

Energy Management & Efficiency Improvement in Oil & Gas sector

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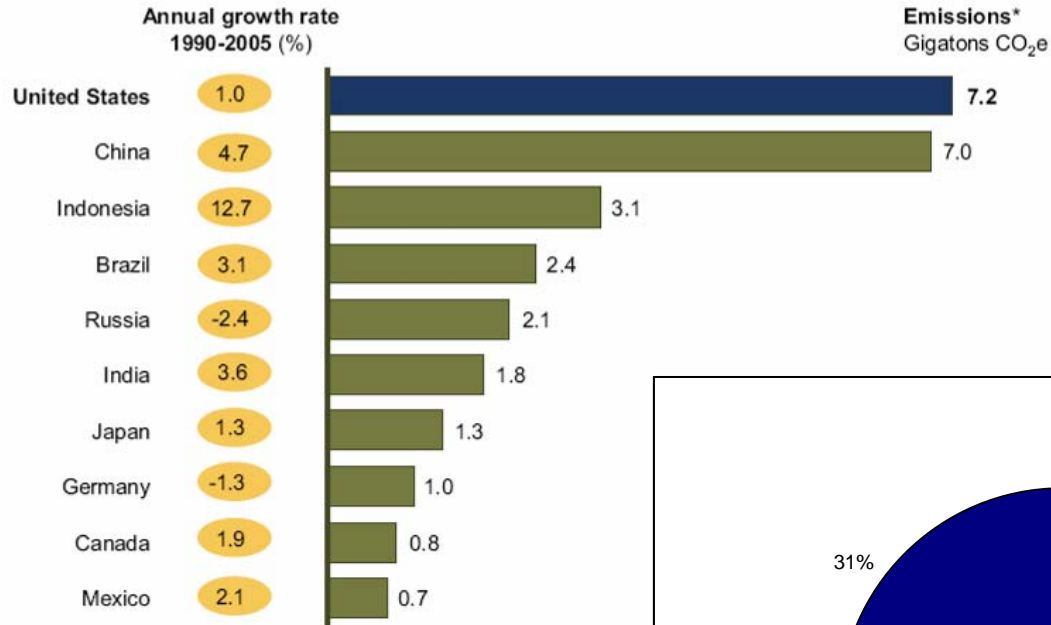
November 13, 2009

New Delhi

Honeywell

GHG Emissions By Country/Industry Sector

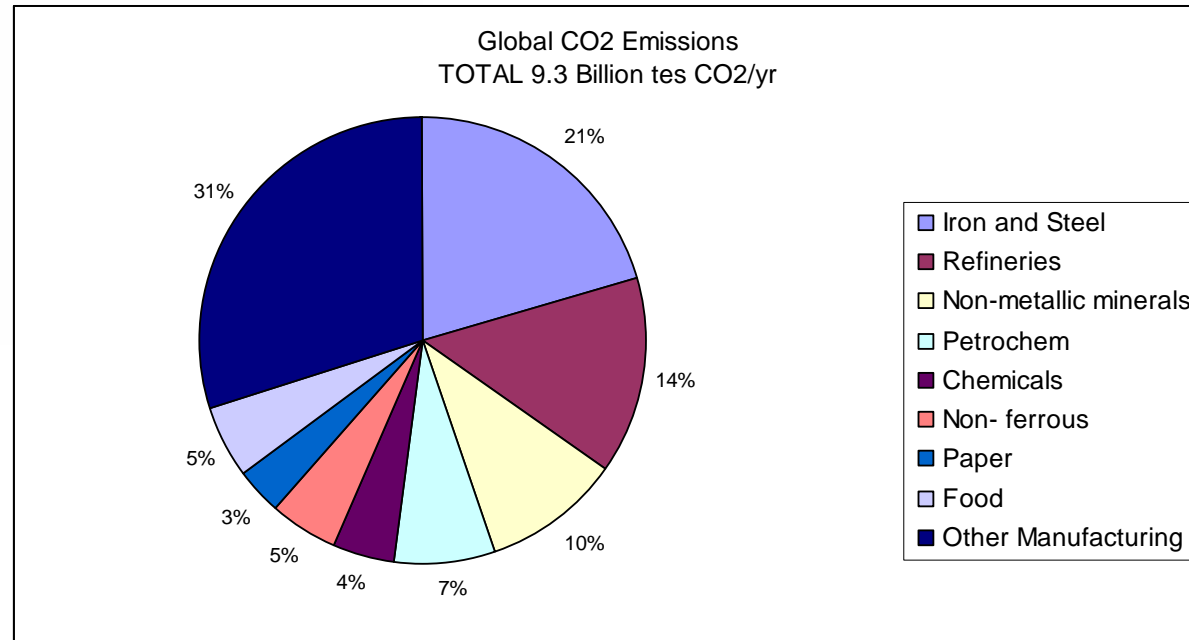
GHG EMISSIONS FOR SELECT COUNTRIES – 2005



