

Johnson & Johnson Ortho-Clinical Diagnostics (OCD) Cogeneration Project Raritan, NJ

Jed Richardson

J&J Utility Manager NJ&PA

908 927 5562

jrichar9@its.jnj.com



Ortho-Clinical Diagnostics

a Johnson & Johnson company

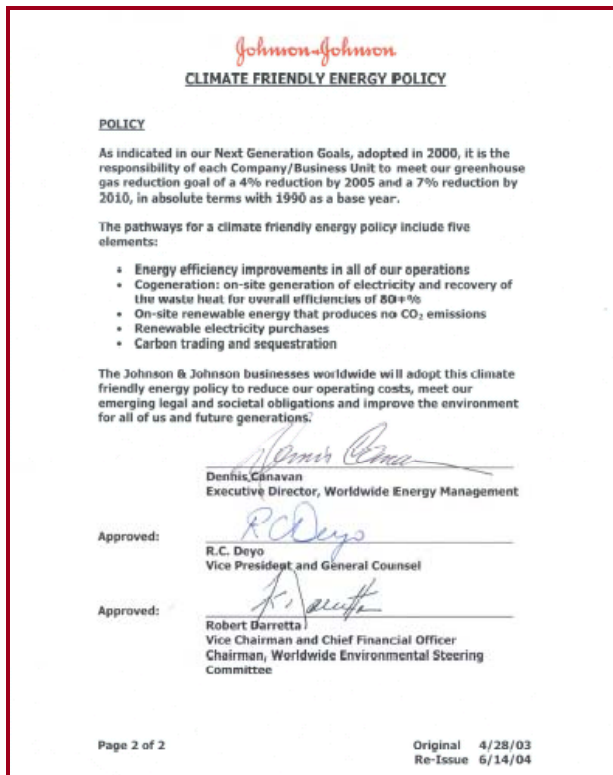


GPSG

Global Pharmaceutical Supply Group



Climate Friendly Energy Policy July 2003



**Achieve a 7%
absolute reduction in
Green House Gas
(CO₂) emissions by
2010, compared to a
base year of 1990**



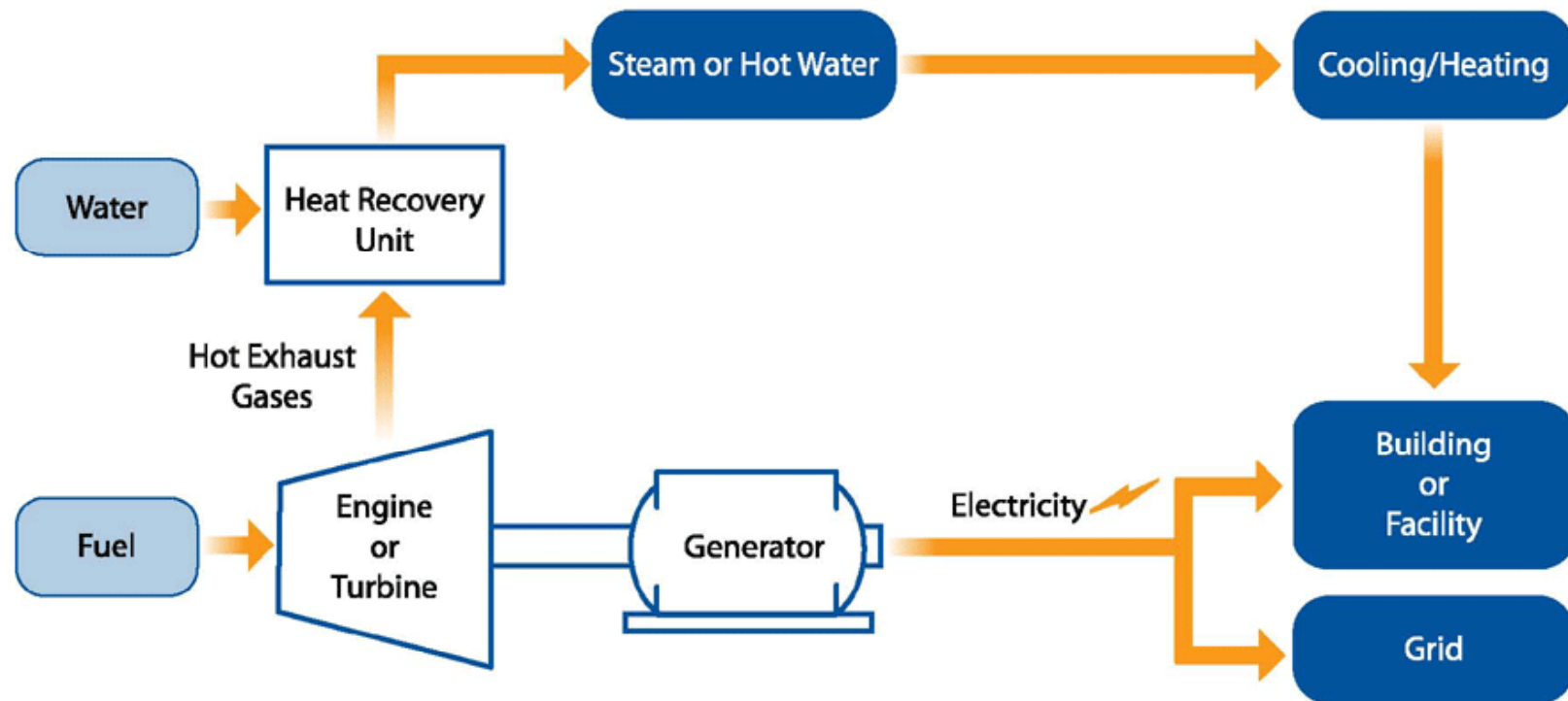
Energy Project Funding

J&J Corporate has set up a special fund to support energy reduction projects with significant CO₂ reduction and a 15% IRR or better.

