



Oracle is committed to developing practices and products that help protect the environment

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# Oracle Sustainability Solutions for an Eco-Enterprise

## Overview

Leading businesses recognize that environmental sustainability is good business. Whether these projects are driven by an organization's desire to protect the environment, reduce costs, produce eco-friendly goods to meet growing consumer demand, or comply with increasing levels of government regulation, the results can be both good for the environment and good for business.

At Oracle, we have a dual focus: internally on initiatives that support our own sustainability goals, and externally on delivering solutions that empower our customers to do the same. Oracle has developed a complete suite of solutions; hardware & software engineered to work together, designed to help any organization with their sustainability initiatives. While Oracle reduces its energy use by using these solutions internally, our impact is multiplied a thousand fold as they are implemented by our customer base as well.

In order to be successful, sustainability initiatives need to be integrated into core business activities across the entire organization and value chain, not isolated in one department or a few processes. This approach yields more impactful, wide reaching and cost effective results.

From technology infrastructure to database, middleware and applications, Oracle provides the hardware and software that helps companies achieve their environmental goals. By leveraging the latest energy-efficient optimized IT infrastructure, businesses can consolidate hardware and reduce energy usage across their organizations. With the right resource management tools, IT teams can manage energy use across applications and workloads, significantly raising utilization and reducing energy use. Oracle software provides support for environmental and social compliance, as well as a broad range of other sustainability initiatives. Oracle's risk and performance management solutions enable customers to support sustainability reporting and management initiatives. [Oracle Environmental Accounting and Reporting](#) enables organizations to track their greenhouse gas emissions and other environmental data against reduction targets, and facilitates environmental reporting for both voluntary and legislated emissions reporting schemes. When armed with factual data, organizations can benchmark and affect behavioral change to materially reduce environmental impacts.

## Oracle's Sustainability Solutions

Organizations can derive strategic advantage by embracing sustainability as an integrated part of their business. The benefits include cost savings by limiting waste and consumption of natural resources, new business opportunities through environmentally-friendly product innovations, enhanced brand value and reputation with customers and partners, better risk management, the ability to attract capital from “green” investors, and the opportunity to attract better employees by offering a great place to work.

Oracle's sustainability solutions cover an unmatched breadth and depth of capability and we are continuing to invest and to innovate. This includes sustainability solutions for your IT infrastructure, business operations, and risk and performance management. For more information on Oracle's comprehensive suite of solutions, visit [here](#). When you do this, you will be able to hear from some of our [customers](#) who are using Oracle's sustainability solutions to reduce their environmental footprint and improve their operational efficiency.

### **IT Infrastructure**

Sprawling IT infrastructure and big data are just two factors driving the phenomenal growth of energy use in data centers. By leveraging the latest energy-efficient, optimized IT infrastructure along with key strategies including virtualization and cloud computing, businesses can dramatically decrease energy costs and save precious data center real estate. With the right resource management tools, IT teams can gain insights and manage energy use across applications and workloads, easing the management burden and raising utilization. [Oracle's IT Infrastructure](#) includes products for:

- Energy Efficient Platforms
- Consolidation and Virtualization
- Cloud Computing
- Intelligent Storage
- Resource Management

**Dena Bank Increases ATM Transaction Speed by 80% and Uses 40% Less Power for Storage Systems**

[Dena Bank](#), based in India, operates around 1,500 automatic teller machines (ATMs). Their new SPARC Enterprise M5000 servers enable Dena Bank to increase the speed of their ATM transactions by up to 80%, even during peak load times, improving customer service at its 1,500 ATMs across India. In addition, the average number of ATM transactions that are declined during peak load times has dropped from 10% of all transactions to less than 1%.

