Energy Strategy and Project Financing

November 19, 2008
ENERGY STAR Monthly Partner
Web Conference

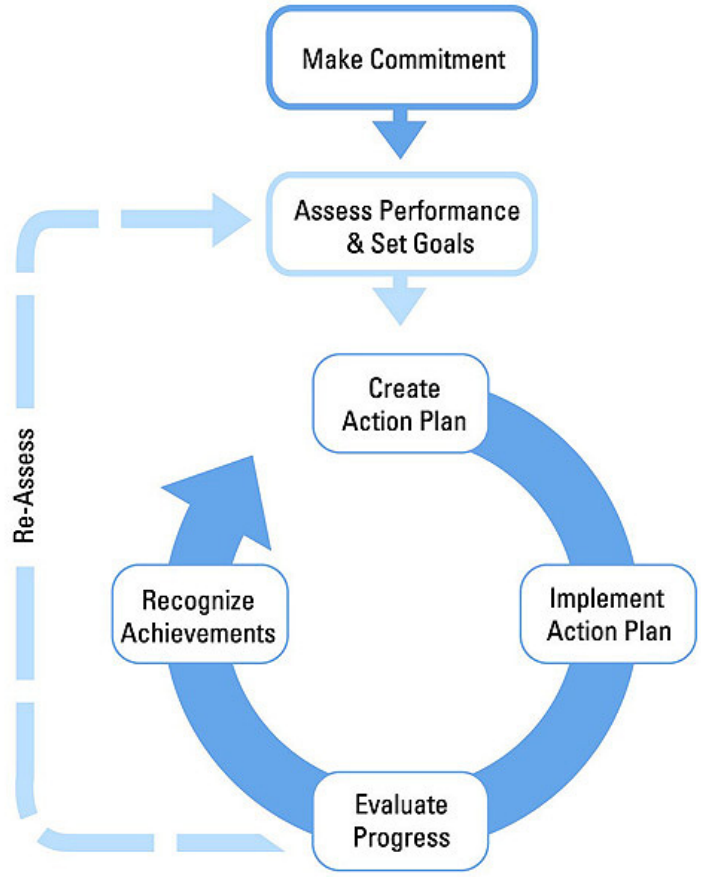
Call-in Number: 1-866-299-3188
Conference Code: 202 343 9965

EPA

Learn more at **energystar.gov**

About The Web Conferences

- Monthly
- Topics are structured on a strategic approach to energy management
- Opportunity to share ideas with others
- Slides are a starting point for discussion
- Open & Interactive



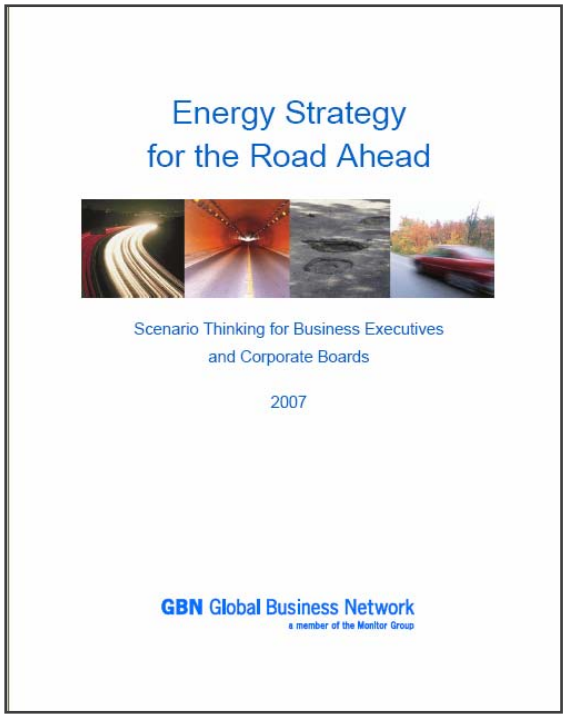
Web Conference Tips

- Mute – To improve sound quality, all phones but the presenters will be muted.
- Use # 6 to un-mute and * 6 – to mute
- Presentation slides will be sent by email to all participants following the web conference.

