8TH PETRO INDIA

24-25 Nov 2009

ACCELERATING
CITY GAS DISTRIBUTION PROJECTS

SHARING EXPERIENCE

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City Gas Distribution

- NATURAL GAS PERSPECTIVE
- CGD GROWTH DRIVERS
- UNDERSTANDING CHANGED BUSINESS SCENARIO
- UNDERSTANDING ISSUES
- DEVISING EXECUTION STRATEGIES

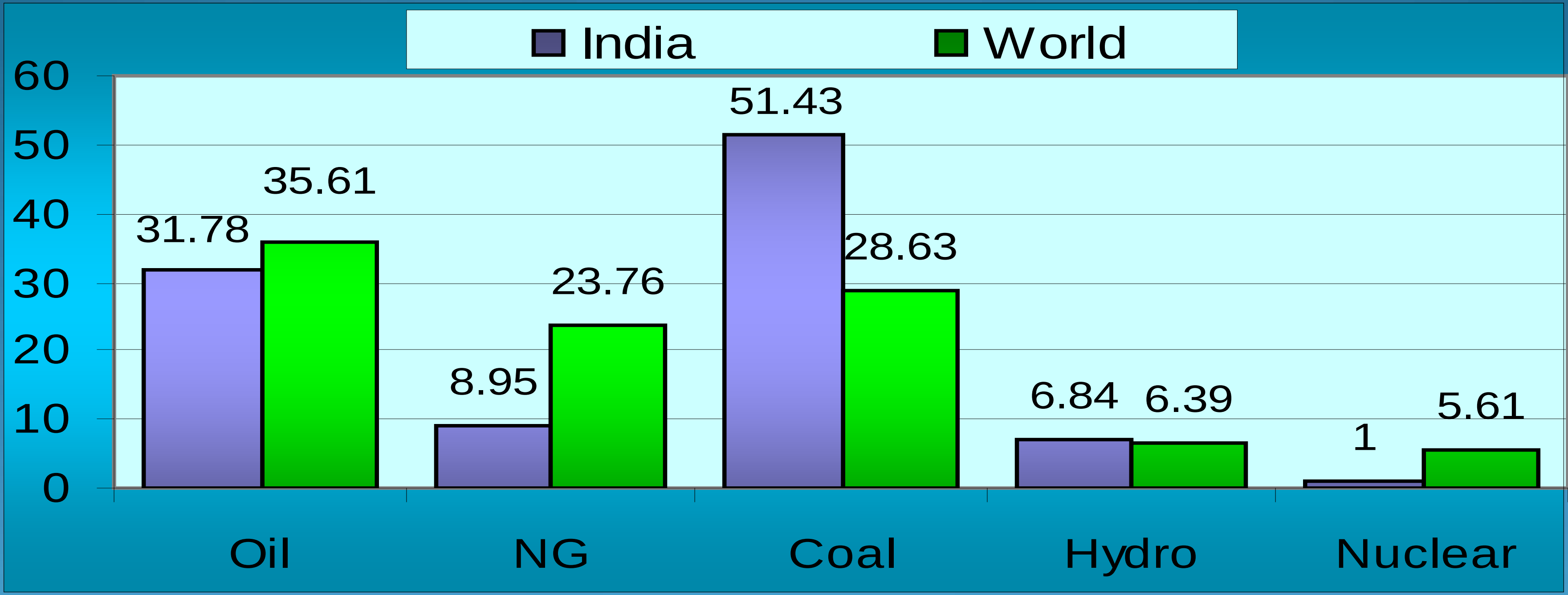
INDIAN ENERGY PERSPECTIVE

India’s primary energy consumption in 2007 registered a growth of 6.8% against the average growth 5.6% during 2003-06.

