Engaging Employees to Drive Efficiency Behavior

Better Buildings Summit
May 27-29, 2015
Engaging Employees to Drive Efficiency Behavior

Your Speakers:

- Brad Reed, Toyota, Assistant Manager, Maintenance and Operations, Toyota Technical Centers
- Kathy Pecora, Energy and Conservation Specialist, Will County, IL
- Chris Magee, Executive Director Sustainable Facilities, MGM
- Susan Rochford, VP Sustainability, Legrand

Your Moderator:

- Sandy Glatt, DOE
Engaging Employees to Drive Efficiency Behavior

DOE - Better Buildings Summit

Toyota Engineering & Manufacturing
North America, Inc. (TEMA)

May 29th 2015
Dan Cooper
Engage

: to get or keep (attention or interest)
: to participate or become involved in
What do the plants have in common?
Toyota Way

Challenge
Kaizen
Genchi Genbutsu

Continuous Improvement

Respect for People

Respect
Teamwork
Engagement Activities

- Plant Shutdown Challenge
- Kaizen Blitz Shop
- Energy Reduction Challenge

Engaging members!
Plant Shutdown Challenge

Toyota plants compete against each other
Goal: Reduce energy during plant shutdown
Rules: Baseline is previous year avg. energy

5th year for Challenge
491,000 kWh reduction
Plant Shutdown Challenge Recognition

Plaque presentation at Facility Conference
Reigning Plant presents award to new winner
Article in Company newsletter

Best Practices:
- Optimize compressors
- Reduce cooling water pumps
- Turn off spot coolers
- Green Weekend
Energy Reduction Challenge!

The shops in plant compete against past performance

Goal: Reduce energy during plant shutdown
Rules: Baseline is previous year avg. energy

"Award of Excellence" Results

- 10th year
- 10 shops
- 32,000 MWh reduction
Energy Reduction Challenge!

Recognition: “Award of Excellence” presented by President
Article in Company newsletter
Winning Shop recognized (plaque & banner)
Kaizen Blitz

Kaizen: small improvements
Blitz: with concentrated effort

Goal: Energy, Water & waste (3R’s)
Process: 5 teams, 5 days
Utilizing Team approach!

- 6th year for Blitz
- 15,670 MWh identified
- 10,600 MWh implemented

Goal: Energy, Water & waste (3R’s)
Process: 5 teams, 5 days
Utilizing Team approach!
Kaizen Blitz

Benefits: Presents to top management
          T/M input on annual plan

Energy savings
**Value to Organization**

- **Team Work**
  - Plants, shops, departments working toward same goal

- **Best practices**
  - Share activities with plants & shops (CA, HVAC, lighting, etc)

- **Work Place**
  - Engaged T/Ms
  - Ownership
  - Motivated

- **Value**
  - Energy & Cost reduction
  - Environmental benefits
Main Takeaway

• Empower the team members
• One size does not fit all
• Sustain – keep momentum

The Toyota Way

Opportunity to Participate

Engaged Employee!
Thank You!
Engaging Staff in Energy Usage Reduction Behaviors

Presented by: Kathy Pecora
Will County, Illinois Energy & Conservation Specialist
Will County, Illinois

- Approximately 30 miles southwest of Chicago
- Founded in 1836
- The County Seat is Joliet
- Joliet
  - Largest city in Will County
  - 4th largest city in Illinois
History of Economic Development 1800’s-1970’s

- Major Exports: Agriculture, Coal, Limestone
  - Illinois-Michigan Canal
  - Sanitary and Ship Canal
  - Major Railroads
  - Interstate Highway System
- Industrialization of Will County
  - Texaco Oil Refinery
  - United States Steel Corporation
  - Joliet Army Ammunition Production Plant
  - Caterpillar, Inc.
The Great Recession of the late 1970s

- A mass exodus of industry
- Unemployment rate 26.9%
- Commercial collapse of Joliet City Center
- Commercial development relocates west of City Center