The Longer, Broader View

Energy Strategy for Road Ahead key recommendation:

- Companies should take a longer and broader view of financing energy projects given:
  - Future energy and climate risks
  - Energy projects tend be low risks investments
  - Energy projects frequently have greater pay backs than originally expected
  - Strategic investments in energy projects should be encourage and not discouraged by corporate financial policies



Financial policies for energy strategy

- Variety options:
  - Lower hurdle rates for energy project
  - Lower internal cost of capital
  - Longer pay back periods
  - Capital set aside programs
  - Other approaches…
- Policies should help fund strategic and sensible projects that may not normally meet short payback periods

Today's Web Conference

Establishing a capital set aside program:

- Dennis Canavan, Johnson & Johnson
- Jack Shih, Navistar

Energy Capital Set Asides

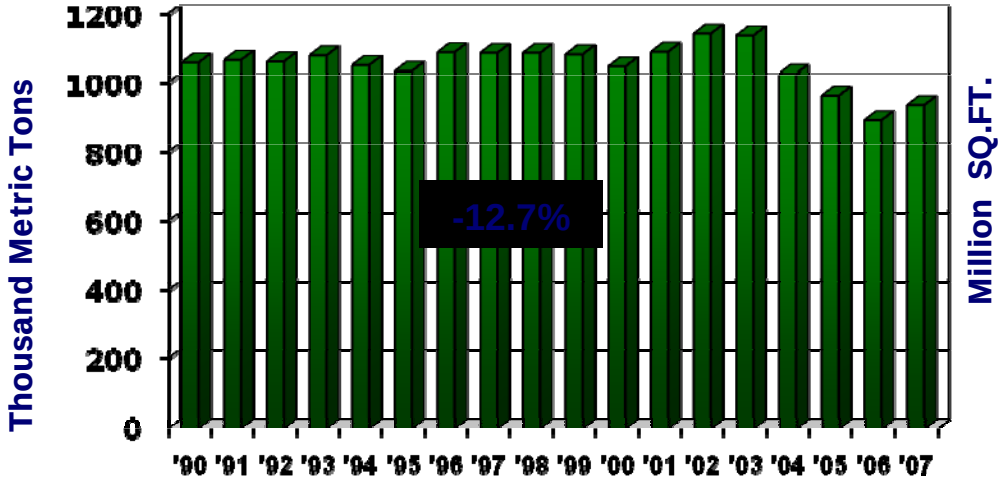
- Examples of other companies:
  - ArcelorMittal
  - Allergan
  - Boise
  - Corning
  - Eli Lilly & Company
  - Ford
  - And others