* Includes emissions associated with deforestation and land-use changes

Source: IEA; EPA; WRI; UNFCCC; McKinsey analysis

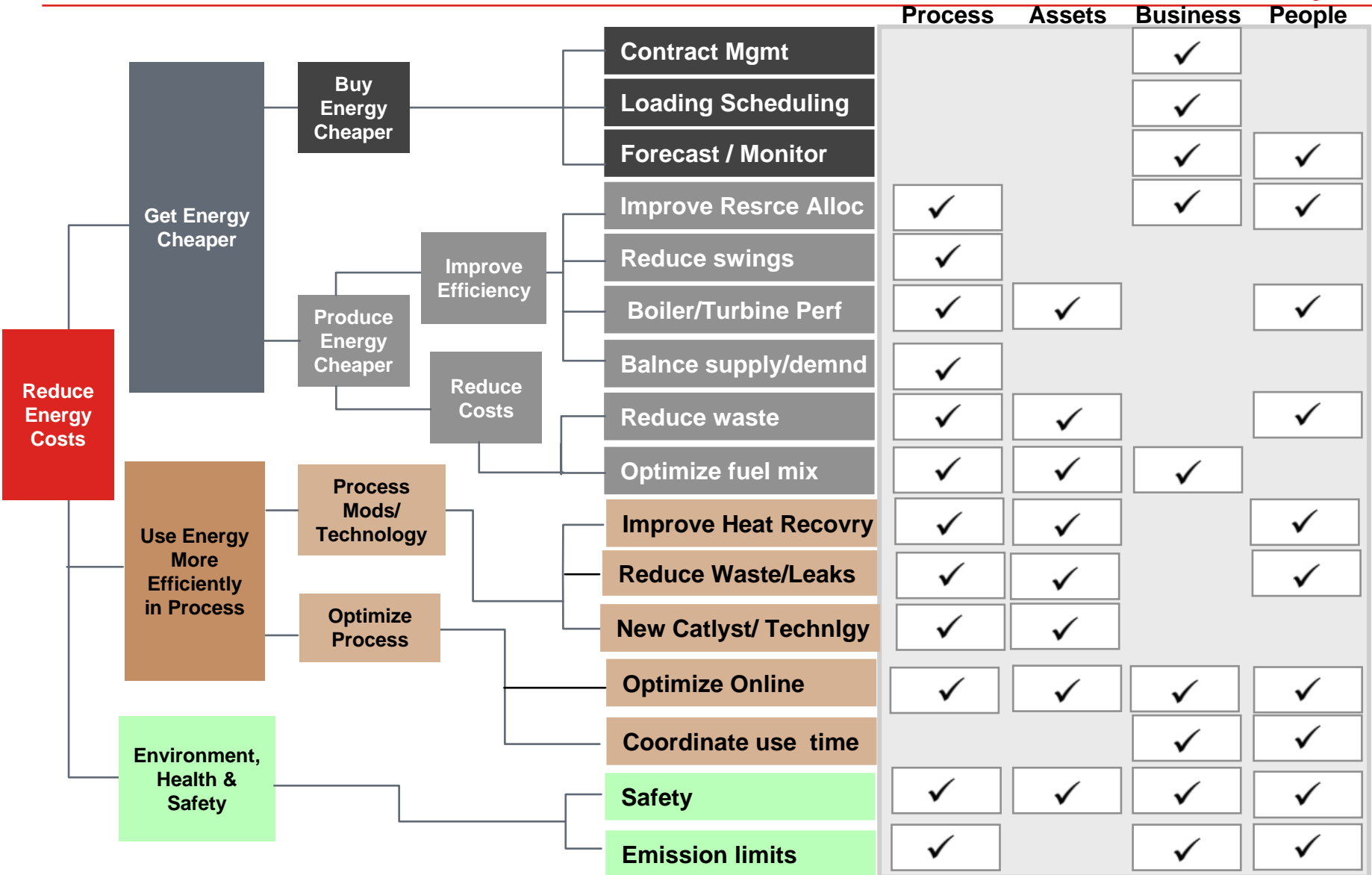
- **O&G best position to lead**
 - **Big consumer:** next only to Iron and Steel
 - **Organized:** Ideal for application of PAT (perform, achieve, trade) scheme
 - **Eco system:** Has ecosystem (CHT, PCRA, EIL, IIP, IREDA,) to support achievement



