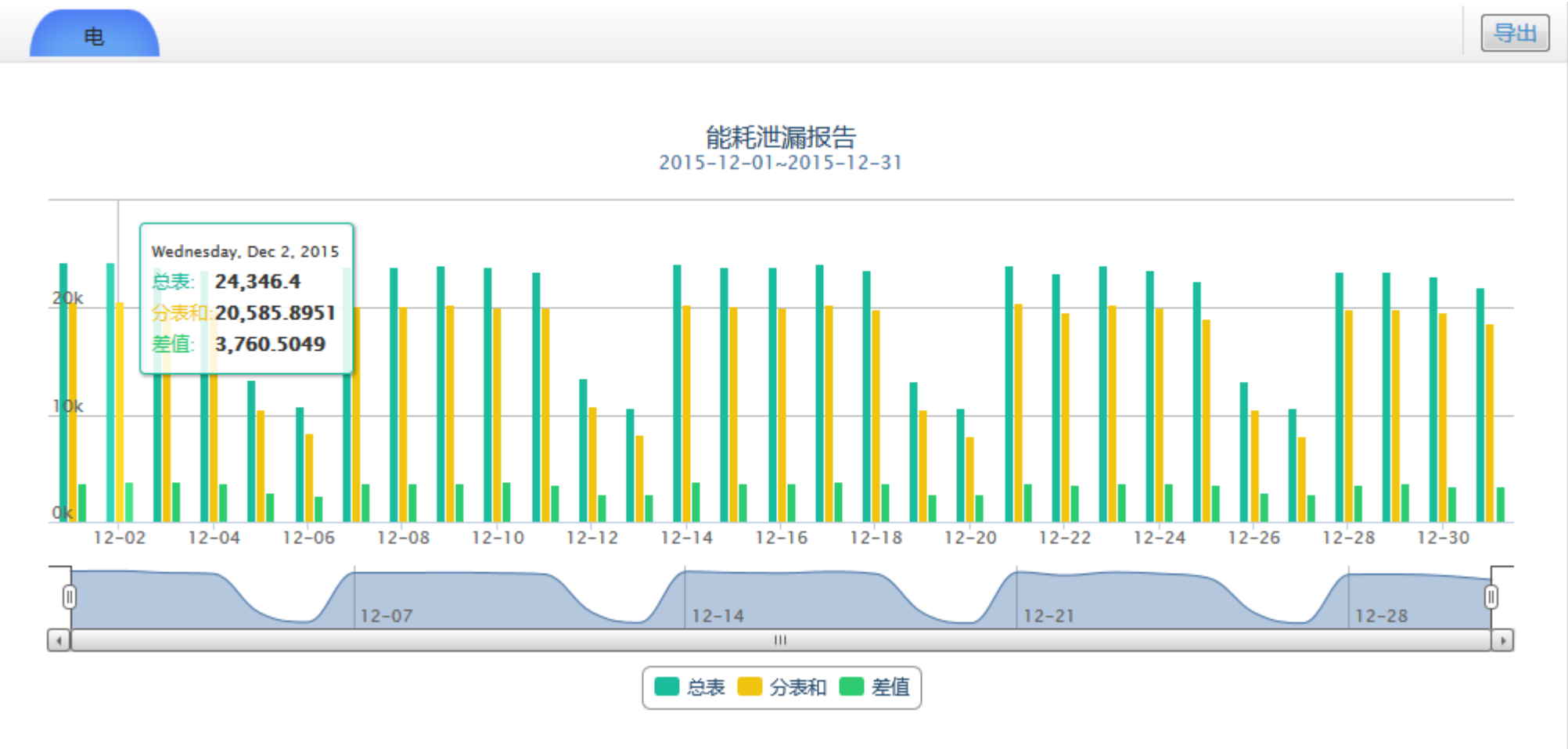
# Primary Energy Report

■ converts and displays energy use in equivalent use of Coal, CO2, Oil, and Crude Coal.



