



the green grid<sup>SM</sup>

# The Green Grid Technical Forum

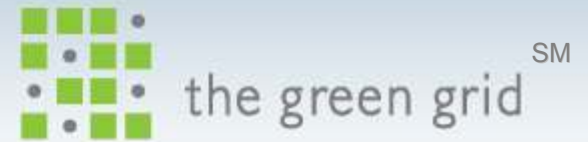
February 5-6, 2008

## Welcome to The Green Grid Technical Forum

---

John Tuccillo, APC  
A Director of The Green Grid

# Assessing Today for Efficiency Tomorrow



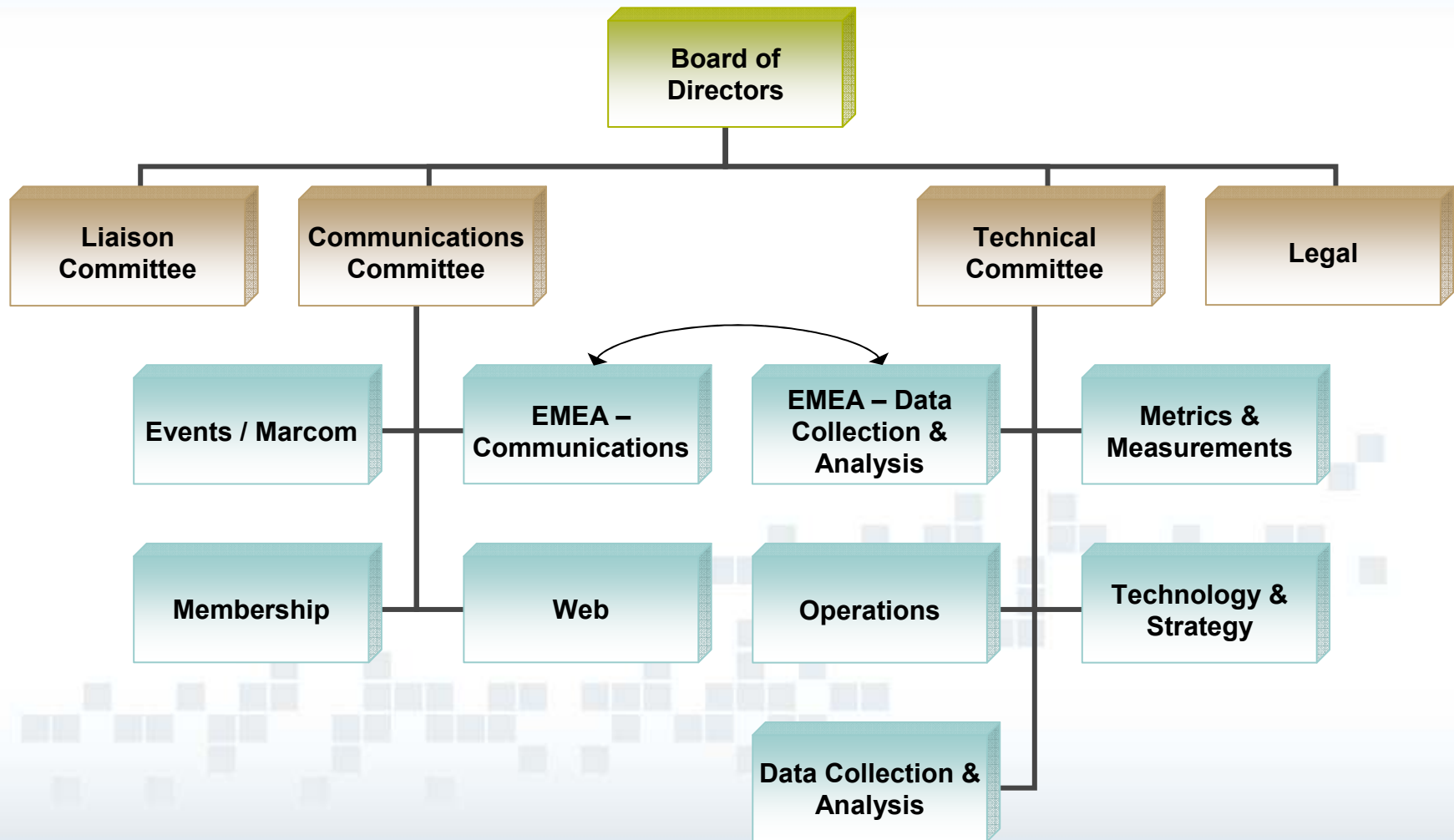
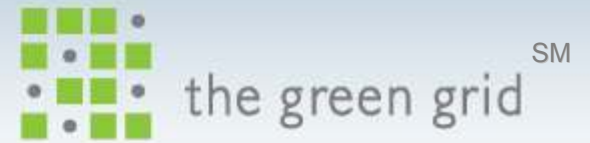
- Welcome to The Green Grid Technical Forum – our first!
- Our goals
  - To bring together our Members, the IT industry, end users and global policy makers to share and support our Mission
  - To review and discuss The Green Grid’s contributions to the industry
  - To look ahead to our works in progress
  - To “Get Connected to Efficient IT!”