**Will County Invest to Stabilize Downtown Joliet**

- Purchased shuttered businesses
- Retrofits for office use to house County Departments
- Developed a long range plan with the City of Joliet
Will County, Illinois

Demographics & Statistics

- Total population of 677,560
- 29 townships containing:
  - 7 Cities
  - 29 Villages
  - 9-census designated places
- Will County Government is the 3rd largest employer within Will County having 2,065 employees
- Owns over 1,000,000 square feet of building space
- Largest office space lessee in Joliet’s City Center
ARRA funds finance Energy Efficiency

- 2010 applies for and receives two million dollars
- Hire consultant to identify EE projects in County owned buildings
- Work is completed at:
  - County Office Building
  - Court Annex
  - Sunny Hill Nursing Home
  - Department of Transportation (Main Site)
- Construction of a Gas to Energy Facility at our Prairie View landfill
- Launched www.willcountygreen.com
Will County joins the Department of Energy’s Better Buildings Challenge in 2012
2013
University of Illinois
Smart Energy Design Assistance Center (SEDAC)

- Five Level Two Energy Efficiency Audits
- 10 years or less ROI
- 12.5% a year or more in annual energy cost savings
Clinical services, community spaces, family health services, behavioral health services, and an environmental testing lab

- 65,000 square feet
- Approximately 300 employees
- 6,000 – 8,500 total visitors per week
- Hours of operation: 7 am – 7 pm (Monday – Saturday)
### Table 1: Existing Building Data

<table>
<thead>
<tr>
<th>Annual Consumption</th>
<th>Electricity (kWh)</th>
<th>Natural Gas (Therms)</th>
<th>Annual Utility Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Building Consumption</td>
<td>943,583</td>
<td>35,082</td>
<td>81,211</td>
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</tbody>
</table>
Obstacles

- Oldest building in County portfolio
- Remaining Useful Life of Health Department determined to be 5-10 years.
- Limitations on energy efficiency projects for this building.
Implementation of ECRM1-4 would result in 14.3% energy cost savings, totaling $11,718 annually.
Health Department Main-Interior lighting retro-fit including occupancy sensors and LED Exit Signs

$94,669 cost, $36,902 in qualifying incentives, total cost $57,767

Cumulative Energy Cost Reduction of $51,721 from December 2012 to February 2015

ROI of >3 years

23.7% energy usage reduction achieved with staff engagement

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<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY STAR score (1-100)</td>
<td>67</td>
<td>72</td>
<td>5 (7.5%)</td>
<td></td>
</tr>
<tr>
<td>Source EUI (kBtu/sq ft)</td>
<td>242.3</td>
<td>223.1</td>
<td>-19.2 (-7.9%)</td>
<td></td>
</tr>
<tr>
<td>Site EUI (kBtu/sq ft)</td>
<td>123.1</td>
<td>122.9</td>
<td>-0.2 (-0.2%)</td>
<td></td>
</tr>
<tr>
<td>Energy Cost ($)</td>
<td>148,858.19</td>
<td>113,592.97</td>
<td>-35,265.22 (-23.7%)</td>
<td></td>
</tr>
<tr>
<td>Total GHG Emissions (Metric Tons CO2e)</td>
<td>944.5</td>
<td>856.7</td>
<td>-87.8 (-9.3%)</td>
<td></td>
</tr>
</tbody>
</table>
Director’s and upper management support facilitates SUCCESS

- Health Department Director approves Employee outreach to engage staff in energy efficient behaviors in all 5 divisions of the health department
- Presentations given at mandatory monthly meetings
  - Energy reduction behavior was featured topic
  - Equipment audits conducted in each department
  - Health Department Staff creates their own GREEN TEAM
- Health Department Staff become active in Countywide GREEN TEAM
Opportunities for Will County

- Repeat Health Department success countywide
  - Changed Energy Management Procedures to Utility Cost Reduction Measures
  - UCRM adopted by County Board April 16, 2015
  - County Board will consider current Energy Reduction Behavior for all departments seeking funding for Energy Efficiency improvements
  - Partnering with other government agencies within the County to complete Energy Efficiency Projects
Success = One Building at a Time