*Power generation is included in these numbers Source WEO and DOE/EIA
US CO₂ Emissions 2005

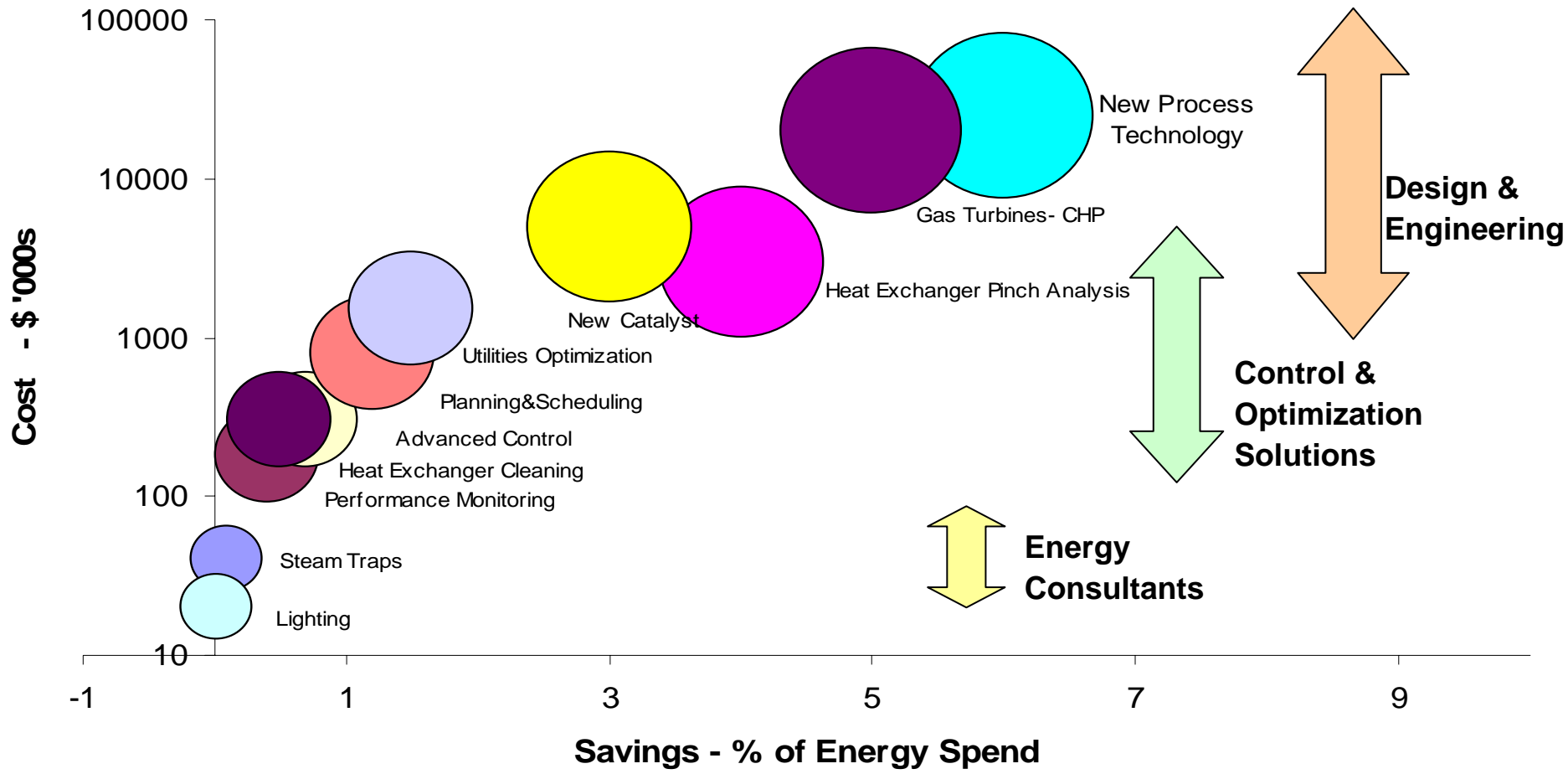
India Needs to Lead the Way Oil & Gas Sector Critical to Success