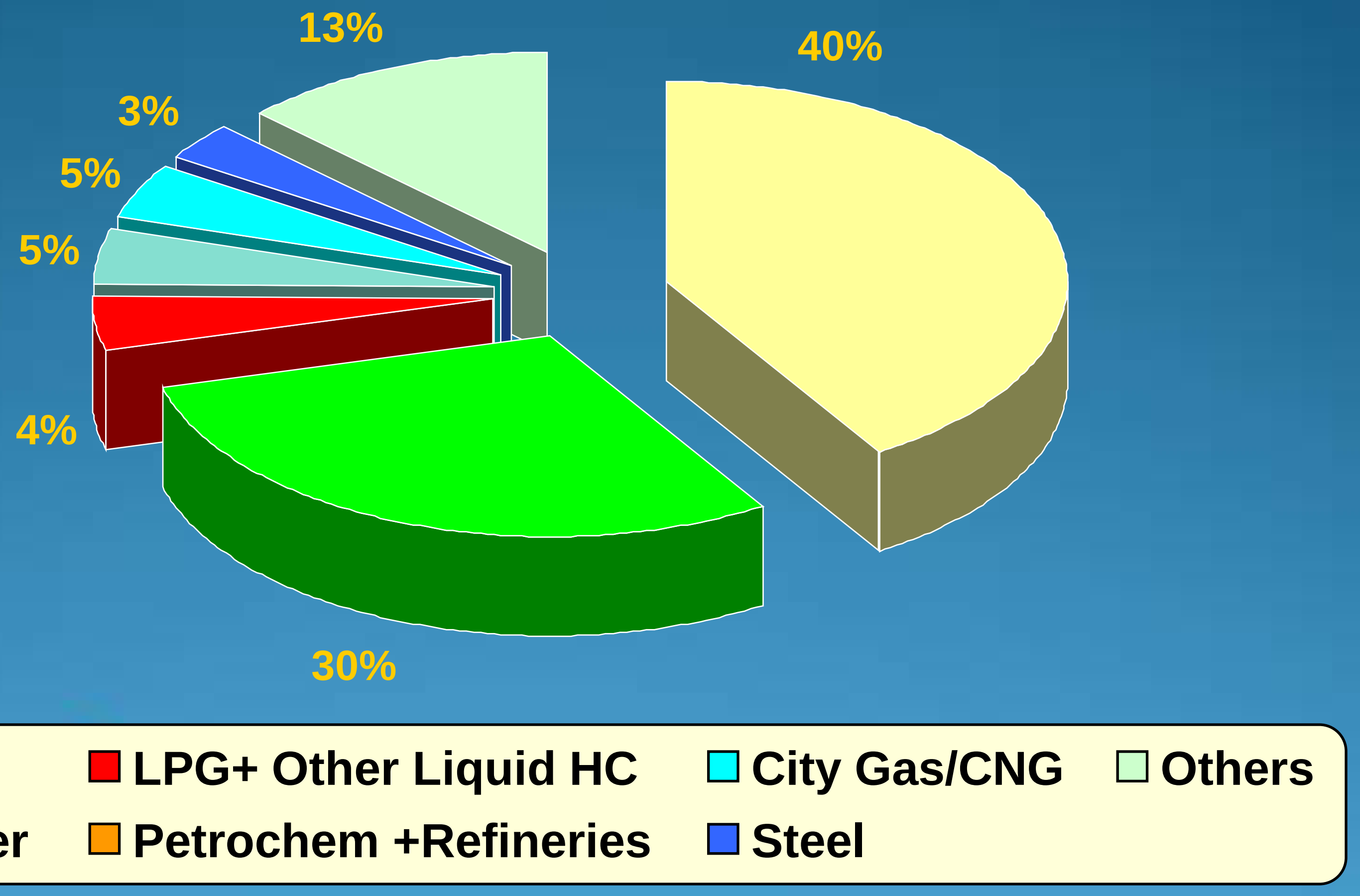
YEAR	PRIMARY ENERGY CONSUMPTION (MTOE)	% GROWTH
2003	316.2	2.7%
2004	343.9	8.8%
2005	362.2	5.3%
2006	378.5	4.5%
2007	404.4	6.8%

INDIAN ENERGY PERSPECTIVE

Share of Natural Gas in Indian Primary Energy basket in 2007 was over 8.5% (in 80's 3-4%) compared to Global avg. of 24%.



NATURAL GAS CONSUMPTION- Sector Wise



NG 9% of Energy basket, CGD/CNG growth 0.5 – 5 MMSCMD, 00-07

INDIAN ENERGY PERSEPECTIVE

- WIDER SCOPE TO PROMOTE & EXPAND-

i. INDIA'S NG SHARE IN WORLD ENERGY BASKET 1/3RD

ii. INDIA'S PER CAPITA PEC (2007) 1/5TH OF GLOBAL

iii. INDIA WORLD'S 6TH LARGEST ENERGY CONSUMER, ONE OF THE FASTEST GROWING ECONOMIES

NATURAL GAS -UNIQUE FUEL

- NATURAL GAS ITSELF A CATALYST OF CGD EXPANSION
- UNIQUE FUEL - READY TO USE, EFFICIENT, CLEAN, ECONOMICAL , AVAILABLE IN BIGGER VOLUMES
- CONVERTIBILITY - USE/NEED SPECIFIC
- LNG- (-160 Deg C,reduces by 1/600th of Vol, Easy Transport)
  CNG- (Compressed at 200-250 Kg/cm^2- Transport Fuel)
  PNG- (at Press 4mbar to 19 Kg/cm^ for Dom /Comm/ Indus)
- NO WONDER –ITS FORE RUNNER OF INDUST REVOLUTION- SERVING THE BIGGEST CONSUMER MKT AS GREEN FUEL

