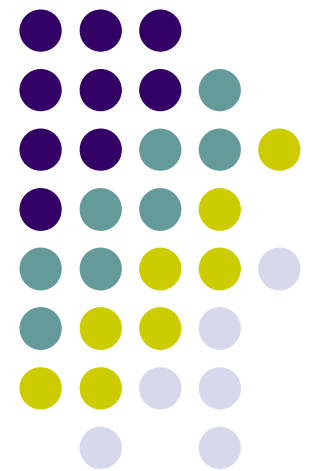


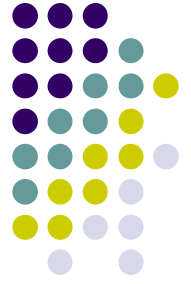
# Draft National Energy Policy

Presentation to UNDP

17 January 2007



# Current Situation



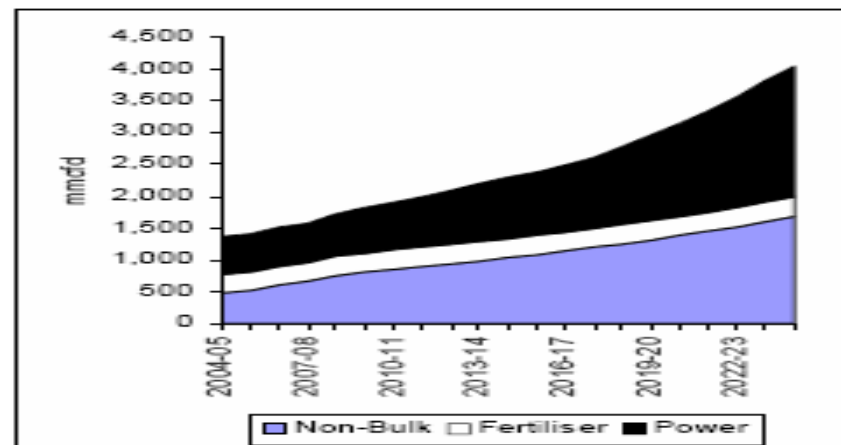
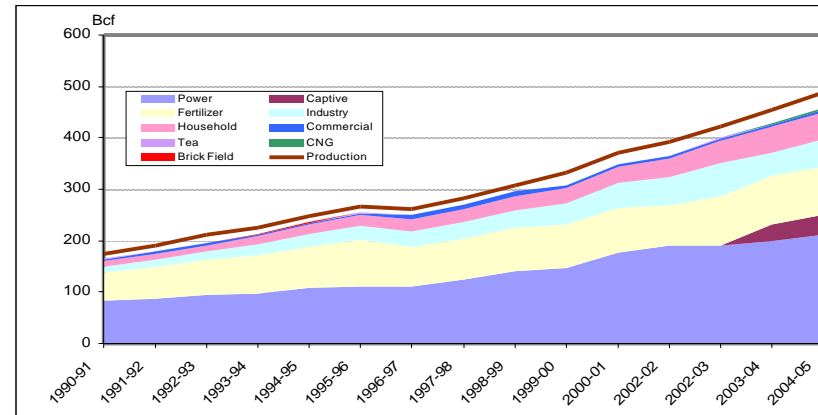
## In general,

- **more than 50% of total energy needs from traditional fuels:** highly inefficient & environmentally unsustainable
- **per capita electricity consumption (145 kw hr):** one of the lowest in the region/world
- **production is 3000- 3500MW against 5000MW national requirement:** resultant acute load-shedding
- **around 60-65% of population have no access to grid power:** achievement of MDGs by 2015 questionable
- **sustainable energy remains largely unexplored with very little internal or external support :** national capacity lacking

# Energy Demand Situation



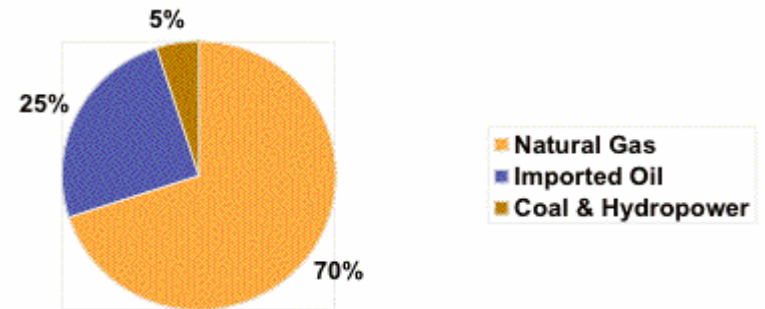
- | Both gas and electricity demand growth is unsustainable
- | Demand for primary energy has grown from 173 bcf in 1990-91 to 487 bcf in 2004-5. Demand is expected to grow to 1450 bcf/yr
- | Large inefficiencies in distribution and consumption