This allows solid investments to be made without competing with manufacturing/product related projects.

What is cogeneration & Why is it valuable?

Combined heat and power (CHP)



Efficiency of electricity bought off the grid ~ 35%

Efficiency of our cogen system ~ 80%

OCD Cogen Project Info

Equipment:

- 1.5 MW Kawasaki gas turbine
- 125 HP Gas compressor
- 12,000pph Heat Recovery Steam Generator (HRSG)



Project Stats:

- \$4.5MM investment, ~5yr simple payback
- Produces 40% of our electric and 75% of our steam needs on site
- Reduces over 5,500,000 lbs of CO₂ per yr; equivalent to taking 475 cars off the road annually



OCD Cogen Project Financing

J&J financial model:

- ~\$800,000 in energy savings per yr
- ~\$300,000 in actual savings (minus taxes, depreciation, maintenance, etc)

CHP Clean Energy Program:

- ~\$1MM rebate

All in:

- ~14% IRR (without rebate 11%)
- Over \$1MM NPV (without rebate \$375k)

		INVESTMENT				
		2006	2007	2008	2009	2010
A. NET INCOME (LOSS) IMPACT						
A.	Reduction in electricity	0	498	1,540	1,586	1,634
B.	Increase in fuel use	0	(705)	(2,177)	(2,242)	(2,310)
C.	Increase in maintenance costs	0	(48)	(144)	(144)	(144)
D.	Reduction in boiler fuel use	0	465	1,436	1,479	1,523
1. Net Trade Sales						
Expenses:						
2.	Savings	0	(211)	(655)	(679)	(704)
3.	Depreciation	0	179	179	179	179
4.	Other Direct Costs of Sales					
5.	Direct Operating Expenses					
6.	Interest Expense (Income)					
7.	Allocated Operating Expenses					
8.	Total Expenses	0	(31)	(476)	(500)	(524)
Project Related Expense:						
9.	New Project Expense					
10.	Start Up Costs					
11.	Dismantling Costs					
12.	Less: Salvage Value					
13.	Total Project Related Expense	0	0	0	0	0
14.	Income (Loss) Before Taxes	0	31	476	500	524
15.	Provision for Taxes	0	12	182	191	200
15a.	Special 10% Refund					
16.	Net Income (Loss) Impact From Operations	0	19	294	309	324
B. NONCASH CHARGES						
17.	Depreciation and Amortization	0	179	179	179	179
18.	Deferred Taxes Increase (Decrease)					
C. BALANCE SHEET IMPACTS						
Capital Expenditures:						
19.	Land & Land Improvements					
20.	Building & Building Equipment	2,000	2,582			
21.	Machinery & Equipment	0	(1,000)			
22.	Leasehold Improvements					
23.	Total Capital Expenditures	2,000	1,582	0	0	0
Working Capital (Increase) Decrease:						
24.	Accounts Receivable					
25.	Inventory					
26.	Other					
27.	Total Working Capital (Increase) Decrease	0	0	0	0	0
28.	D. INT ADJ FOR CASH FLOW (net of tax)	0	0	0	0	0
29.	E. NET CASH FLOW GENERATED	(2,000)	(1,384)	473	488	503
	Cumulative cash flow	(2,000)	(3,384)	(2,911)	(2,423)	(1,920)
F. PRESENT VALUE						
30.	% Cost of Capital	10.00%				
31.	Discounted Cash Flows	(2,000)	(1,258)	391	367	344
32.	G. NET PRESENT VALUE	1,118				
33.	H. INTERNAL RATE OF RETURN	14.0%				

JOHNSON & JOHNSON WORLDWIDE APPROPRIATION REQUEST SUPPORT (\$ U.S. IN THOUSANDS)

COMPANY NAME GPSG Raritan
PROJECT TITLE OCD Cogen - Kawasaki

Lessons Learned

- Poor natural gas quality
- Engineer, procure, and construct
- Equipment vendor experience & service in US
- Equipment reliability
- In house operations and maintenance time
- Long term maintenance agreement details



CoGen Triple Bottom Line

People - Social benefits



- Improved air quality
- Improved grid availability
- Maintains local manufacturing

Planet - Environmental benefits



- Reduces consumption of fossil fuels
- Reduces Green House Gas emissions
- Reduces local generation of NOx, a component of smog

Profit – Operational and Reputation benefits



- Decreases operating costs and improves profits
- Supports and demonstrates Johnson & Johnson's Credo, our commitment to the environment, and our global and local communities

Recapping Our Journey

January '05 – Began to investigate cogen with vendors

June '05 – Began to discuss cogen with upper management

February '06 – Design Team Kickoff Meeting

August '06 – Raritan Planning Board Approval

December '06 – Ground Breaking

January to April '07 – Foundations, Facility Structures, Piping, Electrical

May '07 – Gas Compressor & HRSG Arrived on Site

July '07– Turbine Skid Arrived on Site

September & October '07 – Final Testing & Commissioning

January '08– Cogen System and Site Work Complete