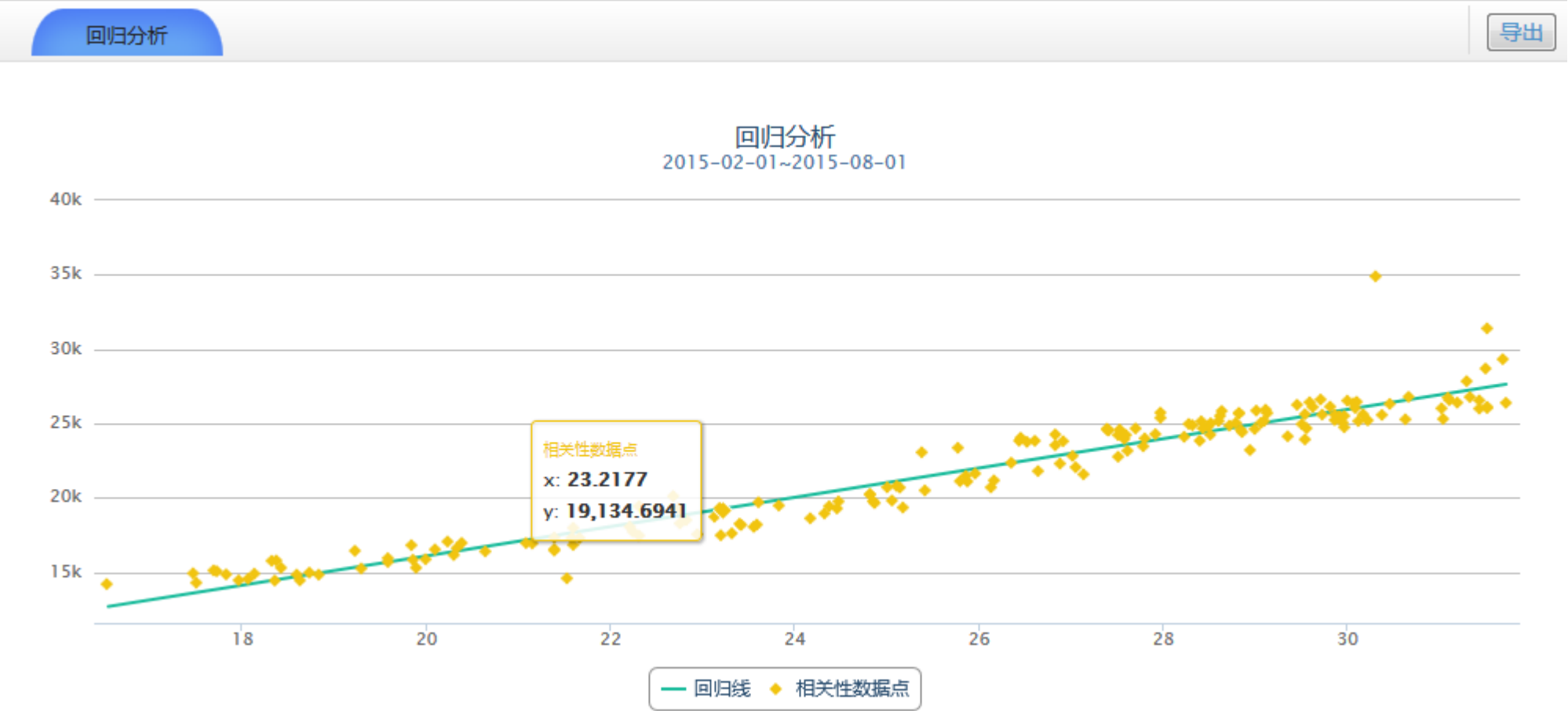
# Energy Leak Report

■ shows energy use differences of master meters and meters



