

Easily monitor your data center's efficiency



Data Center Energy Efficiency KPI Solution

With the increase in energy usage by data centers, the need for energy efficiency has become more apparent. Currently data centers use 2% of the energy on the grid and this is expected to double within the next 5 years. It is essential to implement energy efficiency measures without compromising reliability. You can achieve improvements in both energy efficiency and reliability with an energy management and control system spanning power, building and facility systems.

The Data Center Energy Efficiency KPI Solution is the latest PowerLogic solution developed to help IT and data center managers accurately benchmark efficiency within their facilities. Two KPI's: are calculated, Power Usage Effectiveness (PUE) and Data Center Infrastructure Efficiency (DCiE). Evaluating the success of any green initiatives, determining energy saving opportunities, and comparing efficiency information with other data centers becomes easy. By reducing the impact on the environment through energy efficiency, the data center KPI solution can help obtain an energy star rating and green data center recognition.

Device	Quantity	Min.	Date	Avg.	Max.	Dr
PDU A1 480V	Real Power Total	166.2	36/06/2008 10:15	196.7	231	06/25/09
PDU A2 480V	Real Power Total	76.44	36/04/2008 13:30	78.59	82.86	06/13/09
PDU A5 480V	Real Power Total	41.87	36/06/2008 21:00	44.35	48.23	06/11/09
PDU R1 480V	Real Power Total	184.6	36/11/2008 18:45	235.9	299.6	06/15/09
PDU R2 480V	Real Power Total	68.33	06/19/2008 7:15	69.82	70.6	06/26/09
PDU R3 480V	Real Power Total	182.8	36/21/2008 18:45	196.6	112.7	06/12/09
PDU CT 480V	Real Power Total	199	36/21/2008 18:45	289.6	276.5	06/07/09
PDU C2 480V	Real Power Total	62.3	36/21/2008 18:15	64.88	66.91	06/18/09
PDU C3 480V	Real Power Total	71.31	36/06/2008 21:00	75.87	77.65	06/11/09
PDU D1 480V	Real Power Total	196.7	36/11/2008 18:45	289.7	218.6	06/15/09
PDU D2 480V	Real Power Total	68.89	05/29/2008 7:30	68.74	61.81	06/03/09
PDU D3 480V	Real Power Total	75.76	06/26/2008 16:30	78.81	81.68	06/09/09
Average Kpi Total:				1411.98		
Device	Quantity	Min.	Date	Avg.	Max.	Dr
MAIN 2	Real Power Total	2518	05/19/2008 7:15	2706.1	3138	05/20/09
PUE AVERAGE				1.318556		

Data Center Energy Efficiency Solution



PUE and DCiE

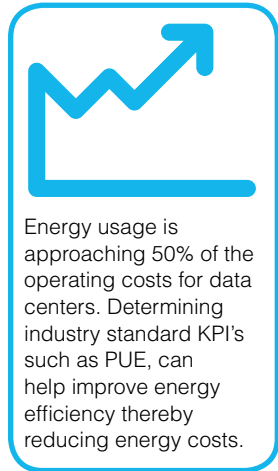
PUE measures how much power is actually delivered to the IT loads compared to the amount of power used by the data center facility. DCiE is simply the reciprocal of PUE and in comparison describes what percentage of the total load is used by the IT equipment. The PowerLogic KPI solution calculates these two values, allowing you to evaluate the success of any green initiatives, determine energy saving opportunities, and compare efficiency information with other data centers.

$$PUE = \frac{\text{Total Facility Power}}{\text{IT Equipment Power}}$$
$$DCiE = \frac{1}{PUE} = \frac{\text{IT Equipment Power}}{\text{Total Facility Power}} \times 100\%$$

Total Facility Power is the IT Equipment Power (load associated with all the IT equipment such as computers, storage, network, and monitoring equipment.) plus the everything that supports the IT equipment load such as power Delivery Components (UPS, Transformers) Cooling systems (Chillers, Pumps, Towers), and other miscellaneous loads such as lighting.

Features and Benefits:

- Helps reduce energy usage, minimizing the economic and environmental impact associated with high energy usage
- Validate the effectiveness of energy efficiency deployments throughout the life of the data center facility
- Discover opportunities for improving data center efficiency by evaluating the PUE
- Show how your data center compares to other facilities
- Benchmarking and normalization to verify system improvements and accurately compare facilities



System Requirements:

Software:

- PowerLogic SCADA
- ION Enterprise
- System Manager Software

Devices:

- PowerLogic Devices
 - > ION 7650,
 - > CM4000 series,
 - > PM800 series,
 - > Energy Meter,
 - > Micrologic Trip Unit (Series P & H),
 - > Sepam Relays,
 - > BCPM and
 - > MCM
 - > Additional modbus devices supported



System survey:

A Schneider Electric application engineer will survey the site or review the facility plan to determine how to configure the application to monitor PUE and DCiE for the building.

Please contact your local sales representative for ordering information.

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