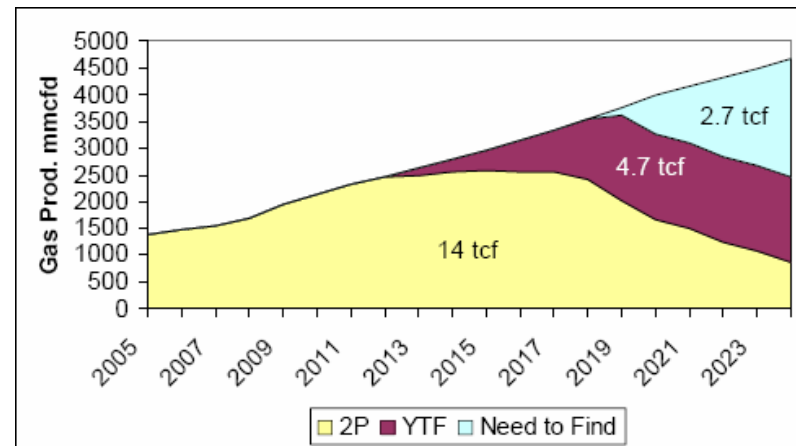
# Energy Supply Situation

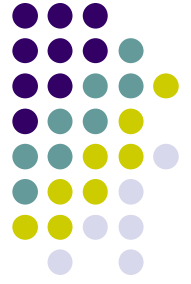


At present Natural Gas accounts for 70% of total commercial energy



Given consumption trends by 2025 total requirement for natural gas will be 21.4 tcf as against proven reserves 14 tcf

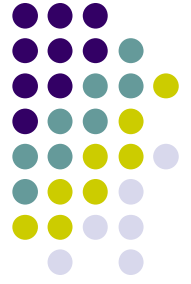




# Demand and Supply Impacts

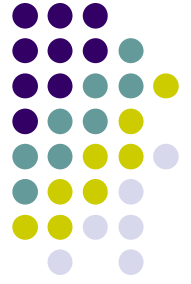
- | Gas and electricity demand growth is not sustainable unless there is new energy supply
- | No other near-term substitutes other than imports

# Four Fuels Energy Strategy



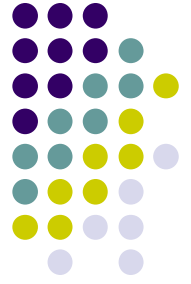
- | Expand gas supplies to meet near-term (about 15-20 years) needs through exploration
- | Add to available stock of energy through effective Energy Efficiency Policies
- | Develop coal resources to diversify and expand domestic energy resource base
- | Develop renewable energy to meet today's rural energy needs & to provide for tomorrow's sustainability

# Structure of the Policy Document



- | General Principles and Objectives
- | Power Sector Policy
- | Hydrocarbon Policy
- | Coal Policy
- | Renewable Energy Policy
- | Rural Energy Policy

# Basic Principles of the Energy Policy



## | **Sustainable and Balanced Energy Supply**

- | Adequate Supply
- | Environmental Impacts
- | Sustainability
- | Geographic (E-W) Balance

## | **Economic Development**

- | Rural Development
- | Industrial Development
- | Area Planning

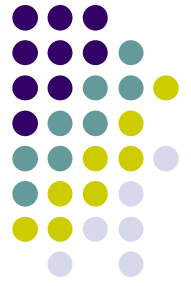
## | **Poverty Reduction and Social Equity**

- | Modern Energy Access
- | Mainstreaming Gender
- | Minimize Social Costs
- | Equality of Access

## | **Rational Use**

- | Cost-reflective Pricing
- | User Pays

# Basic Principles of the Energy Policy (con.)



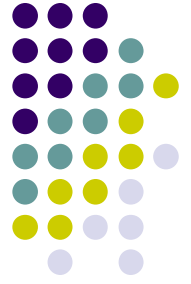
## | **Sector Reform, Management and Governance**

- | Energy Price Parity
- | No untargeted subsidies
- | Sector management
- | Eliminate fiscal drain
- | Independent, transparent regulation
- | Government oversight and integrated planning