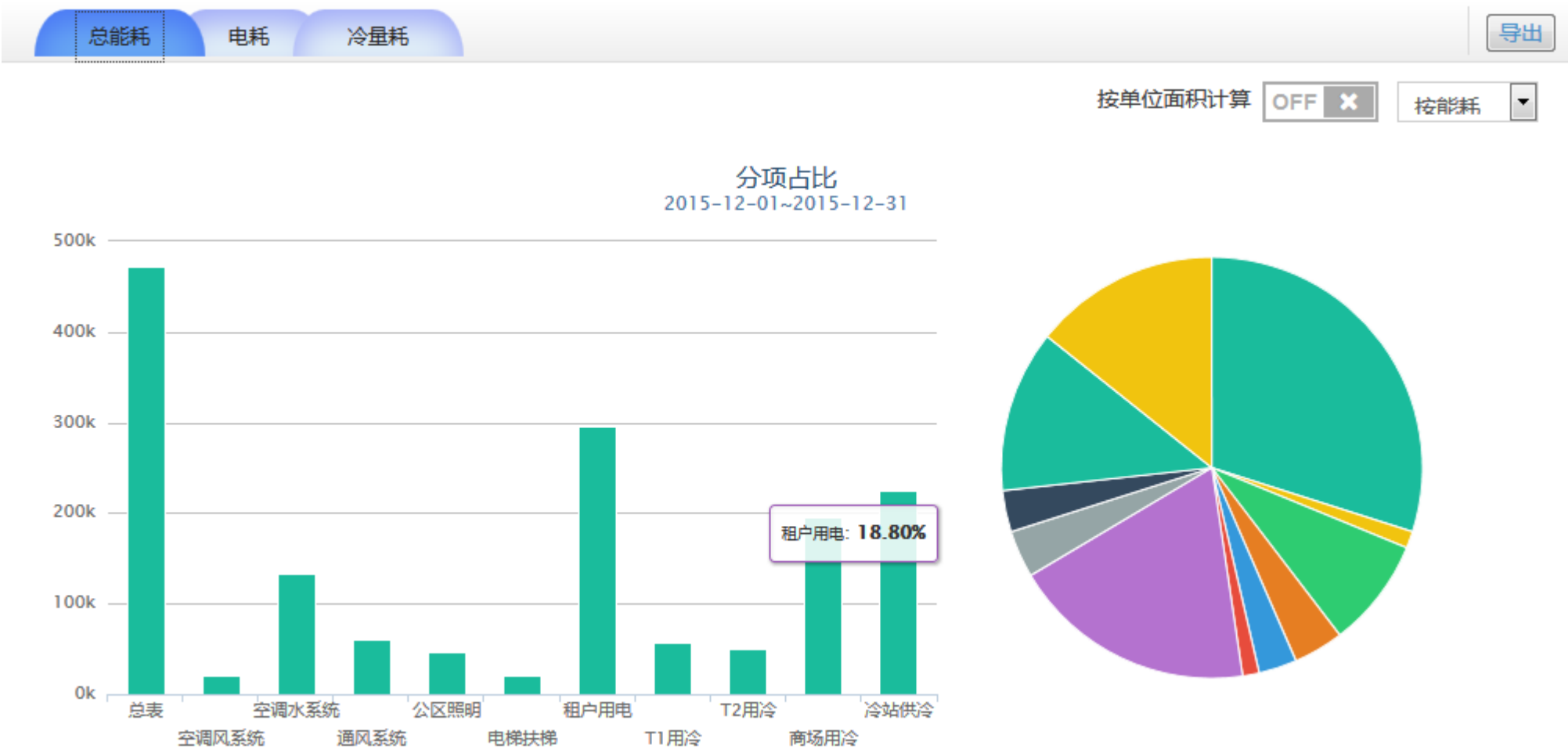
# Energy Regression Analysis

■ shows regression analysis result for estimating the relationships among variables



