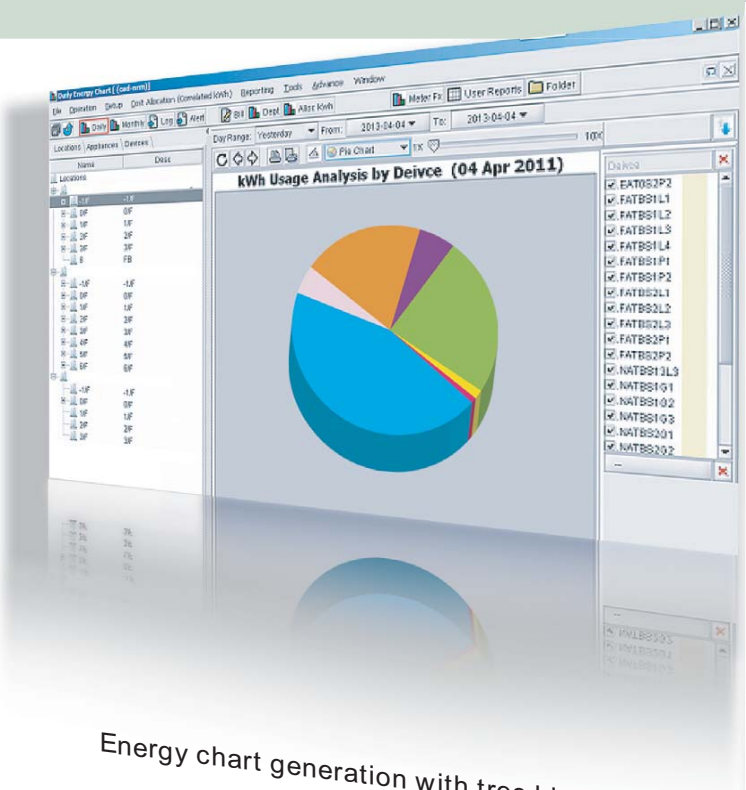
Key Energy Performance Index Management System (KEMS™)



Energy chart generation with tree hierarchy

Key Energy Performance Index Management System

KEMS™ is a java-based desktop server/client application developed on top of the powerful " Quso™ **K**ey **E**nergy Performance Index **M**anagement **S**ystem" platform (**KEMS**™), which allows system tailoring for various energy data sources in the shortest development time. It provides an innovative graphical analysis interface reveals trends, energy management opportunities, potential issues of your daily facilities and operation from the angle of energy view.

By providing a comprehensive overview on one screen, KEMS™ helps users to quickly understand their energy usage from different perspectives. In addition, with its advanced features data can be distributed to different relevant parties/departments/partitions automatically with pre-defined criteria. Besides, cost allocation can be applied at the same time if necessary. There are 3 product series from KEMS™

BEM-RS: (Reporting System)

- A basic version which implements all main concepts of our Building Energy Management (BEM).
- Easy-to-Use automatic reports generation system.

BEM-EA: (Expert Analysis)

- Includes all features of BEM-RS with lots of advanced reports for analysis.
- Comprehensive kWh usage monitoring alerts.
- Energy audit reports for different standards.

KEMS-EMO: (Energy Management Opportunities)

- Includes all features of our BEM-EA with generic KPI management features.
- Powerful energy KPI monitoring alerts, analysis and enquiry interface.
- Email data exchange to transfer data between servers
- Advanced features for EMO exploration, such as event based energy trend analysis, simulation reports by user-defined meter groups, drilldown chart to explore causes of triggered alert.

Building Energy Code (BEC) and Energy Audit Code (EAC)

BEC & EAC from the HK government ordinance were effective on 2012, KEMS™ provides database, energy analysis reporting and usage alert monitoring. Management/ operators can analyze and view their energy usage from different angles to identify Energy Management Opportunities (EMO).

The 3rd party integration drivers from KEMS™ can import different 3rd party system data sources and integrate them into a single database for energy allocation, analysis, simulation and reporting. Therefore, it is a powerful tool to facilitate the implementation of the ordinance.

ISO50001

KEMS™ is a Building Energy Management Reporting System with Energy Auditing which facilitates the standard implementation and operation of ISO50001. It provides comprehensive reports for the system execution. The organizations certified to this standard should define and document the scope of work for energy management. They should accomplish the improvement of energy performance and that of energy management system. KEMS™ finally can enhance the operation effectively and efficiently.