Capital Funding for Energy Projects

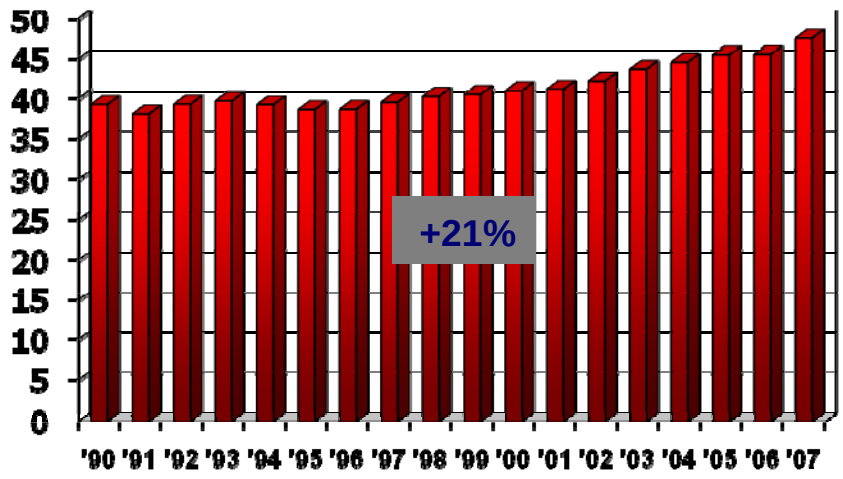
Energy Star
November 19, 2008

2007 J&J ENERGY PROFILE – WORLDWIDE DATA

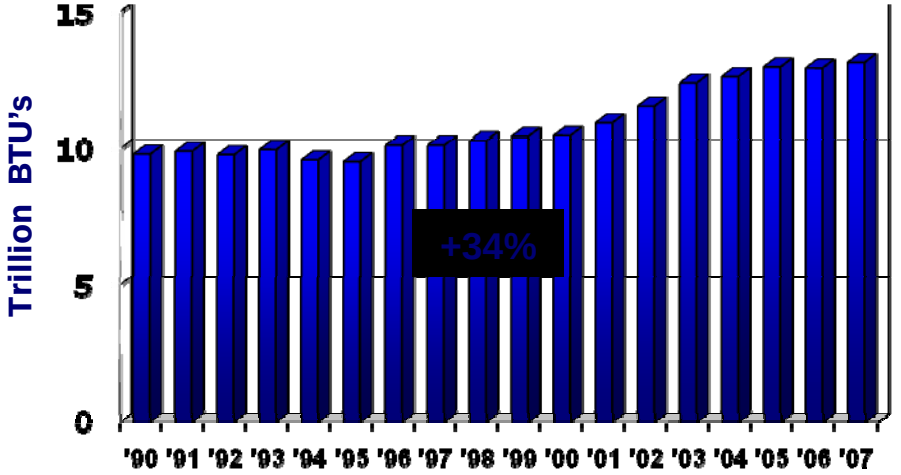
CO_2 EMISSIONS



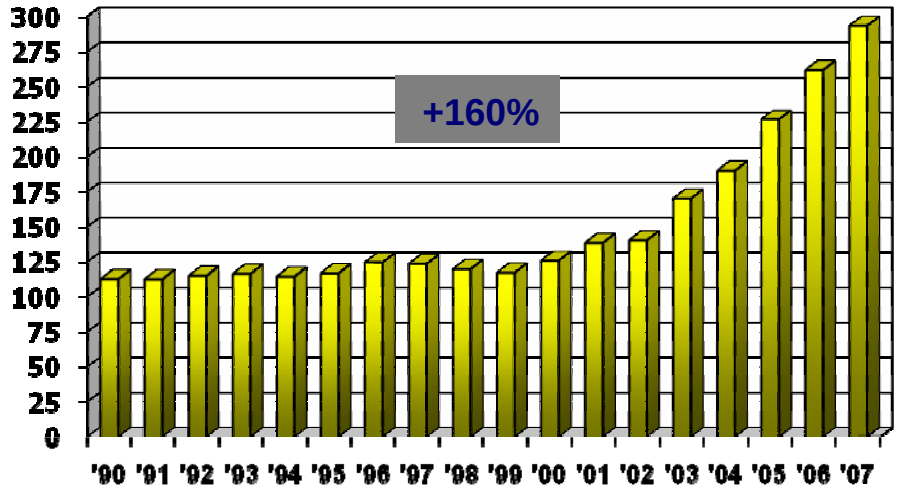
FLOOR SPACE



ENERGY USAGE



ENERGY COST



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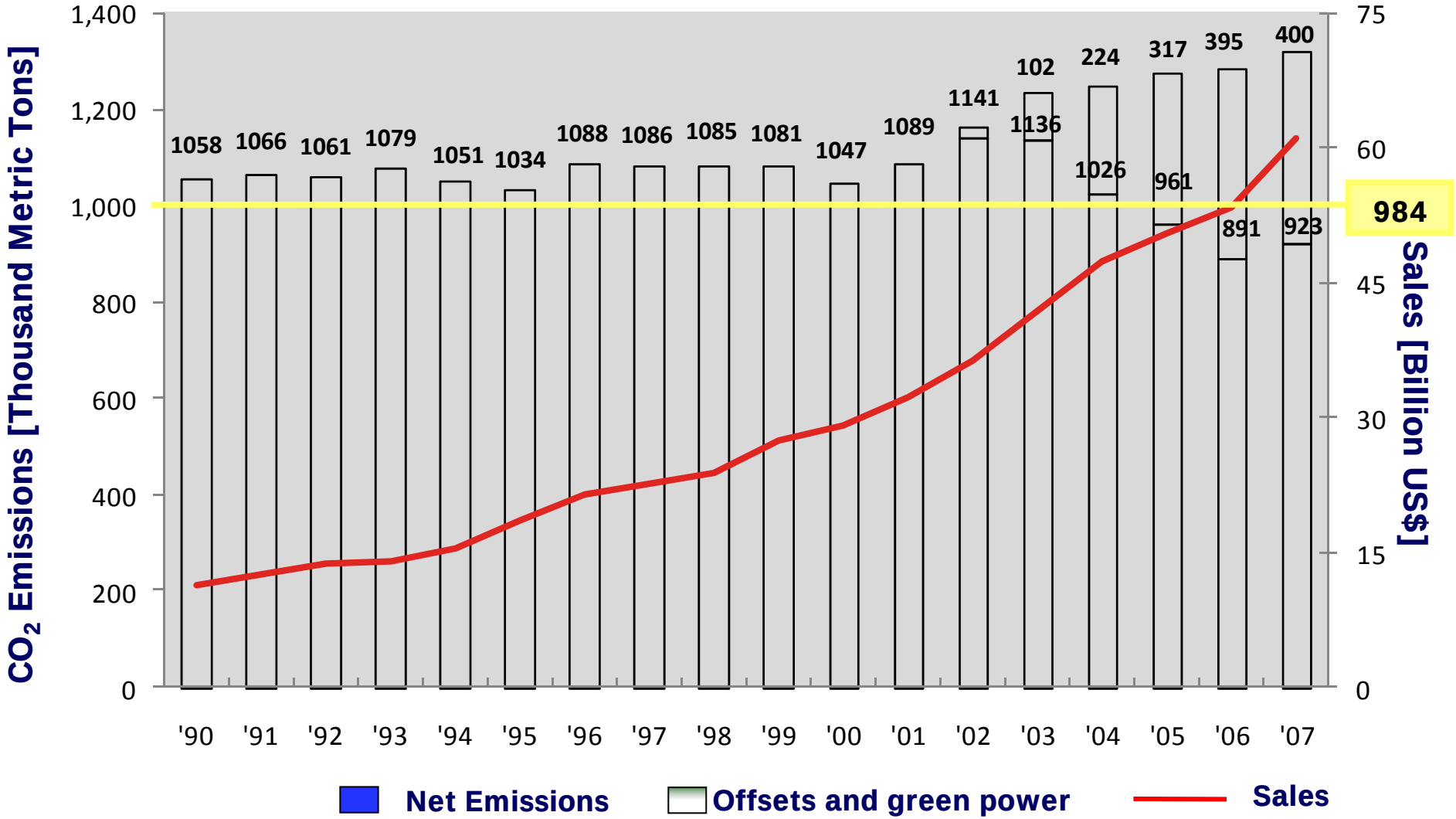
Worldwide Results