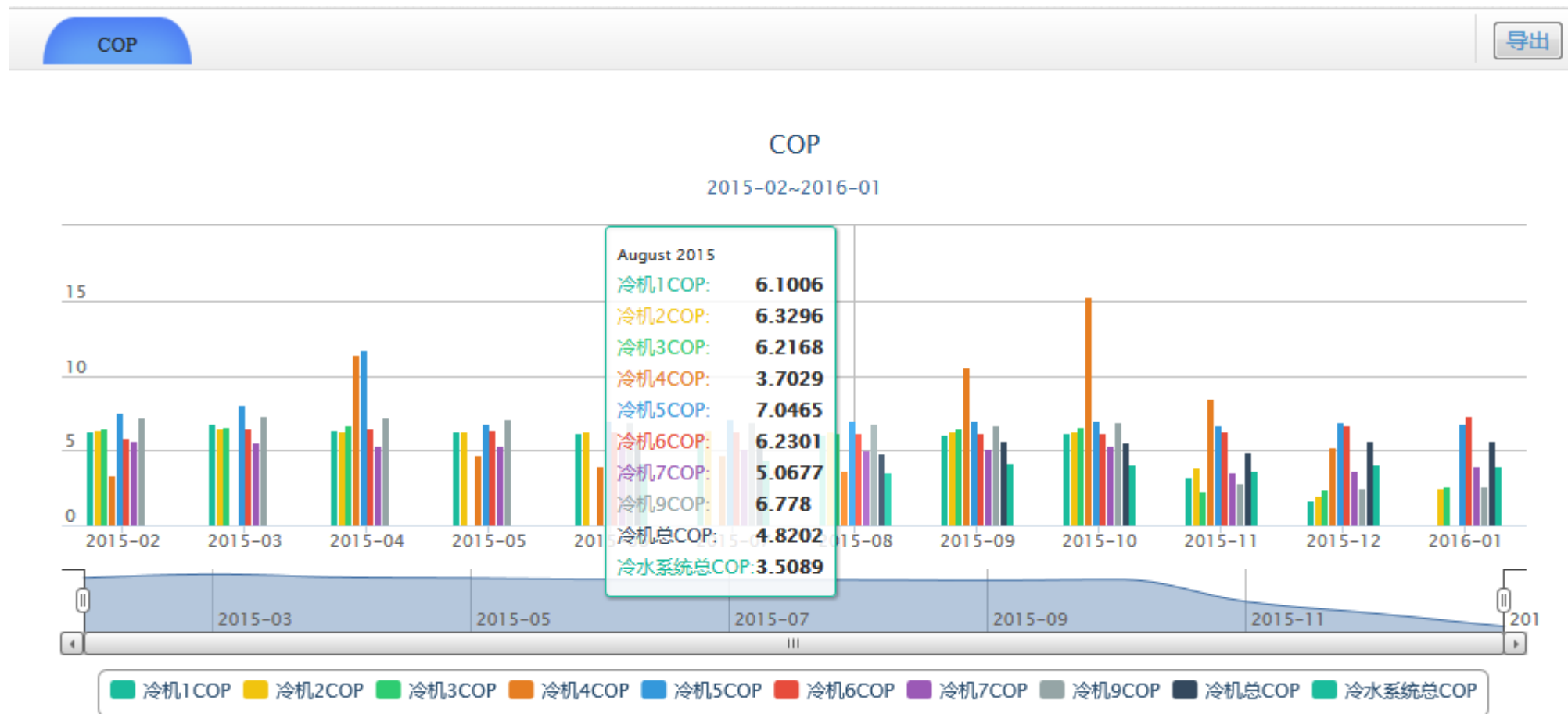
# Energy Utilities Report

■ shows energy use by energy utilities