Kathy Pecora – Will County Illinois Land Use Department
Driving sustainability through employee engagement

Chris Magee
Executive Director of Sustainable Facilities
MGM Resorts International
17 Resorts – 48,000 Hotel Rooms

740 Acres on the Las Vegas Strip

350 Food & Beverage Outlets

61,000 Employees

3 Million Sq. Ft. of Convention Space
AGENDA

- Program Overview: MY Green Advantage
- Recognition & Competition
- Identifying Employee Interests
- Employee Impact
- Engagement
The Program

What Can You Do?
Join MY Green Advantage

Get Started Now

Take Action
See how the little things you already do add up—or challenge yourself to try something new! It’s easy to move at your own pace.

Get Inspired
Get help from your colleagues and share tips and photos—it’s easy to learn, ask questions, and stay motivated.

Make an Impact
Rack up points as you make a real-world impact. Complete projects with your team or race for the top of the leaderboard!
Recognition & Competition

Good Eats
You've earned this achievement!

LEVEL 1
25 pts

LEVEL 2
345 pts

LEVEL 3
370 pts

Actions
Activity
Leaderboard
About

LEVEL 1

+10 Find out if there are community-supported fisheries near you

LEVEL 2

+2 Try a natural sweetener

+2 Eat at a Dine Green certified restaurant

Your Contribution

Beat the Clock
Team with the most points wins!

+2,871 pts YOUR CONTRIBUTION

64 DAYS REMAINING

John Szostek
TOP CONTRIBUTOR - 6,435 POINTS
Identifying Employee Interests
Employee Impact

- 18,500 Employees Signed On
- 1,300,000 Green Actions Taken
- 25 PERCENT Of Total Employee Base
- 40 PERCENT Of MGM Resorts Employees Engaged On Their Mobile Phones
- 32 MILLION kWh of energy saved
- 62 MILLION gallons of water saved
Engagement
THANK YOU!
Energy Marathon: Engaging an Entire Workforce

Susan Rochford, Vice President, Energy Efficiency, Sustainability & Public Policy

Legrand North America

2015 Better Buildings Summit
Washington, DC
Legrand in a Nutshell

WE ARE

POWER LIGHT & DATA

transforming the spaces where people live & work.

global-minded

WE ARE

$6 Billion 2014 Revenue

30,000 people united in the belief that together we can do things better

a public company

in 180 countries

$1.17 Billion Sales

+2,600 employees

7 plants in NA

+170,000 SKUs
Sustainability at Legrand

High Performance Sustainable Buildings
We are dedicated to designing products that are environmentally preferred, and meet the needs of High Performance Buildings.

Operational Excellence
We are focused on increasing resource productivity and reducing the environmental impacts of our operations.

Employee & Community Welfare
We value our employees and the communities in which we work and live. We strive to provide an excellent working experience for our associates and better the communities in which we operate.
2022 Sustainability Operational Goals

25% reduction in corporate energy intensity
*20% at U.S facilities

25% reduction in water consumption

0 waste-to-landfill
Our Energy Profile

LEGRAND, NORTH AMERICA

2014 MMBtus

Electricity: 461,139

Natural Gas: 79,872

### Legrand, North America Energy Profile (2014)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Number</th>
<th>Sq. Ft.</th>
<th>Headcount</th>
<th>Energy Usage (MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>7</td>
<td>162,255</td>
<td>324</td>
<td>20,698</td>
</tr>
<tr>
<td>Distribution</td>
<td>5</td>
<td>662,281</td>
<td>397</td>
<td>45,196</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>7</td>
<td>1,323,422</td>
<td>2,488</td>
<td>481,167</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>19</strong></td>
<td><strong>2,147,958</strong></td>
<td><strong>3,209</strong></td>
<td><strong>547,061</strong></td>
</tr>
</tbody>
</table>
Our Energy Strategy