2010 Goal: -7%

2007 Status: -12.7%

CO_2 Emissions 1990-2007 vs. Sales



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Energy Projects – Prior to 2000

- Focus on energy and cost reduction
- Primarily energy efficiency focus
- Acceptable payback was a moving target: 3-8 years
- Many small projects; few multi-million $ projects

Shift in Focus 2000-2004

- Energy and GHG reductions
- Respond to rising energy costs
- Renewable energy, cogeneration
- Larger projects
- Dedicated funding with IRR hurdle rate

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CLIMATE FRIENDLY ENERGY POLICY

POLICY

As indicated in our Next Generation Goals, adopted in 2000, it is the responsibility of each Company/Business Unit to meet our greenhouse gas reduction goal of a 4% reduction by 2005 and a 7% reduction by 2010, in absolute terms with 1990 as a base year.

The pathways for a climate friendly energy policy include five elements:

- Energy efficiency improvements in all of our operations
- Cogeneration: on-site generation of electricity and recovery of the waste heat for overall efficiencies of 80+%
- On-site renewable energy that produces no CO_2 emissions
- Renewable electricity purchases
- Carbon trading and sequestration

The Johnson & Johnson businesses worldwide will adopt this climate friendly energy policy to reduce our operating costs, meet our emerging legal and societal obligations and improve the environment for all of us and future generations.

Dennis Canavan
Executive Director, Worldwide Energy Management

Approved:

R.C. Deyo
Vice President and General Counsel

Approved:

Robert Darretta
Vice Chairman and Chief Financial Officer
Chairman, Worldwide Environmental Steering Committee

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Original 4/28/03
Re-Issue 6/14/04

Climate Friendly Energy Policy
1999/2003

Achieve a 7% absolute reduction in Green House Gas (CO_2) emissions by 2010, compared to a base year of 1990

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CO_2 Reduction Pathway: A Balanced Approach

- Energy Efficiency
- On-site Cogeneration
- On-Site Renewables: Solar, Wind, LFG, Biomass, Geothermal
- Green Power Purchases
- Carbon Offset Trading & Sequestration

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Group Finance

CO_2 Capital Funding Process

August, 2004

- $40 million per year in capital relief for Projects Worldwide
- Projects provide good financial returns: 10-15% Internal Rate of Return
- Projects provide meaningful CO_2 reduction: $1000/Metric Ton

Funding is for improvements to existing facilities; new construction projects must include energy efficiency technologies.