CGD GROWTH DRIVERS

1.ECONOMIC BENEFITS OF CNG

			(In Rupees/Km)
	Auto Rickshaw	Petrol Car	Bus
CNG	0.54	0.9	4.61
Petrol	1.62	2.71	-
Diesel	-	-	8.82
Savings	1.08	1.81	4.21

2. EARLY PAYBACK

Type of Vehicles	Avg. Daily running (Kms)	Cost conversion	Annual saving	Payback Period (Months)
Car/Taxi (Petrol)	150	40,000	97,282	5
3Wheeler (Petrol)	100	18,000	38912	6
Bus (Diesel)	200	4,00,000	1,72,216	28

Note: Mileage considered for Car, 3Wheeler and Bus are 15, 25 and 3.5 Km/hr respectively at current fuel prices in Delhi

3. FOREX SAVING BY CNG USAGE v/s Other Liquid Fuels

% Vehicles converted to CNG from Petrol/Diesel	Qty of Petrol/ Diesel replaced (TMT)	Forex Savings (Cr) (All India basis)
20	17019	25,886
50	42548	64,715
75	63822	97,072

Assumptions:

- Annual Qty. of crude oil consumption for 2007-08 around 1,54,719 TMT
- % of Petrol and Diesel out of crude oil is 65%
- % of Qty of Petrol and Diesel used in transport sector around 55%
- Gas cost considered as $9 per MMBTU for transport sector

UNDERSTANDING CHANGED BUSINESS SCENARIO

TO WORK FROM NO COMPETITION-MONOPOLY ENVIRONMENT TO A DIFFERENT COMPETITIVE, TRANSPARENT & REGULATED ERA

MANDATORY TO DISCRETIONARY DEMAND

CHOICES OF GAS SOURCES

WELL ESTABLISHED CGD KNOWLEDGE & TECH, BENCH MARKING

CUSTOMER REQUIREMENT - REQUESTING TO DEMANDING

UNDERSTANDING ISSUES

NEED OF TRIPARTITE MECHANISM WITH PNGRB, STATE & CGD ENTITIES TO RESOLVE ISSUES/ STAUTORY CLEARANCES

PNGRB MAY REVISIT THEIR JOURNEY SO FAR !

FOR OBJECTIVE ASSESSMENT

PNGRB - REGULATOR – BUT IN BIGINNING MAY ACT FACILITATOR !

UNDERSTANDING ISSUES

UNDERSTANDING OF CGD BUSINESS AT COMMON PLATFORM

- PNGRB ACT WIDELY DISCUSSED & DEBATED!
- DIFFERENT UNDERSTANDING ON OCCASIONS.
- KEEPING ENGAGED PNGRB, GOVT, JUDICIARY,CGD ENTITIES
- WHO IS RESPONSIBLE FOR WHAT !
- NEW PLAYERS - CONFLICT SCENARIO!
- STRENGTHENING OF PNGRB -MEMBERS OF HC BACKGROUND

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UNDERSTANDING ISSUES

CONCEPTUAL PLANNING OF CGD PROJECTS

- CITY SELECTION & MARKET SURVEY
- DFR
- MEN & MATERIAL SOURCING
- TECHNICAL STANDARDS
- BEST PRACTICES & SAFETY STANDARDS
- PROJECT LAYOUT & EXECUTION
- 3

DEVISING STRATEGIES

- TO DRAW TAILOR MADE STRATEGIES CITY/TOWN SPECIFIC
- TO ASSESS REAL DEMAND POTENTIAL WITH 10 YEARS GROWTH PLAN
- TO FIX PRIORITY ORDER IN ROLL OUT PLAN OF INFRASTRUCTURE
- TO SPREAD BUSINESS AWARENESS IN APPLICATION, ECONOMY, ENVIRONMENT
- FORMATION OF JV ENTITY

DEVISING STRATEGIES

- INFRASTRUCTURE DEVELOPMENT & GAS SOURCING - SYNCHRONIZATION
- CREATING STRONG ORGANIZATIONAL CAPABILITIES- MANPOWER COMPETENCE /EXPERTISE
- REPOSING TRUST - A CONDUCIVE CHARACTER OF MOTIVATED TEAM
- 2

DEVISING STRATEGIES

- OPERATIONAL EFFICIENCIES FOR LOW COST OPERATIONS –INHOUSE /OUTSOURCED

- ORGANIZATIONAL & OPERATIONAL EFFECTIVENESS WOULD BRING BUSINESS EFFECTIVENESS TO GROW FAST,CREATE VALUE

- IDENTIFY LEADERS & GROOM, LEAST CREATE!
- CREATE EXECUTORS; LEAST IDENTIFY!
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Thank You