# The Green Grid - Intro

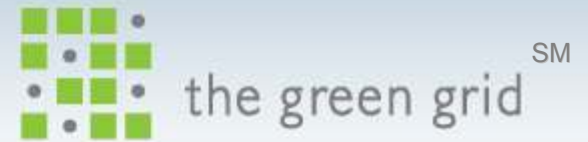


- A global consortium dedicated to developing and promoting energy efficiency for data centers by:
  - Defining meaningful, user-centric models and metrics
  - Developing vendor neutral standards, measurement methods, best practices and technologies to improve performance against the defined metrics
  - Promoting the adoption of energy efficient standards, processes, measurements and technologies
- An open consortium bringing together industry leaders and end users from critical segments of the data center ecosystem to develop a unified global voice around data center efficiency issues

# The Green Grid Structure

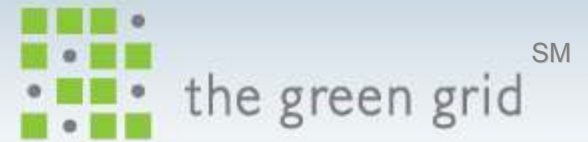


# Technical Committee's Work Groups



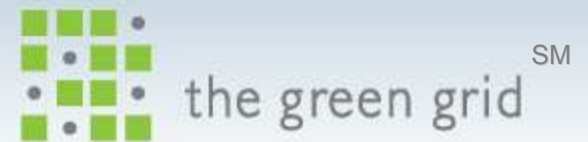
- Data Collection and Analysis
  - Investigations and analysis into data center efficiency problem space
- EMEA Data Collection and Analysis
  - Focusing on the unique challenges of investigations and analysis into data center efficiency problem space in EMEA
- Data Center Technology and Strategy
  - Existing and emergent technologies for data center efficiency
- Data Center Operations
  - Use models, operational strategies and best practices
  - Equipment standards
- Data Center Metrics and Measurements
  - Data center characteristics and performance metrics
  - Measurement protocols for data collection
- Membership and participation in the Technical Committee and Work Groups is limited to Contributor Members

# The Green Grid's Progress



- Launched as a non profit in February 2007
- Membership has grown to more than 150 members
- Held four Technical Summits bringing together the best minds in the industry to focus on what to measure, how to measure and how to increase efficiencies in the data center
- Released six ground breaking White Papers
- Holding our First Tech Forum
  - Milestone deliverables providing a new framework to enable IT managers to assess data center energy use
- The Green Grid is delivering on its promise to become the industry voice on energy efficiency for data centers and business computing ecosystems

## Introducing our Keynote Presenters



- Renato Crocetti, Corporate Vice President, *ADP*
- Jim Miller, Assistant Vice President Information Technology, *Enterprise-Rent-A-Car*
- Brandi K Landreth, Director of Continuity Management and Data Center Strategy, *Allstate Insurance*

# Green IT, A Perspective

---

Jim Miller, Enterprise Rent-A-Car

# Enterprise – The Business

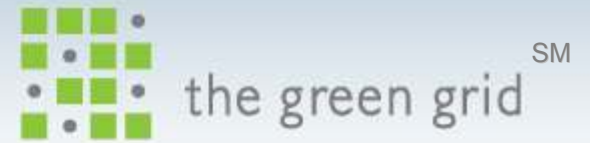


- Founded in 1957
- More than 66,000 employees
- Largest car rental company in North America
- 7,000 locations worldwide
  - US, Canada, UK, Ireland and Germany
- Operate fleet of more than 900,000 vehicles
- Fiscal 2007 revenue of \$9.5 billion
- Recognition
  - #21 on *Forbes* "500 Largest Private Companies in America"
  - One of the "Best Places to Launch a Career" by *BusinessWeek* magazine

