HITACHI
Inspire the Next

Energy in the digital era
Harness the power of IoT and data to improve facility performance with Hitachi Energy Solutions

Energy is indispensable for all industries and is in the midst of the digital revolution as emerging technologies are becoming more cost effective and the Internet of Things (IoT) is growing rapidly. New disruptive business models are everywhere. Organizations are contemplating how to respond to changing markets and energy dynamics. At the same time, they are making plans to achieve performance targets that address environmental and safety regulations, reduce energy use and operational costs, lower carbon emissions and support overall sustainability goals. The digital era is opening up entirely new challenges and opportunities for energy. Organizations are exploring ways to reach new levels of energy efficiency and agility, and enable customized experiences through smart, connected digital technologies.

Hitachi Energy Solutions is an intelligent, IoT solution that collects data and applies analytics to determine optimal utilization of facility assets to reduce energy consumption across the real estate portfolio.

The solution is built on the Hitachi Smart Energy Platform, a cloud-based platform that incorporates data from edge equipment and leverages intelligent controls with built-in algorithms to drive down operational costs and increase asset life. From planning and analysis to transformation and ongoing operations at scale, Hitachi can help deliver intelligent energy solutions across facilities portfolios.

Hitachi Smart Energy Platform

Hitachi Smart Energy Platform is the foundation for our solution. This powerful, cloud-based IoT platform collects data from networked intelligent endpoints and includes analytics and monitoring software. The platform provides insight into energy usage and helps organizations understand what assets are working efficiently and what's not, and where systems can be optimized.

The platform contains edge IoT devices that

- Use advanced IoT network security, IoT authentication services and virtual private networks to reduce security threats
- Measure energy usage and environmental indicators such as air temperature
- Connect key sensors to our flexible, cloud-based IoT platform across a secure network
- Allow for scalable deployment of energy IoT solutions

Leveraging Hitachi Smart Energy Platform allows clients to analyze, connect, visualize, and deploy energy savings measures across a portfolio of facilities in a fast and cost-effective manner. Ultimately, we provide clients with the tools needed to prioritize operational funds to achieve organizational goals.
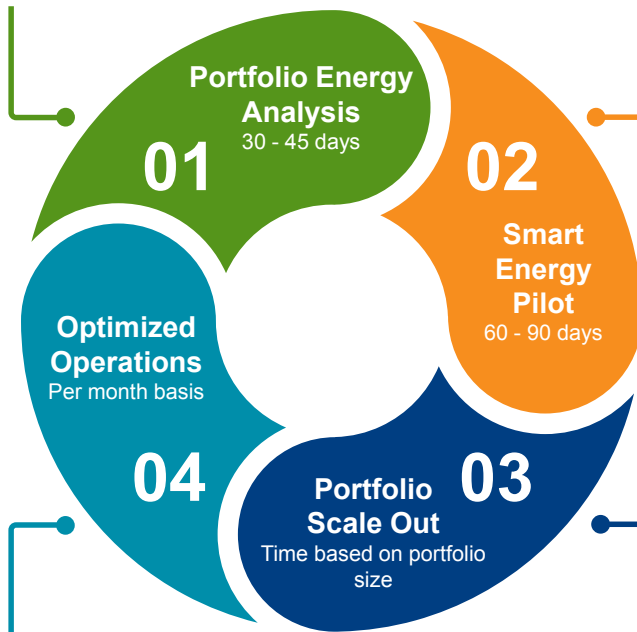
Hitachi Energy Solutions

Up front assessment to define business case for energy savings investments by client

Outcome: Business case to include target facility types, recommended energy projects or retrofits, and estimate of energy savings and investment return

Portfolio Energy Analysis
30 - 45 days

01

02

Smart Energy Pilot
60 - 90 days

Install platform and integrated energy saving projects at select representative facilities to measure and verify energy savings

Outcome: Designed and installed energy projects with measured savings via **Hitachi Smart Energy Platform**

Optimized Operations
Per month basis

Ongoing management, maintenance and innovation through new application services

Outcome: Ongoing measurement and optimization of facilities

04

03

Portfolio Scale Out
Time based on portfolio size

Scale energy projects across the real estate portfolio to achieve enterprise energy savings

Outcome: Installed and measurable energy projects and **Hitachi Smart Energy Platform** across a portfolio of facilities

1. Portfolio energy analysis

Our solution begins with an up-front assessment to determine the potential for energy savings across an organization's real estate portfolio. Hitachi leverages advanced simulation of the client's facility portfolio data, facility modeling techniques and analytics to identify facility types, locations and energy efficiency projects to yield the optimized energy savings and create a business case for energy efficiency programs.