**Earth Rangers Increases Data Center Energy Efficiency by 90% Without Sacrificing Performance or Scalability**

When initializing the organization's data center, [Earth Rangers](#) had two options—a standard implementation of enterprise solutions or virtualization coupled with data storage optimization and cooling load reduction. Earth Rangers chose virtualization, which is more cost effective to initiate and operate than traditional servers, and this resulted in an instant return on their investment. The installation has allowed Earth Rangers to avoid the equivalent of 100,000 kilowatt hours of energy consumption, and 26 tons of greenhouse gas emissions. These savings contributed significantly to the 17.8% energy savings realized in 2011 over 2010 levels—all while the organization was growing, both in reach and employees.

**University of Massachusetts Sees Savings With Linux**

The [University of Massachusetts \(UMass\) chose Oracle Enterprise Linux](#), Oracle Unbreakable Linux support services, and Oracle VM for their new data center it's building to replace a legacy infrastructure dominated by 500 physical servers running proprietary hardware and operating systems. The result is helping the university avoid nearly US\$1 million in annual operating expenses and several million dollars in capital acquisition and licensing costs that they would have incurred had they upgraded their environment with architecture similar to what they had been using.

## **Business Operations**

Environmental and sustainability practices today can be embedded in all aspects of an organization's operations. This includes sourcing sustainable materials, producing and shipping products in a sustainable way, reducing the product's energy consumption, managing waste and recycling at all stages of the product development life cycle, and reporting on your sustainability initiatives. Organizations that run lean and green can be more productive, more profitable, and less polluting. By taking an environmental stance, your organization can cut costs, reduce risks, drive revenues, and improve your brand. Oracle's [Operations solutions](#) include products for:

- Design for the Environment
- Sustainable Sourcing
- Sustainable Manufacturing
- Supply Chain Design and Planning
- Sustainable Logistics

- Product Takeback
- Facilities and Asset Management
- Smart Utilities Grid
- Paperless Processes

**Korean Air Reduces Fuel Consumption and Saves U.S. \$2.56 Million Yearly in Catering and Paper Costs**

[Korean Air is deeply committed](#) to green operations and constantly looks for ways to improve its product and service designs, so that they are based on green business processes. Using Oracle E-Business Suite Applications, Korean Air cut their catering costs by US\$2.56 million per year and minimized food wastage, by creating route-specific menus based on accurate passenger numbers and regional demand. They also established an aircraft fuel management system that helped reduce fuel consumption by 5%, based on revised laws and procedures about fuel allowances and ground-based auxiliary power units. In addition, Korean Air saved U.S. \$60,000 in paper costs and 165,000 sheets of paper per year by establishing a digital library and generating electronic airline tickets and other documents.

**Modesto Irrigation District Deploys Oracle Utilities Meter Data Management to Support SMART Meter Program**

Modesto Irrigation District (MID), a multi-service utility serving more than 100,000 residential, commercial and industrial customers in California, deployed Oracle Utilities Meter Data Management to support its SMART meter program. [The project](#) involves replacing every residential and commercial electric meter with advanced digital smart meters. With Oracle as the backbone, the system will provide MID with real-time data. As a result of reading smart meters remotely, MID will drive more than 200,000 fewer miles each year, spending less money on gasoline and cutting carbon and other harmful air pollutants.

**Hill International Streamlines Forecasting and Improves Visibility into Project Productivity and Profitability**

[Hill International deployed](#) Oracle's Primavera P6 Enterprise Project Portfolio Management to approximately 90 offices and 150 project sites, providing a centralized, Web-based system that improved visibility into their project status worldwide. They leveraged the integration between the Primavera applications to provide dashboards that aggregate information for their project teams and senior management. Hill International enabled centralized access to their best-practice project plans and schedules, applying them to current projects. They implemented [Oracle Hyperion Financial Management](#) to improve and standardize their project forecasting across the company—enabling better decision-making and helping to keep projects on time and within budget

## Risk and Performance Management

A critical characteristic of an eco-enterprise is the ability to measure and report the environmental performance of the organization. In order to prove they are environmentally compliant, organizations must provide stakeholders with accurate and verifiable measures of their sustainability-related efforts. Well-designed and implemented risk and enterprise performance management solutions help organizations set environmental goals, build them into their operating plans, track and report progress on a regular basis, and optimally leverage their resources to maximize profits and stakeholder value. [Oracle Environmental Accounting and Reporting](#) enables organizations to increase their environmental data collection efficiency and reliability, comply with global greenhouse gas regulations, and improve their environmental and financial performance. [Oracle's Risk and Performance Management solutions](#) include products for:

- Sustainability Analytics
- Sustainability Reporting
- Environmental Planning
- Predictive Modeling & Forecasting
- Risk and Compliance Management

### North County Transit District Selects Oracle to Optimize Environmental Sustainability Reporting and Analysis

North County Transit District (NCTD) [needed a dedicated system](#) to streamline the collection and analysis of sustainability metrics including greenhouse gas emissions and energy consumption. To automate its sustainability reporting, [NCTD selected Oracle Environmental Accounting and Reporting](#) and Oracle Business Intelligence Enterprise Edition (OBIEE) to replace its previous manual, time-consuming and expensive process for collecting and calculating environmental metrics. Through the integration with Oracle's JD Edwards EnterpriseOne ERP system, their Oracle system provides it with actionable data to help them drive down energy use, lower greenhouse gas emissions, decrease waste and increase renewable energy generation.

### Thiess Pty Ltd Reduces Greenhouse and Energy Reporting Time from Months to Minutes

Thiess Pty Ltd is a leading mining, construction, and services organization with operations across Australia, Indonesia, New Zealand, and the United Arab Emirates. [Thiess Pty Ltd implemented](#) Oracle's JD Edwards EnterpriseOne Environmental Accounting and Reporting to quickly generate more detailed sustainability reports and meet NGER reporting requirements and deadlines. They reduced the time it took them to produce their sustainability and NGER reports from three months to almost instantaneously. They also improved the accuracy of their sustainability reports from a 20% to 2% error margin, primarily by automating the data gathering and reporting process and reducing the risk of human error.

### Sustainable Energy – DONG Energy Backs Up Clean Power Vision With Hard Enterprise Data

Acknowledging its status as one of Denmark's largest emitters of carbon dioxide (CO<sub>2</sub>), DONG Energy's leaders have committed to becoming part of [the solution](#) with aggressive sustainability goals that aim to minimize the company's environmental impact. "I think many companies have visions for the sustainability or corporate social responsibility work that they are doing, but if they are not converted into concrete goals that you can measure, it's very hard to know if it is just talk or if it's also action," says Niels Strange Peulicke-Andersen, common systems manager in the Quality, Health, Safety, and

Environment group at DONG Energy. So the executives at DONG Energy turned to Oracle Hyperion Financial Management to replace a cumbersome and error-prone spreadsheet-based system for tracking sustainability data. In the process, they dramatically improved data quality, gained visibility into every part of the business, and created new appreciation for the company's environment, health, and safety goals.

**Oracle Deploys Oracle Environmental Accounting and Reporting**

[Oracle has automated the process](#) of measuring its greenhouse gas emissions, energy, and other environmental impacts by implementing Oracle Environmental Accounting & Reporting (EA&R). Before implementing EA&R, Oracle had 100 users manually enter utility usage data into spreadsheets. It took 20-person weeks to prepare the necessary figures for the Corporate Citizenship Report, Carbon Disclosure Project and the tracking of Oracle's internal goals. Problems included data inconsistencies due to manual processes and a lack of auditing and reporting capabilities. So Oracle implemented [Oracle Environmental Accounting and Reporting](#) to ensure proper representation and calculation of emissions across Oracle's 600+ buildings across the globe. Oracle can now record environmental data such as energy consumed or energy generated at various facilities, and can automatically calculate the corresponding greenhouse gas emissions resulting from the use of emission sources. This enables Oracle to more effectively meet the increasing governmental reporting demands from around the globe while addressing the associated economic mandates for reporting emissions and sustainability efforts.

To learn more about Oracle's sustainability solutions for an eco-enterprise please visit [here](#) or contact your local Oracle account representative.



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**Hardware and Software, Engineered to Work Together**