Remark: specification may be changed without prior notice

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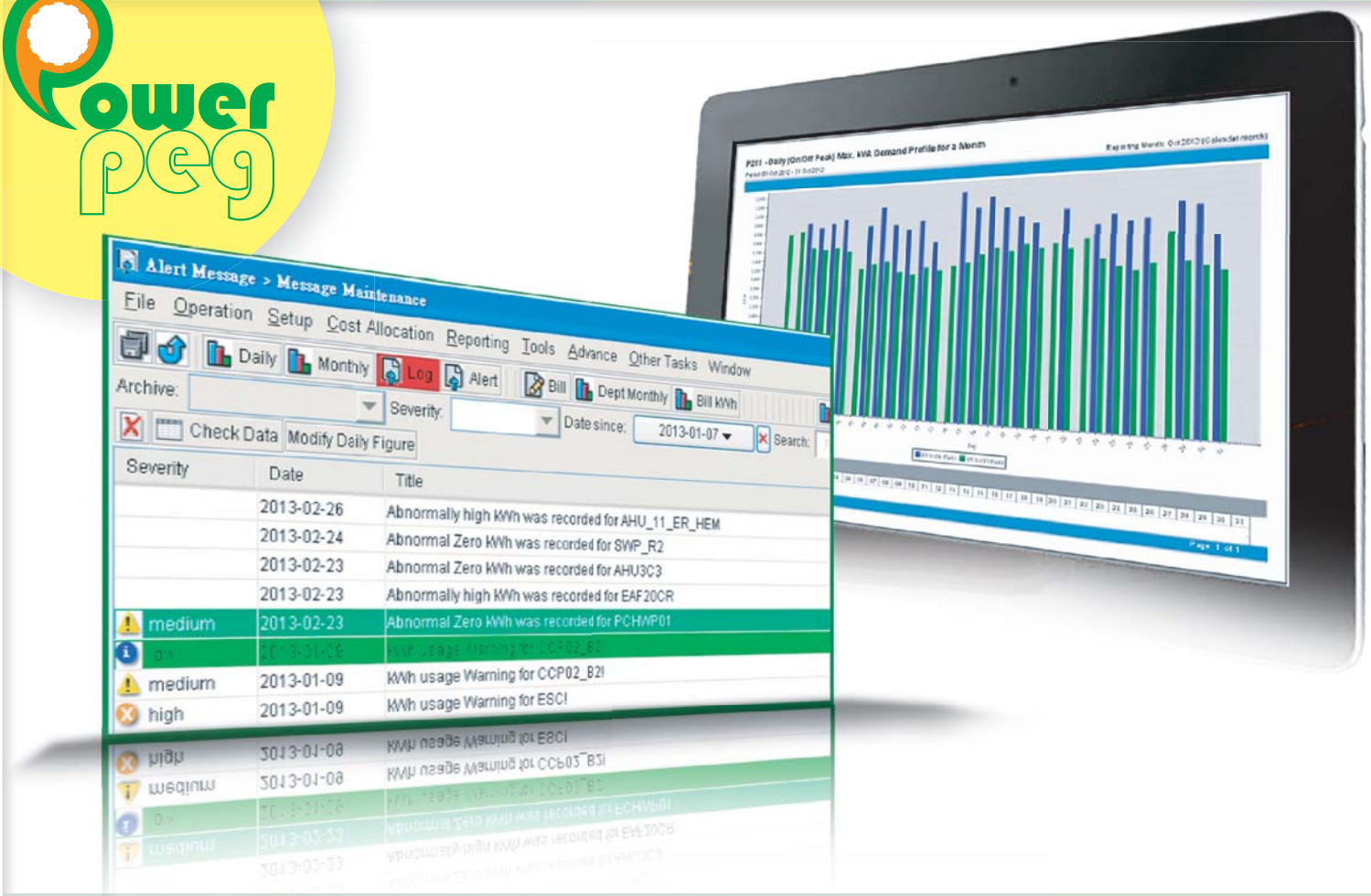

KEMS™ applications

Sewage Water Treatment Plant

KEMS™ provides energy assessment to individual pumping loads according to established international/government standards, Closely monitor the energy performance of major consumption facilities, the energy management opportunities (EMO) are identified for energy and peak demand reduction.

University Campus

KEMS™ provides a comprehensive reporting and analysis for management office to identify the energy management opportunities (EMO). Understanding the energy profiles & different department usage patterns, the facility manager can re-arrange the operation schedule efficiently to achieve the energy conservation purpose.

Hospital

KEMS™ provides peak demand and overall energy profile of daily hospital operation. It also generates monthly & yearly reports. KEMS makes use of the historical data to simulate different electricity tariff schemes. Thus, owners can select the most suitable one for reducing the long term electricity charge.

BEAM, BEAM Plus, LEED and Chinese Green Building Design Label

BEAM, BEAM Plus, LEED and Chinese Green Building Design Label also need to assess the energy performance of green building design and operation. KEMS provides a series of comprehensive standard reports for the energy assessment.