By applying analytics to energy data, organizations can target resources on facilities and energy solutions that offer a strong return on investment.

2. Smart energy pilot

After the assessment is completed, the next step is to conduct pilots at representative target facilities. This process includes baselining site performance, designing and installing energy efficiency projects such as HVAC optimization or lighting retrofits that connect to the Hitachi Smart Energy Platform, measuring energy savings and optimizing performance through intelligent controls.

Once the energy efficiency projects are installed at the facilities, IoT devices connect the facility to our cloud for analysis through the Hitachi Smart Energy Platform. Clients gain insight to energy savings at the facility, system, and device level. Additional opportunities are identified through facility modeling analysis and can be measured to understand baseline performance.

3. Portfolio scale out

Following the IoT pilot, we prioritize facilities with clients to create a roadmap across an organization's facilities portfolio. Next, we scale by installing the Hitachi Smart Energy Platform and the related energy efficiency projects across the real estate portfolio to achieve energy efficiency standardization and to maximize cumulative energy savings.

Our one-stop approach offers an enterprise-wide energy solution through advisory services, project management, performance engineering, and installation management through flexible pricing structures. Our approach also includes client stakeholder engagement; implementation proposal development and management; vetting, deploying and managing vendors throughout the energy efficiency installations; and tracking and reporting key energy and environmental program metrics.

4. Optimized operations

Once the full-scale deployment is completed, clients may be interested in ongoing management, maintenance, and continuous optimization of energy savings solutions. Hitachi provides ongoing energy services including an Enterprise Energy Management System, help desk and ticket management, preventative and reactive maintenance of equipment, and ongoing energy strategy planning including sustainability performance management.

Benefits

- Gain insight into operations and understand energy usage in real-time.
- Transform buildings and assets to be more dynamic and efficient.
- Achieve energy savings and sustainability goals.
- Optimize energy use and reduce associated operational costs.
- Extend asset life with improved visibility into equipment health and performance.

Why Hitachi

Leverage intelligence and IoT - Our unique IoT platform, Hitachi Smart Energy Platform provides insight into energy usage and optimizes performance.

Holistic Approach to Address Complexity - We understand complexities of business today — Hitachi provides end-to-end capabilities, has access to a broad ecosystem of partners and applies industry skills to manage the complexity of transformation.

100+ Years of Innovative Research and Development - Hitachi is one of the most innovative companies in the world, with 119,000 patents, spending nearly $3 billion annually on research and development, and investing $2.8 billion in IoT during the next three years.

Commitment to Social Innovation – Hitachi develops solutions that benefit business and society. We harness the breadth of Hitachi's industrial and IT capabilities to co-create solutions to help our clients innovate faster, maximize operational efficiency and realize sustainable business value.

The future is bright

Rapidly emerging technologies, agile dynamic competition and growing market demands are driving energy innovation. With the internet of things expected to grow to more than 50 billion connected assets by 2020, progressive organizations are using data to understand energy usage and applying analytics for real-time awareness, maintaining adaptability in the face of changing businesses, and enabling ongoing efficiency management of their operations.

Through a collaborative, pragmatic approach, your organization can improve performance, lower costs, and achieve consistent and measurable results. Hitachi harnesses the power of data and digital disruptors to help our clients significantly improve operational efficiency.

Interested in learning how to make your facilities more efficient?

Contact us to get started
info@hitachiconsulting.com

About Hitachi Consulting

Hitachi Consulting is the global solutions and professional services organization within Hitachi Ltd., a global innovation leader in industrial and information technology solutions and an early pioneer of the Internet of Things. Hitachi Consulting is a business integrator for the IoT era and a catalyst for digital transformation. Using our deep domain knowledge, we strategically collaborate with our clients to help them innovate faster, maximize operational efficiency and realize measurable, sustainable business and societal value. As a consulting-led solutions company, we can help you leverage data as a strategic asset to drive competitive differentiation, customer loyalty and growth. To learn more, visit www.hitachiconsulting.com.

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