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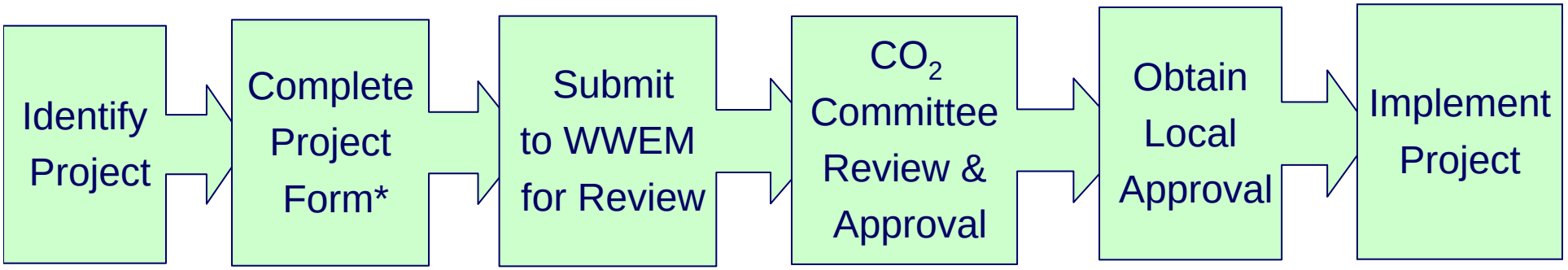
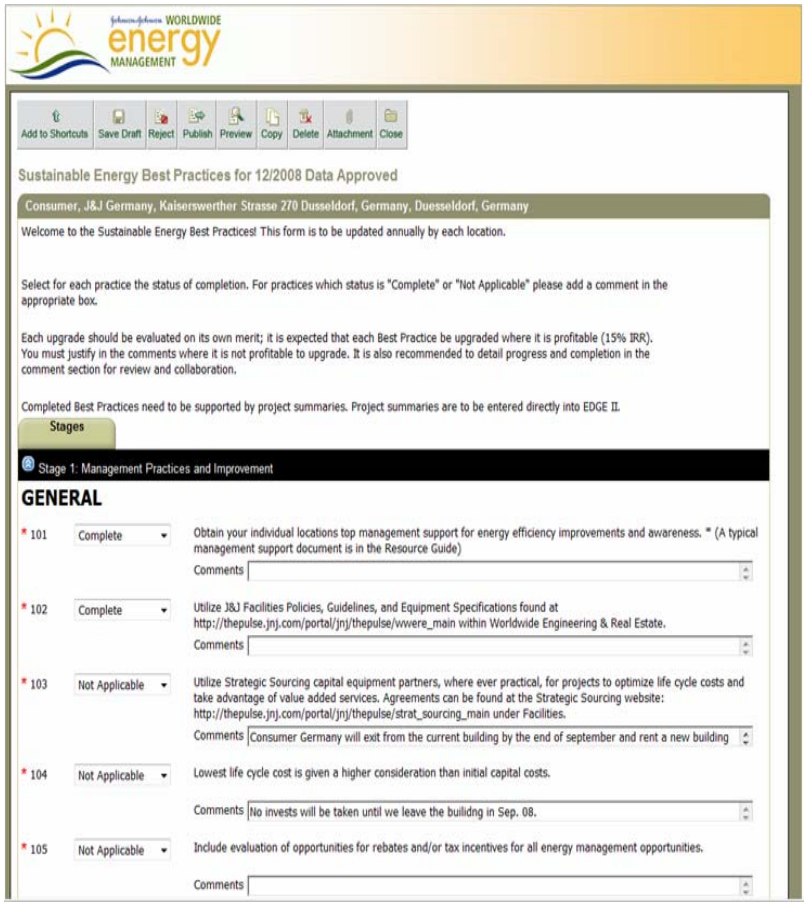
Capital Project Approval Process



Efficiency
Energy Best Practices
Rev. 2007



- Stage 1: Management Practices & Continuous Improvement
- Stage 2: Energy Purchasing & Monitoring
- Stage 3: Air Handling (HVAC)
- Stage 4: Motors & Pumps
- Stage 5: Boiler Systems
- Stage 6: Chiller Systems
- Stage 7: Electrical & On-site Generation
- Stage 8: Lighting
- Stage 9: Compressed Air
- Stage 10: Manufacturing & Other Load Reductions

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CO_2 Reduction Project Summary

Company	Ortho-McNeil Pharm USA		Project Type	CHP: Combined Heat & Power				
Operating Group	Pharmaceuticals & Nutritionals		Description	1 - 4.6MW, 13,500#/hr Solar Mercury				
Address	1000 Route 202							
City	Raritan		Start Date	15-Nov-04				
State	NJ		Completion Date	31-Dec-05				
Country	UNITED STATES		Project Life [years]	20				