# Enterprise – The Business



# IT History at a Glance



1973-1989  
Establishment

1988-1998  
Expansion

1996-2006  
Retooling

2005-?  
Strategic

- Enterprise rental point-of-sale system
  - Used to plan, transact and manage rental business at our rental car and truck locations
- Functionality built around insurance replacement business
- Recently extending to include more retail and corporate type business functions (one-way rentals, expedited rentals, tour vouchering, etc.)

- Provides automated system for direct bill trading partners, featuring:
  - Rental reservations
  - Rental management
  - Shop status
  - Reporting
  - Invoicing
- Supports multiple rental transaction types
  - Insurance, body shop, dealership, fleet
- Fiscal year 2007 - worldwide
  - Over \$3 billion (USD)
  - Over 7 million direct-bill rentals

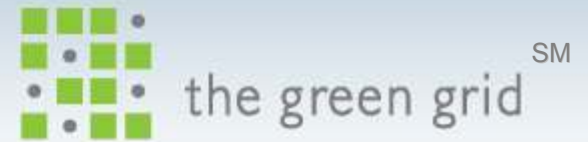
- Rental system supporting National and Alamo Brands
- Functionality built around retail and corporate travel type business
- Bolt-on capabilities, interface into the core Odyssey system
  - Websites
  - Kiosks
  - Tune-up for vehicle maintenance
  - Pyramid for claims management
  - PeopleSoft for summarized accounting and financial reporting

enterprise.com,  
Nationalcar.com,  
Alamo.com



- Public websites providing retail and corporate customers the ability to book reservations
- Combined fiscal year 2007
  - Over \$1.45 billion (USD) in closed ticket revenue
  - Over 11.9 Million reservations
  - Over 78 Million unique visitors
  - Over 37% market share among direct suppliers of car rental on the web

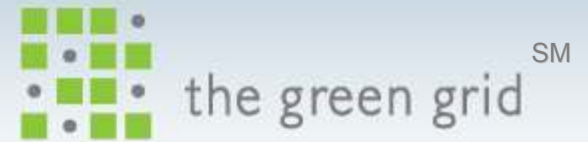
# Additional Products



- Vehicle
  - Fleet planning – EVMS (Enterprise)
  - Vehicle ordering
  - Vehicle maintenance
  - Remarketing – CSR
- Liability and claims management
  - Enterprise ICE – Integrated Claims Environment
- Accounting and administrative
  - PeopleSoft Financials
  - Human resources and benefits
  - Payroll – ADP (pro-business)
  - Retirement – Fidelity
  - LKE – Like Kind Exchange
  - Traffic citation management
- Fleet management
  - EDGE – customer management and leasing application
  - Vehicle order – specific to leasing
  - Vehicle maintenance and invoice processing
  - PeopleSoft A/R – for lease bill and receipt
- Car sales
  - CRM, sales, financing
- Decision support
  - Data warehouse, reporting

# Data Centers

- Clayton, Missouri
  - 14,000 sq ft
- Weldon Spring, Missouri
  - 30,000 sq ft
- Perot Systems
  - National and Alamo Brands