# COP Report

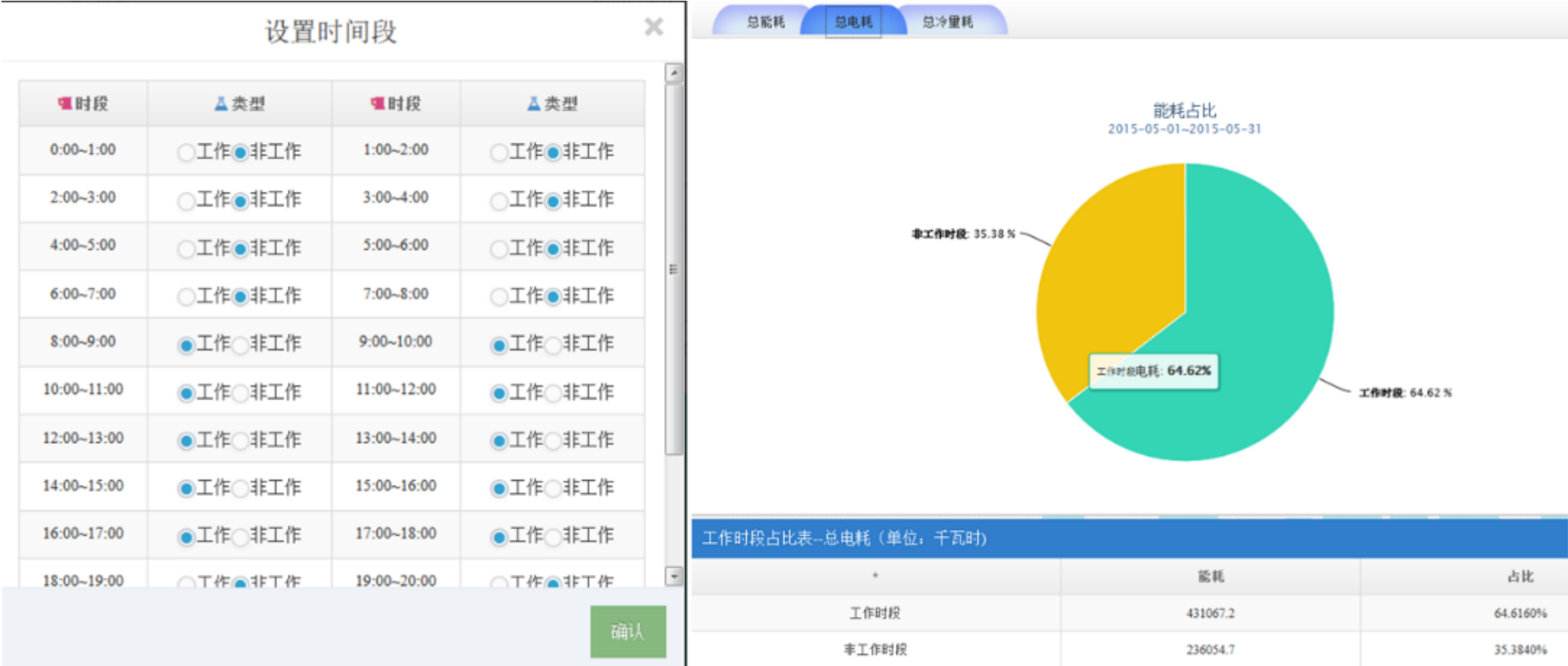
■ shows Coefficient of Performance for chillers