		2005	2006	2007	2008	2009	2010	Total (2005-2010)
Appropriation Capital	[US$]	$350,000	$2,150,000	$6,300,000	$0	$0	$0	$8,800,000
Appropriation Expense	[US$]	$0	$0	$0	$0	$0	$0	$0
Total Project Cost	[US$]	$350,000	$2,150,000	$6,300,000	$0	$0	$0	$8,800,000
CO_2 Reduction	[tons CO_2]	0	0	7,048	7,048	7,048	7,048	28,192
Capital Cost/CO_2 Reduction	[US$ / tons CO_2]	-	#DIV/0!	$894	$0	$0	$0	$312
Internal Rate of Return (IRR)								15.0%

		2005	2006	2007	2008	2009	2010	Total (2005-2010)
Electricity Usage Savings	[kWh]	0	33,638,184	33,638,184	33,638,184	33,638,184	33,638,184	168,190,920
Fuel Usage Savings		0	216,579	216,579	216,579	216,579	216,579	1,082,895
Fuel Type								Natural Gas
Electricity Unit Cost	[US$ per kWh]	$0.084	$0.092	$0.092	$0.095	$0.098	$0.101	$0.094
Fuel Unit Cost	[US$ per unit]	$7.910	$8.150	$8.390	$8.640	$8.900	$9.170	$8.527
Electricity Cost Savings	[US$]	$0	$3,094,713	$3,094,713	$3,195,627	$3,296,542	$3,397,457	$16,079,052
Fuel Cost Savings	[US$]	$0	$1,765,119	$1,817,098	$1,871,243	$1,927,553	$1,986,029	$9,367,042
Total Energy Cost Savings	[US$]	$0	$1,329,594	$1,277,615	$1,324,385	$1,368,989	$1,411,427	$6,712,010

Comments

Total project cost assumes a $1MM rebate from NJ BPU through the Clean Energy Program, which this project has a good chance of receiving. Without the rebate, Capital Cost/CO2 Reduction is $376 and IRR = 13.7%.

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Financial Analysis of Projects – Things to Consider

- Model the cash flow for life of the equipment (10,15,20 years)
- Energy Costs: Use most accurate local data, i.e., contract pricing; NYMEX futures; Use 3-4% annually as a default
- Use J&J Worldwide Financial Procedure 410(b); provide Finance contact in submission
- Consider Price of Carbon in Analysis (What would it cost to buy carbon offsets in lieu of project?)
- Check for incentives & tax credits for additional returns (Utility, local, national incentive programs)
- Consider selling REC's if necessary to make hurdle rate

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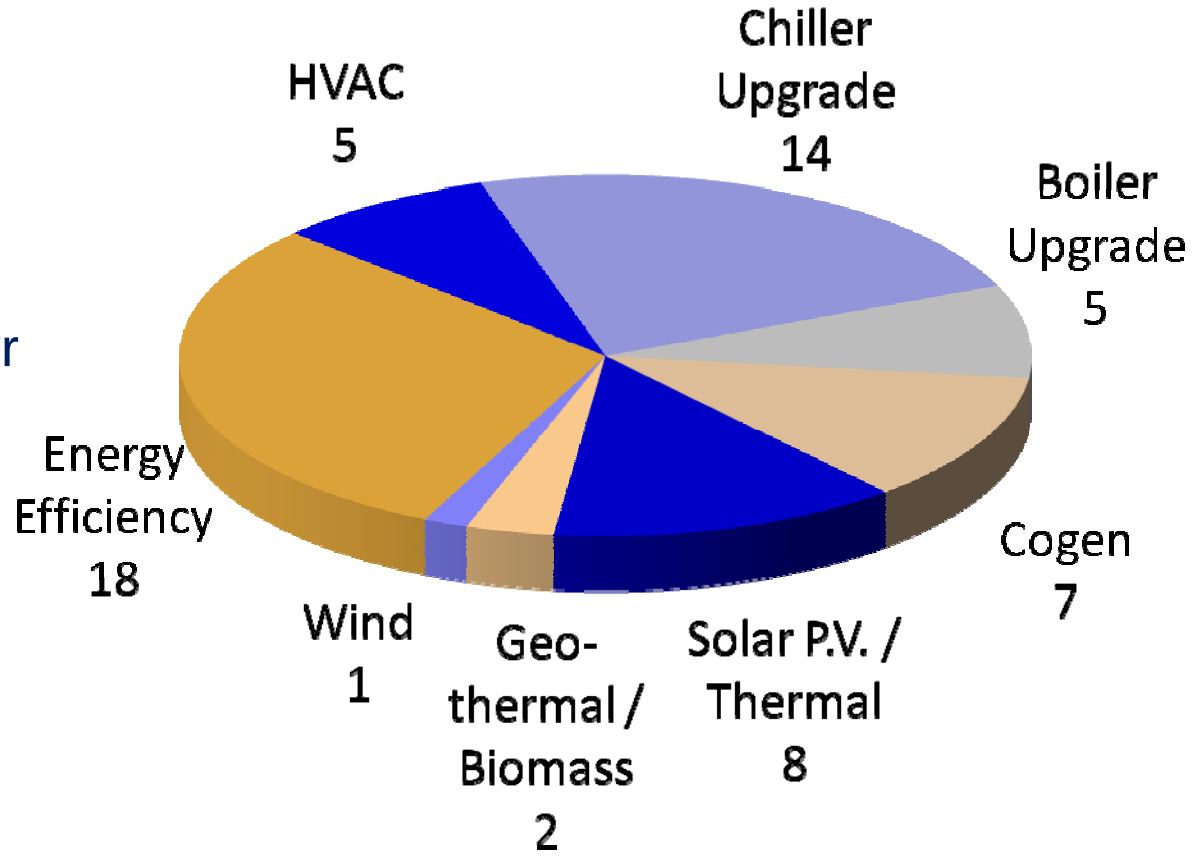
CO_2 Reduction Projects Funded by Program