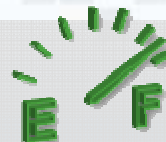




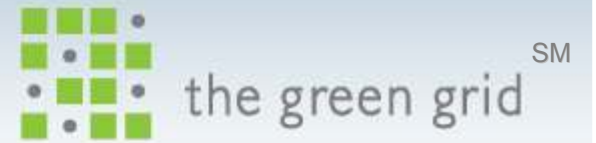
# Enterprise Green Initiatives

CO<sub>2</sub>

EGS  
HYBRIDS  
FLEXFUEL



# Corporate Responsibility



CUSTOMER  
ADVOCACY



CAREER  
QUALITY



STEWARDSHIP

# CONSERVATION

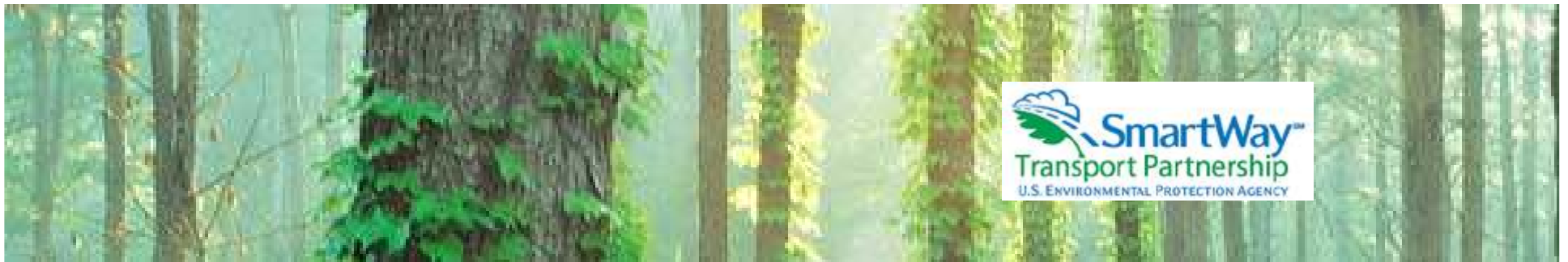
Enterprise  
**50 Million Tree Pledge**  
Planting 50 million trees  
over the next 50 years



**Secretary of Agriculture, Mike Johanns; National Arbor Day Foundation Founder and President, John Rosenow; First Lady Laura Bush; and Enterprise Rent-A-Car Chairman and CEO, Andy Taylor**

## MOST FUEL-EFFICIENT FLEET

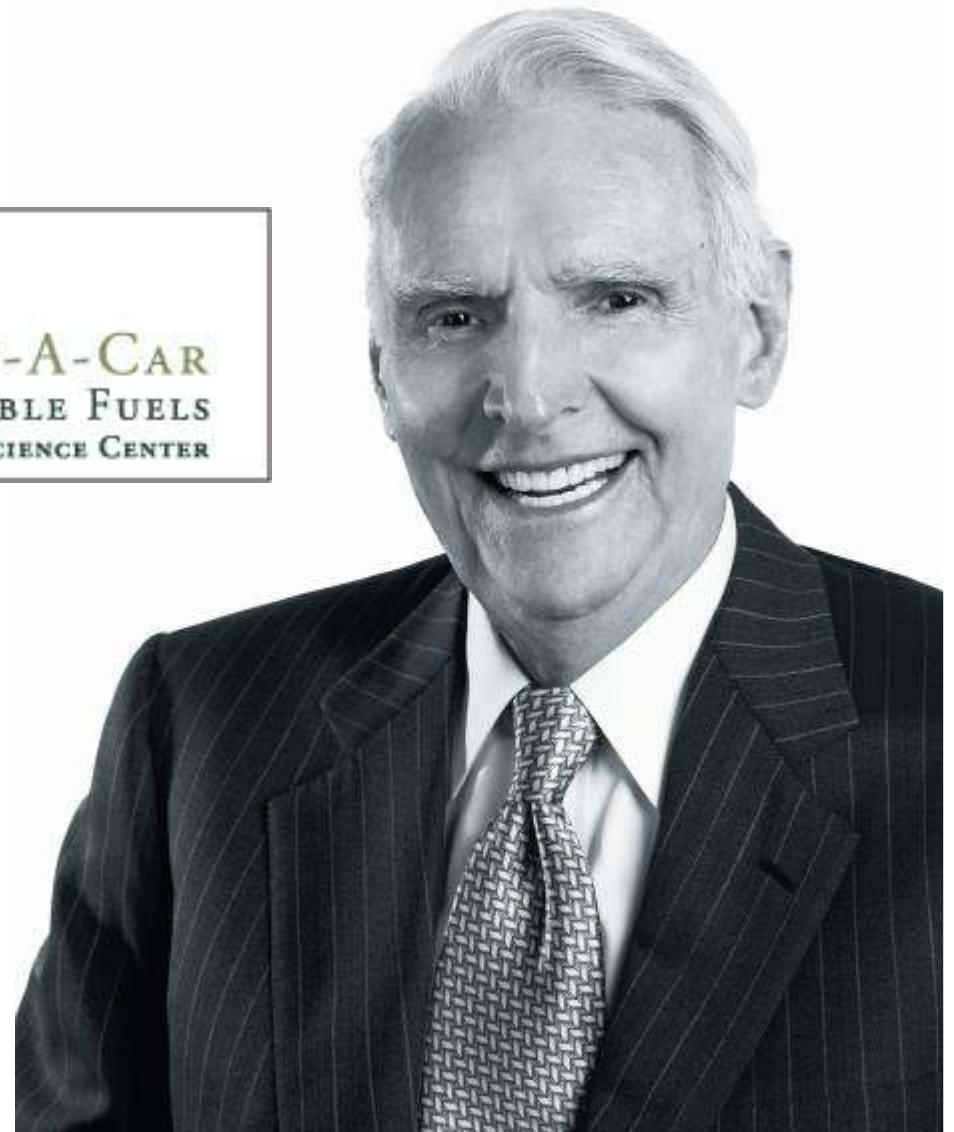
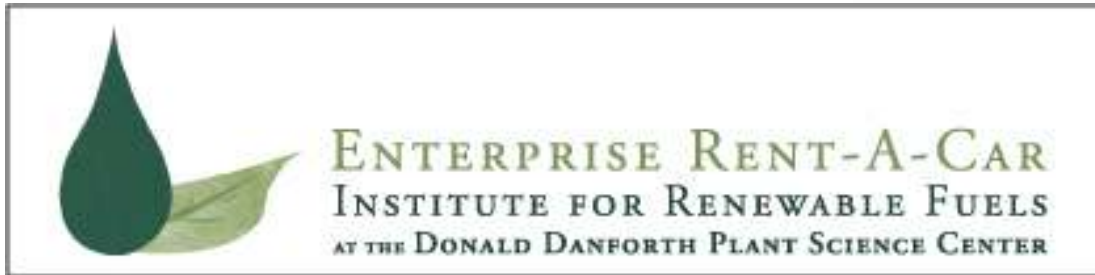
- **450,000 vehicles** average 28 miles per gallon or better
- **238,000 vehicles** average 32 miles per gallon or better
- **265,000 vehicles** qualify for U.S. Environmental Protection Agency's SmartWay certification