# Working Hours Energy Report

■ shows energy use of working hours and off hours



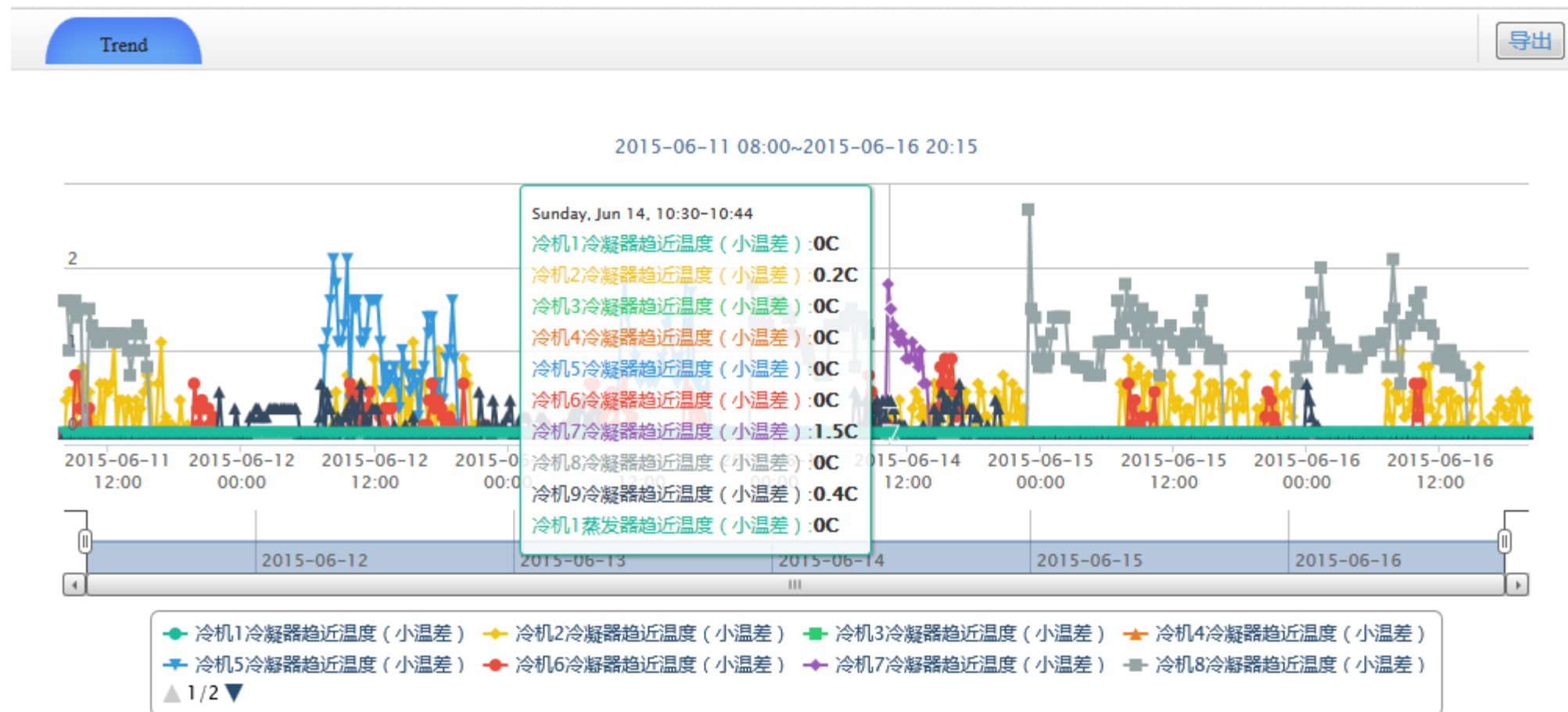
# Working Days Energy Report

■ shows energy use of working days and holidays



# Trend

- displays trends of sensors



# Case Study 1

TaiKoo Hui is a large-scale multi-faceted complex in the thriving heart of the Tianhe Central Business District of Guangzhou, developed and managed by Swire Properties. Offering a gross floor area of approximately 358,000 sqm (exclusive of the cultural center), it incorporates a prime shopping mall, two Grade A office towers, a cultural center, the first Mandarin Oriental Hotel in Guangzhou, and serviced apartments.



## Case Study 2

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### New Outpatient Building of Peking Union Medical College Hospital

Peking Union Medical College Hospital (PUMCH) is a Class A tertiary comprehensive hospital committed to delivering state-of-the-art clinical care, innovative scientific research and rigorous medical education. It is designated by the National Health and Family Planning Commission as one of the national referral centers offering diagnostic and therapeutic care of complex and rare disorders, as well as one of the earliest Chinese hospitals offering medical care to senior leaders and foreign patients. PUMCH enjoys high reputation for its full range of disciplines, cutting-edge technologies and outstanding specialties.







Engineered Systems & Solutions

Building Efficiency

Johnson Controls