Engaging our People

Evolving Our Processes

Deploying the Right Technologies
Engaging Our People – 1.0

Visible Leadership Commitment

Dedicated Corporate Energy Manager and Designated Site Liaisons for Energy

Employee Engagement Initiatives

- Recognizing and Reporting Success
- Energy Education
- Earth Day Poster contest for children of employees
- Legrand Employee Product Purchase Program
Power Down Day – 2.0

On Thursday November 29, 2012 we held our first company-wide Power Down Day. A 24 hour competition to challenge all 2500 employees to save energy.

- Unplugging overcrowded receptacles and appliances not being used
- Turning off unnecessary lights (task and overhead)
- Turning off computer, monitor or printer when not being used

RESULT: 24% reduction in energy intensity

The Legrand Corporate Energy Policy was introduced on Power Down Day

Winning Sites: Employee Luncheon and $3000 contribution to their local food bank
Energy Marathon Concept – 3.0

Asked 2,500 employees to save energy for 26.2 days

Bring energy efficiency to the forefront, boost energy awareness and have fun
2014 Legrand Energy Marathon

**Purpose:** Jumpstart our NEW energy intensity reduction commitment of an additional 25% reduction by 2022.

**When:** Oct 1, 12:00 PM — Oct. 27th, 2:00 PM

**How:** Similar to the “Power Down Day” held in 2012, this is an inter-site competition to reduce energy intensity but over a 26.2 day period versus one day

- Multi-functional steering committee in place to organize and run the event; set the ground rules
- Multi-faceted communications and outreach effort to engage employees, post progress/status and share energy saving tips throughout the event
- Use of daily main meter readings in October to be tracked against a per site average taken from first 2 weeks of Sept,
- Weekly themed events to promote energy savings opportunities

**Winner:** Awarded to the top Site to achieve the highest percent reduction in electrical use

**Benefit:** If electrical use is reduced across LNA by 10-20% over the 26.2 day period, ~$30-60K savings possible.
• Start planning at least 3 months in advance
• Identify and assign Core Team members – include roles and actions
• Detailed project plan covers communications, operations and recognition
• Prepare Comprehensive Communication Campaign

• Provide “purpose” information for each audience (i.e., tips to save energy at work and at home)

• Maintain interest – avoid “event fatigue” using contests and daily updates on energy savings
GO

- Deliver communication plan
- Share Energy Marathon site standings
- Energy Waste Citations elevate daily focus
- Encourage best practice sharing amongst leaders
Our Results

Across 18 Sites

- 15.4% Reduction in Energy Consumption
- 588,540 kWh saved
- 406 metric tons CO₂ saved
- $46,732 saved
- Awareness of sustainability goals

- Visible leadership appreciation of sustainability
- Employee morale boost
- Charitable contribution
- Pizza party
- Recognition by the U.S. Department of Energy
- FUN!
**Energy Marathon – an example of cultural shift**

- Making sustainability part of our DNA
- Applying lessons learned to other areas of sustainability
- Harnessing friendly competition to unify a diverse organization
- Having confidence in our people to exceed our goals
- Building on our internal success to engage more proactively with our suppliers, partners and customers

**Next Steps and Lessons Learned**

- Leverage the best practices we learned throughout the entire year
- “Check-in” to evaluate site performance since the Marathon
- Share the Energy Marathon “Toolkit” with suppliers and other companies
- Commit to a biennial Energy Marathon – keep the competitive spirit alive!
Want to Know More?

Download the Energy Marathon Toolkit

- Share our ideas with others – no cost
- Fact sheet, checklists, action planning, communication and recognition ideas

Energy Project Evaluation Tool

10 Lessons in Submetering White Paper

Energy, Waste and Water Corporate Policies

Organizing for Results Sustainability Tool

High Performance Building White Papers
QUESTIONS?
SUSAN.ROCHFORD@LEGRAND.US

www.legrand.us/sustainability