# ALTERNATIVE TECHNOLOGY



# RESEARCH



THE ECO-ADVANTAGE ●

# Inc.

The Handbook of the American Entrepreneur

November 2007

## NOTHING BUT GREEN SKIES

### THE GREENING OF EVERYTHING

Sustainability isn't just about venture-backed tech firms and big manufacturers. In this, Inc.'s Second Annual Eco-Advantage issue, we look at how green business practices are transforming the stuff of everyday life.

Including the world's greenest RENTAL CAR COMPANY

**SUBJECT** "We are not a not-for-profit," says Andy Taylor. "What we're doing, we're doing for the long-term sustainability of our business."

Enterprise Rent-A-Car is one of the nation's top family-owned businesses, a \$12 billion behemoth that dominates its industry. But CEO Andy Taylor feared it all could vanish in a puff of CO<sub>2</sub>. It was time to get greener. And quick. BY ALISON STEIN WELLMER

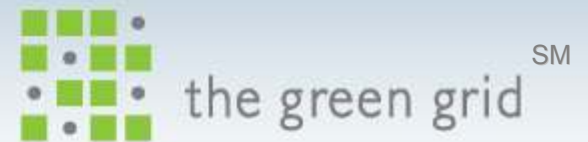


the green grid<sup>SM</sup>

# IT Green Initiatives

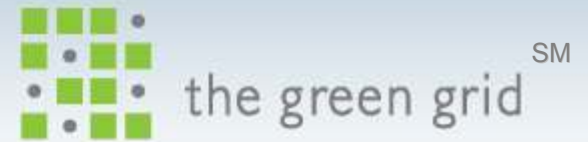


# IT Initiatives



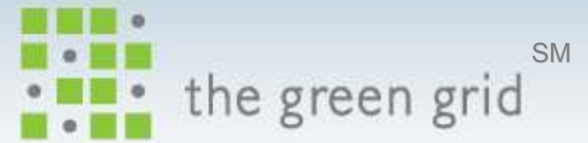
- **Electrical conservation**
  - Variable speed motors in air handlers, etc.
  - Running only necessary data center equipment
- **Cooling**
  - Seal floor cutouts
  - Hot aisle/cold aisle orientation
  - Reduced lighting
- **Increase server utilization**
  - Virtualization
  - Consolidation