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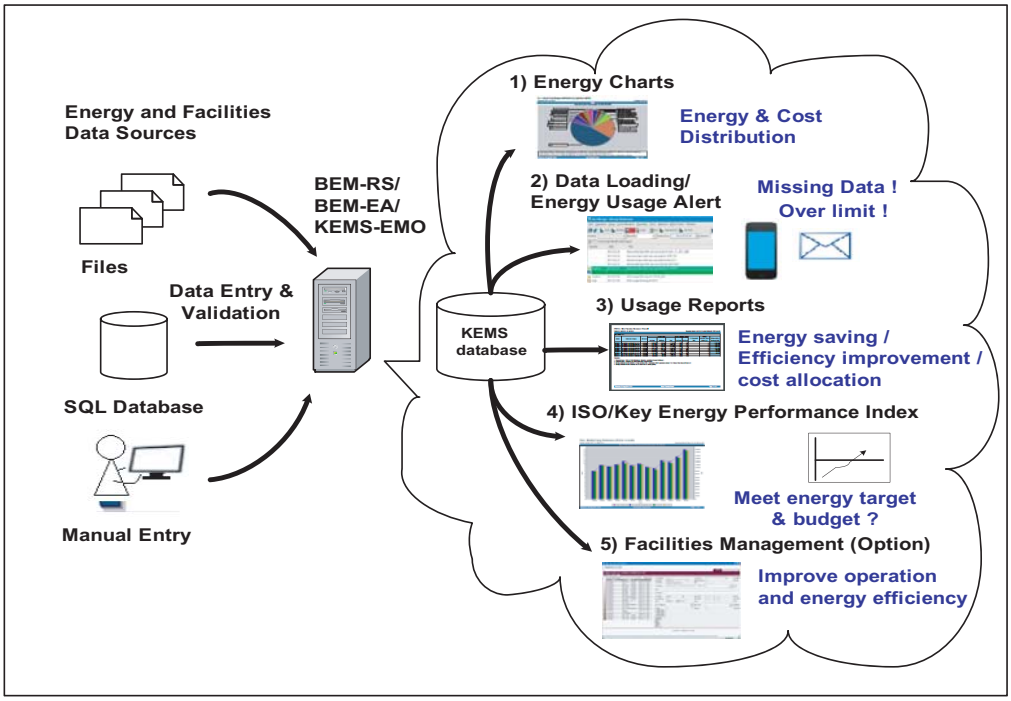
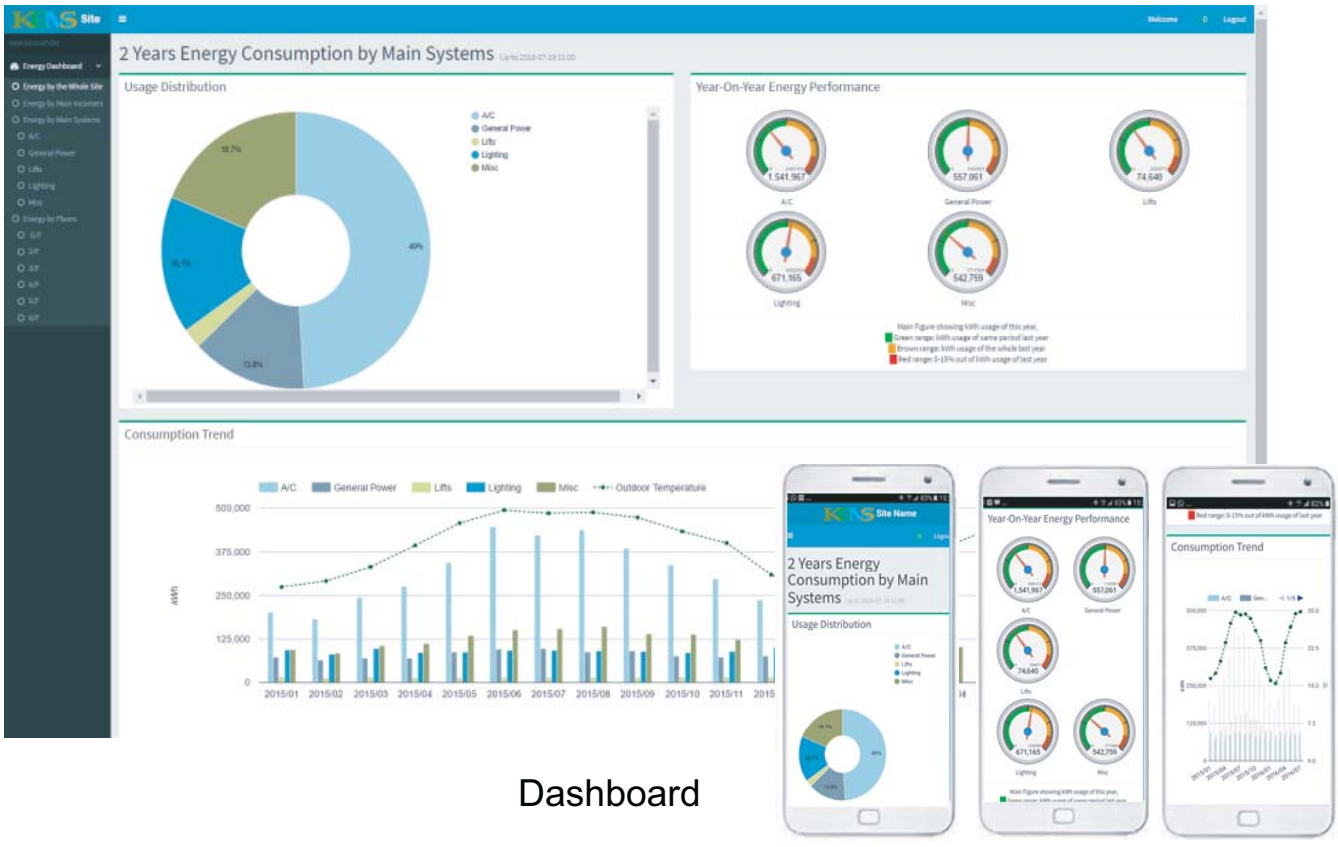