- 60 projects approved for funding
- $121 million US
- 115,000 metric tons CO2/yr
- Average IRR: 16.8%
- 33 Projects Complete



Energy Efficiency Projects

Ethicon
Somerville, NJ
Upgraded Chiller with VFD

Janssen
Beerse, Belgium
Stack Gas Economizer

Healthcare Systems
Memphis, TN
Cool Roof Coating

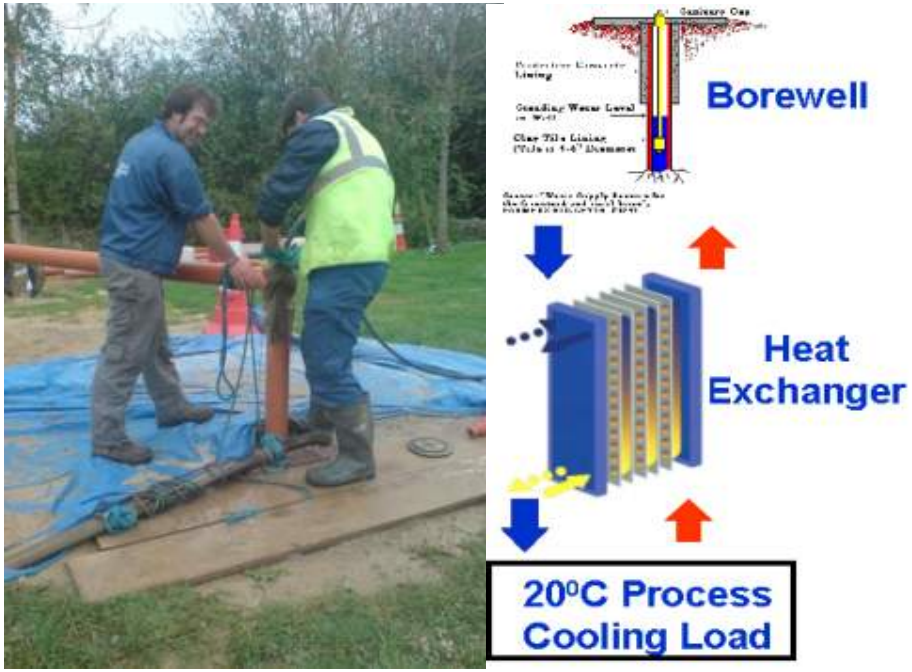
Ethicon
Cornelia, GA
Boiler Upgrade

PRD
High Wycombe
Ammonia Chillers

Geothermal Projects

DePuy - St. Priest, France
Geothermal Heating / Cooling System

- Ground water heat pump
- Utilizes underground aquifer 130 m below building as heat sink
- Provides all heating & most cooling for 7,000 s.m. HQ building



Vistakon – Limerick, Ireland
Geothermal Cooling System

- Phase 1 complete offsetting air compressor loads
- Utilizes underground water flow
- Phase 2 feasibility underway