# IT Case Studies



- AS/400 Lab Consolidation/Virtualization
  - Net affect is a reduction of 37 KW electrical load
- Thin client vs full PC in our branches
  - Net affect is an annual savings of 3,247 US **tons** of CO2 emissions

# Our Expectations



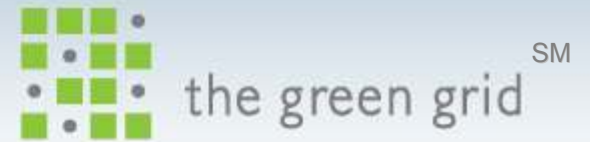
- Industry focus in reducing electrical loads
- Operational best practices
- Standard metrics, measurements, and tools
- Support genuine ... not bogus ... strategies



the green grid<sup>SM</sup>

# Thank You

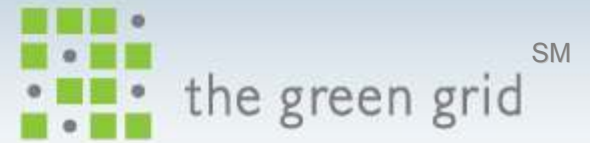




# Allstate and The Greening of IT

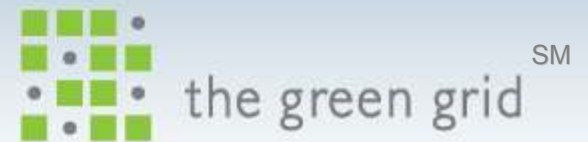
Brandi K. Landreth, Allstate Insurance

# Agenda



- Allstate company overview
- Allstate's green strategy
- The greening of IT
- Industry support

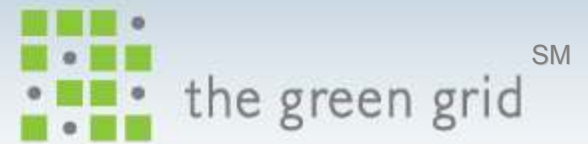
# Allstate Overview



[www.Allstate.com](http://www.Allstate.com)

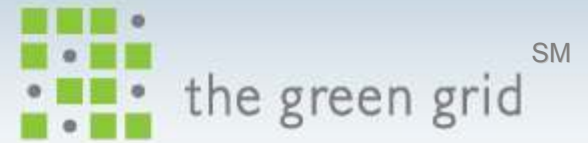
- The Allstate Corporation is the nation's largest publicly held personal lines insurer
- A Fortune 100 company, with \$157.5 billion in assets, Allstate sells 13 major lines of insurance, including auto, property, life and commercial. Allstate also offers retirement and investment products and banking services
- Allstate provides insurance products to more than 17 million households in 49 states and Canada