System Architecture



Dashboard

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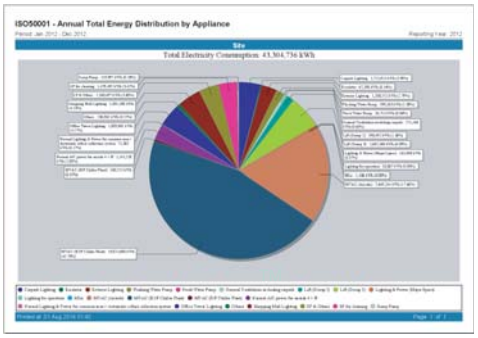

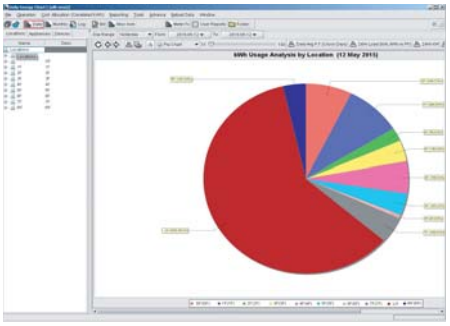

Advantages

Highly Flexible:
The system can be used even NO fixed meter installation and be applicable to feeder circuit with Time-Of-Use (TOU) tariff energy usage.

Data Integration:
The system can collect data from multi sources of 3rd party systems such as files, open SQL database, virtual meters and manual data entry. Therefore, data integration can be achieved after system implementation easily.

Flexibility and competitive:
Since the system can be designed based on the on-site avail -able data and equipment, it is flexible to provide competitive offer.

Mobile dashboard and WEB:
Provides easy access and efficient operation. It can be scaled up to multiple sites monitoring with multi-users login.

Cost allocation:
Energy charge and usage can be allocated to different sites, systems & occupants such as departments or user groups or different building services systems according to fixed criteria or seasonal changes.

Facilitate the standard implementation, energy audit & EMO identification:
A series of ISO reports, energy usage alert & analysis features are ready for use to enhance the operational efficiency and to identify the Energy Management Opportunity (EMO) effectively.

Benefit to users

Maintenance management and operational efficiency enhancement:
- Improve the preventive and correction maintenance driven by the data loading and energy usage alert monitoring.
- With the knowledge record accumulated by the KEMS™, new staff can learn from the past record to reduce the impact of staff turnover.
- Monthly automatic reports generation can enhance the operational efficiency.

Benchmarking:
It is applicable to different building sites, systems and departments for benchmarking easily.

Flexible and cost effective:
Applicable to different building operations from existing facilities to newly built one with minimum cost.

Compliance:
Facilitate to comply with building energy efficiency ordinance and easily to follow the government energy audit guideline or other energy standards overtime.

Corporate profile:
Promote the corporate image with the ISO 50001 certification award, which can be supported by KEMS™.

Environment:
Enhance the energy efficiency with ISO50001 system and KEMS™ operational support to reduce the carbon emission.

Sustainability:
KEMS™ facilitates to achieve the energy saving target or budget or Key Energy Performance Index monthly or yearly. Once the ISO 50001 is certified yearly, the committed targets are renewed annually to assure the sustainability.

Order Information:

- BEM-RS
- BEM-EA
- KEMS-EMO

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Revision 5.0

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