Scope of opportunities



Energy Efficiency Map

Relative Cost-Benefits For Energy Initiatives



Multiple technologies, multiple implementation models

Suppliers have breadth of technology (Honeywell Example)



Process Plant

Area of Saving	Energy Improvement %	Energy Saving MM\$/yr	CO ₂ Reduction kMt/yr
Improve Monitoring and Operation	2-4	1.5-3	24-48
Online Control Optimization and Co-Design	2-6	1.5-2.5	24-36
Balance Supply and Demand	1-2	1-1.5	12-24
Reduce Waste	4-8	3-6	48-96
Energy Management	3-5	3-6	36-96
Incorporate Renewables (1000 BPD Ecofining Unit)	CO ₂ Credit	4	116
Total	12 - 25	14 - 23	144 - 416

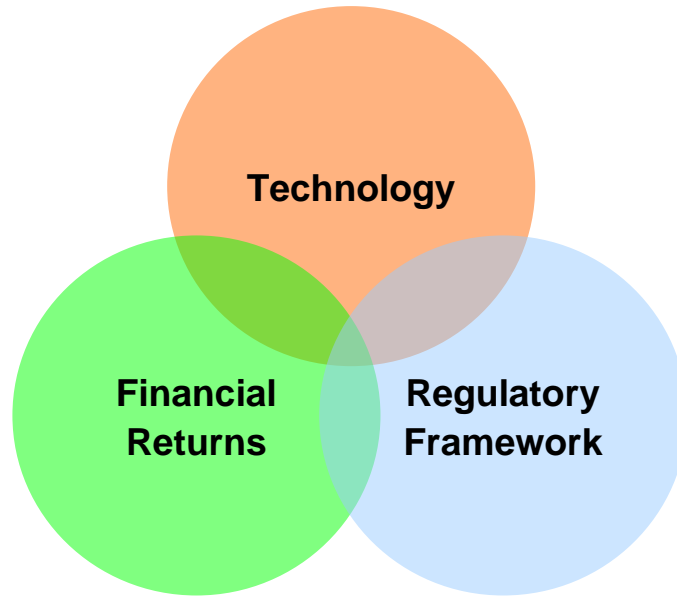
Commercial Building

Area of Saving	Energy Improvement %
Demand Side Response: Honeywell's commercial programmable thermostats and energy management systems reduce heating and cooling energy demand	15-20
Honeywell Energy Saving Performance Contracting can reduce total energy demand for a building	20-30
Spray foam insulation using Honeywell's Enovate® advanced thermal insulating technology demonstrates better energy savings than the next best insulation while improving structural strength up to 3-fold	26-32
Refrigerators and air conditioners using Honeywell refrigerant consume less energy than comparable cost systems	5-10

Transportation

Area of Saving	Energy Improvement %
Diesel turbocharged cars and light trucks using Honeywell turbochargers consume less fuel than their gasoline counterparts	30-40
A new FRAM® air filter can reduce fuel consumption	10
Using Honeywell's pressure sensors, Tire Pressure Monitoring Systems can help ensure proper tire inflation and reduce a vehicle's fuel consumption up to 3%	26-32

Collaborative Approach is Key



“If you deeply understand sustainability, then it's just like the quality movement some 30 years ago.

If you recall, there was a lot of debate about whether quality will increase cost. What did we find?”

C.K.Prahlad