# Implications for IT

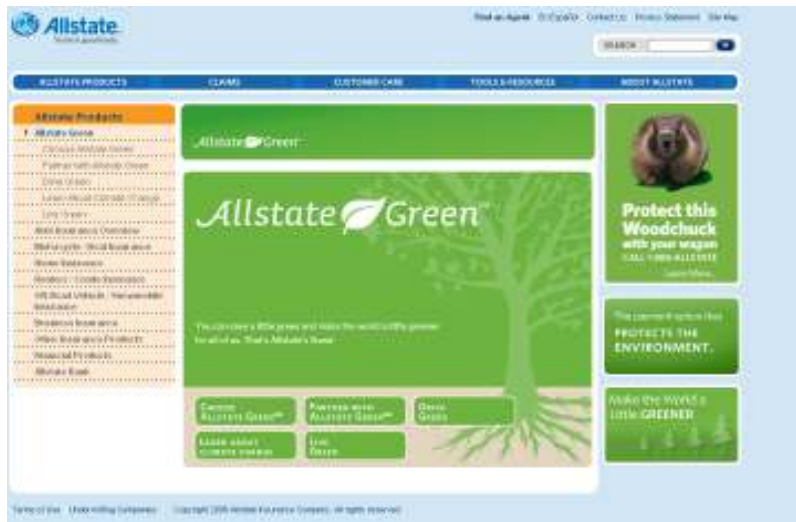


- High availability of critical systems
  - We have made a promise to be there for our customers in their time of need
  - Our systems must enable the business to keep that promise
- IT must
  - Provide robust computing environments
  - Reduce deployment and operating costs
  - Improve disaster recovery capabilities
  - Support new technologies
- To accomplish this, we are consolidating our existing data center footprint into a two data center model
  - Multi-year initiative which includes:
    - Build a new data center in Illinois
      - Expected completion of construction in Spring 2009
    - Expand and upgrade our existing Ohio data center
    - Migrate all infrastructure and applications to the new model

# Allstate Green



## *Allstate's green strategy is more than just IT*



### Allstate green highlights

- Test of new green products and features in Ohio and Colorado
- Paperless statements, policy discounts and a \$30 donation to Carbonfund.org for every Easy-Pay enrollment

### Green partnerships

- Reforestation
  - Marais des Cygnes National Wildlife Refuge outside of Kansas City
  - Tensas River National Wildlife Refuge located in Northeast Louisiana
- Wind energy
  - Horse Hollow II Wind Energy Project in West Texas
  - Hancock Wind Project in Garner, Iowa

# The Greening of IT



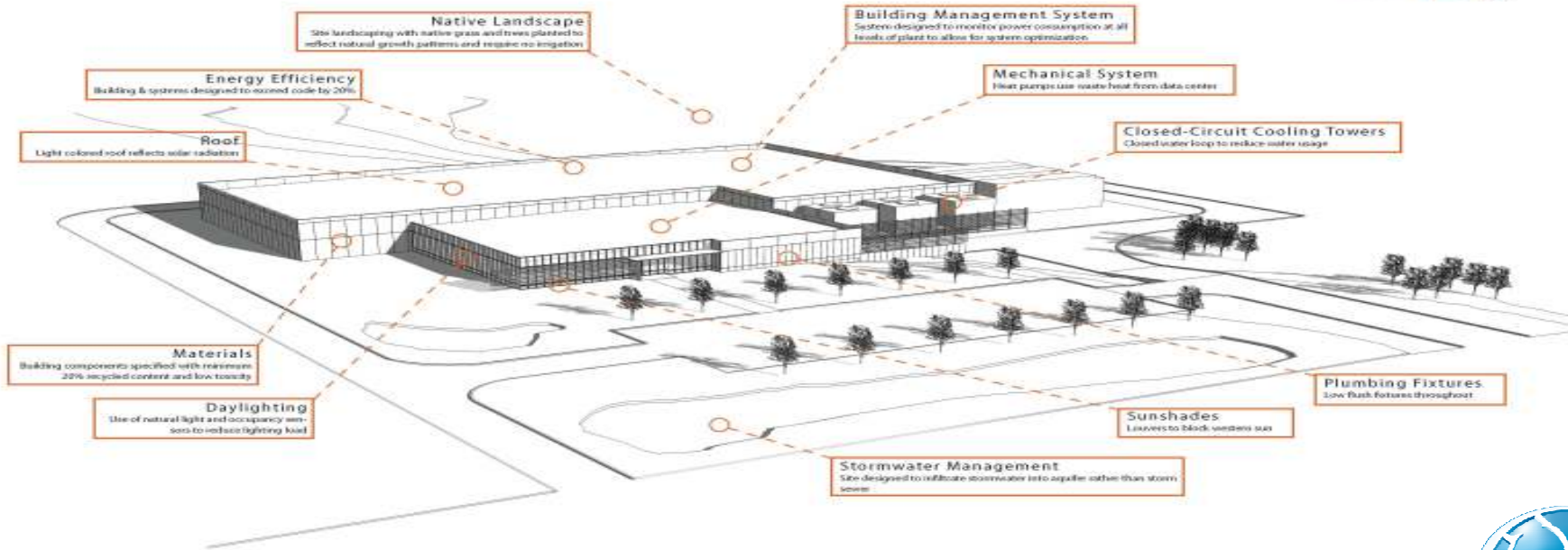
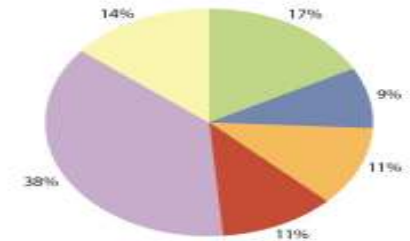
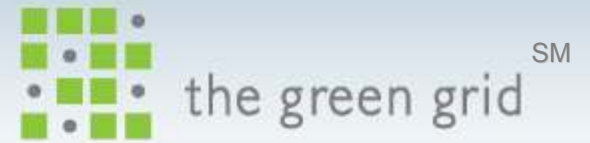
## *Two Types of Green*