Biomass Projects

Wood Chip Boiler
Cilag, Schaffhausen, Switzerland

350 kw boiler provides heating for distribution center

Wood from sustainable forest operated by township

J&J PRD (ALZA)
Mountain View, CA, USA

Installation of 3 megawatts of landfill gas power

CO_2 Reduction: 7,000 MT/year

Cogeneration Projects

OCD – Raritan, NJ
Gas Turbine

- 1.6 MW – Kawasaki Gas Fired Turbine
- Low NOx
- Heat recovery steam generator

Ethicon – Cornelia, GA
Microturbines

- 2x250 KW Ingersoll Rand Gas Fired Microturbines
- Custom Heat Exchanger Retrofit

Solar Thermal Projects

J&J China, Shanghai: Domestic Hot Water

McNeil Consumer
Ft. Washington, PA
124 kW Thermal System for
Boiler Pre-heat

Janssen

Gurabo, Puerto Rico

Domestic Hot Water

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Company: J&J Corporate **Location:** New Brunswick, New Jersey

Project: 234 kW Solar Photovoltaic Tracking System

Completed: March 2006



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Company: J&J Consumer Products **Location:** Skillman, New Jersey

Project: 505 kW Solar Photovoltaic Tracking System

Completed: October 2005

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Company: GPSG **Location:** Vacaville, California

Project: 1,194 kW Solar Photovoltaic Tracking System

Completed: October, 2007



THANK YOU !

Dennis Canavan

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Establish a Capital Set Aside Program for Energy Projects

Jack C Shih, PE
Manager, Environmental Affairs
Navistar, Inc.

ENERGY STAR Monthly Partner Meeting
November 19, 2008

Agenda

- About Navistar, Inc.
- Reasons for requesting capital set aside program for energy projects
- 2004 Request of Corporate Energy Fund
- 2007 Request of Corporate Energy Fund
- Fund Allocation
- Potential Reasons for Approval
- Other Actions to Consider

About Navistar, Inc.

- Formerly:
  - International Harvester
  - Navistar International Transportation Corp.
  - International Truck and Engine Corporation
- Manufactures Trucks and Diesel Engines
- Annual Energy Cost: $70 million
- Approximate 600,000 tonnes Scope I and II GHG Emissions



Reasons for requesting capital set aside program for energy projects

- Too much competing projects, too little available funding
- High hurdle rate for capital projects
- Priority given to production related projects
- Performance contracting generally not allowed

2004 Request of Corporate Energy Fund

- Request $ 4 million set aside for energy capital projects
- Proposal includes detail steps on project evaluation, funding allocation and performance verification
- Projects must meet 15% Return on Assets (ROA) hurdle rate
- Recruited senior executive as program sponsor

2004 Request of Corporate Energy Fund

- Request received multiple levels of support but was rejected at the highest level
- Possible reasons for rejection
  - Too ambitious in asking a blank check of $4 million
  - 15% ROA hurdle rate may be too low
  - Other competing priorities

2007 Request of Corporate Energy Fund

- Requesting $2 million
- Project must achieve minimum 25% ROA hurdle rate
- Recruit Executive Vice President as program sponsor
- Recruit supports from other VPs
- Proposal includes more comprehensive steps on project evaluation, funding allocation and performance verification
- Identified Review Team members to evaluate technical and financial merits of submitted projects
- Identify Allocation Committee members to make final decisions on fund allocation
- CEO approved the $2 million funding in December 2007

Funding Allocation

- Facilities requested to nominate energy projects
- $5 million worth of requests submitted
- 24 projects awarded based on projected cost savings and environmental benefits
- Projects include motor / compressor replacements, lighting upgrades, installing energy management system and meters

Potential reasons for approval

- Overall increase in energy conservation / climate issue awareness
- Recent legislative / regulatory developments
- Support company sustainability efforts / energy conservation goals
- Supports from other corporate organizations

Other Actions to Consider

- Elevate energy conservation projects to become mandatory (compliance) requirements
  - Commitments made as EnergyStar, Climate Leader, SmartWay and Business RoundTable Climate Resolve Program member
- Lobbying management to allow future carbon credits be included in ROA calculations
- Participate in EnergyStar Industrial Focus Groups for best practices and new ideas

Upcoming Web Conferences

Month	Topic
December	No web conference
January 2009	ENERGY STAR Update
February	Designing Energy Efficient Buildings
March	Datacenter Energy Management
April	Solar Power Strategies
May	Leading Energy Programs – 2009 ENERGY STAR Partner of Year

Past Presentations – See “Networking Opportunities” @ energystar.gov

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2009 Web Conferences

- Have a good idea for web conference?
- Have a great energy management story?
- Have an issues your wondering about?
- Then contact: tunnessen.walt@epa.gov with some suggestions!

Thank You!