*Green data centers are about eco-friendly construction and energy efficient operations*

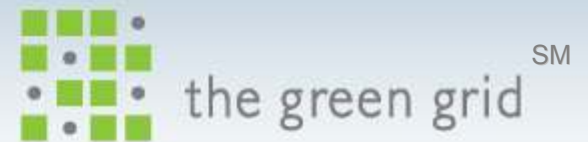


- Green building initiatives
  - Pursuing LEED® Silver Certification for our new Illinois data center
  - Consolidation of data center footprint to leverage economies of scale
- Green IT initiatives
  - Implementation of several strategies to manage and reduce overall energy consumption
  - Focus on high-density computing and virtualization

# Green Construction

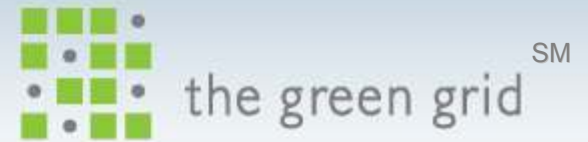


# Green Operations



- Consolidate
  - Consolidate data centers to leverage economies of scale
  - Implement high-density hardware options such as blade servers, multi-core processors, and storage-area networks
- Virtualize
  - Expand virtualization goals from 7:1 to 12:1, or higher
  - Reduces energy consumption up to 70 percent
- Keep hardware current
  - Upgrade to newer, more energy efficient devices
  - Includes everything from servers to multi-function printers
- Think energy efficient
  - Incorporate energy efficiency into the raised floor design
    - Hot aisle – cold aisle configuration
    - Blanking panels for open rack spaces
  - Add energy usage criteria to hardware purchases

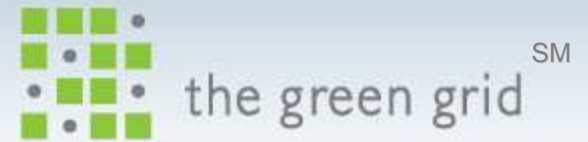
# Green Operations



- Turn it off
  - Power off idle equipment
    - Evaluate software tools that allow consolidation of workloads during low-utilization hours and power-down equipment until needed to support peak demand
  - Implement Wake-on-LAN and NightWatchman solutions for 35,000 Allstate desktop computers
- Plan, monitor and manage
  - Capacity forecasting and management should look at the data center as a system
  - Create a data center scorecard. Look for trends and opportunities to reduce consumption

***These strategies will help Allstate reduce its projected energy demand by 450% over the next 15 years***

# What Can the Industry Do?



- Define LEED® certification standards for data centers
  - Create standards for energy efficient design and evaluation of data centers
- Develop benchmark data and best practices
  - Metrics must allow us to make apples-to-apples comparisons
    - Tie PUE to Uptime Tier Classifications in order to make comparisons between similar sites
    - Must be vendor/platform neutral
- Create tools for monitoring and managing energy consumption
  - Most companies have mixed environments. Tools must integrate across all platforms and vendors
- Provide a clear understanding of technology roadmaps and energy efficiency
  - What should companies expect and plan for over next the next 2, 5, 10 years?
- Integrate building and IT systems
  - Need to manage the data center as a system. This requires an end-to-end view

# *Thank You*

## Brandi K Landreth

Director, Continuity Management and Data Center Strategy

Allstate Insurance Company

[Brandi.Landreth@Allstate.com](mailto:Brandi.Landreth@Allstate.com)

847.402.7788

Thank you for attending  
The Green Grid Technical Forum

For more information please go to  
[www.thegreengrid.org](http://www.thegreengrid.org)



the green grid<sup>SM</sup>

get connected to efficient IT