## | **Private Sector Participation and Sector Financing**

- | Encourage FDI
- | Encourage enterprise formation
- | Encourage regional market creation

# Power Sector Policy Objectives



- | Develop reliable supplies of adequate electric power at least cost
- | Diversify energy use in electricity generation
- | Reform and rationalize governance and management; and
- | Expand electricity coverage

# Short Term Power Sector Policies



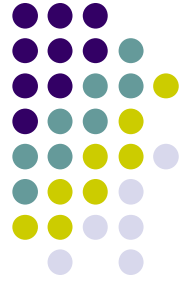
- | Reduce current capacity gap in half through targeted demand management i.e. power rationing, CFL programs, TOD tariff , non-technical loss reduction
- | Increase supply through additional small private power & captive power capacity via a single (e.g, fuel supply and power purchase guarantees) agreement on win-win terms

# Power Sector Policy for Mid and Long Term



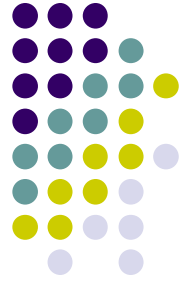
- | The Base Case for Generation Expansion is the Limited Gas Scenario PSMP
- | Integrate/harmonize PSMP and Coal Sector Policy
- | Mandatory time-of-day (TOD) tariffs, with on-peak prices reflecting marginal costs, for all customers =25 kW
- | Undertake thorough review of tariffs to minimize untargeted subsidies & resultant fiscal drain
- | Implement the Power Sector Reform Road map
- | Electricity distributors should co-finance residential and commercial lighting efficiency programs to reduce demand
- | Electricity theft should be targeted through increased penalties and pre-paid meters, with BERC overseeing distributor results

# Hydrocarbon Sector Objectives



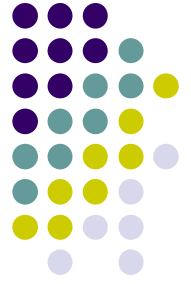
- | Increase Gas Supplies through
  - | Accelerated exploration, discovery and production of new reserves;
  - | Increased recovery of current reserves through sound reservoir management
  - | Managing gas demand growth: eliminate leakage and losses, improve end use efficiency, and fuel switching; (e.g. Bio-diesel, fuel extenders)
  
- | Reform and rationalize sector governance and management the Gas Sector Master Plan
  
- | Reduce demand for imported petroleum products: expand liquid recovery process in gas fields, efficient utilization of liquid fuels and greater use of CNG

# Key Hydrocarbon Policy



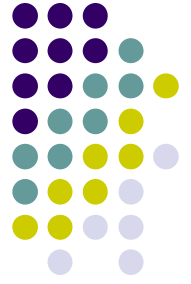
- | Stimulate exploration activity by encouraging public & private sector investment through improved PSC terms for IOCs and inter- company borrowings, bond floatations and diversifying shares in stock markets for SOEs;
- | Improve the efficiency of gas delivery and consumption through loss reduction and energy efficiency programs

# Additional Hydrocarbon Policy



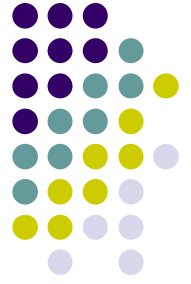
- | Pursue regional cooperation in exploration & development
- | Build technical capacity within the gas industry
- | Improve reservoir management practices via technology & upstream coordination
- | Reduce transmission bottlenecks and improve carriage efficiency

# Coal Sector Objectives



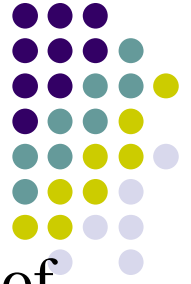
- | Rapidly scale-up commercial exploitation of coal to increase primary energy resources at affordable costs;
- | Develop capacity for governance of coal sector, focus on social and environmental impacts;
- | Introduce advanced technologies for efficient uses of coal, through gasification, production of smokeless coal and coal-bed methane recovery.

# Coal Sector Policy



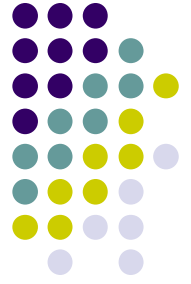
- | Different Investment Models should be undertaken
- | Develop a Coal Sector Master Plan
- | Carry out a comprehensive Coal Zone Study focused on social & environmental impacts & mitigation
- | Create a Bangladesh Coal Corporation to expedite investment in coal resources
- | Expedite development of discovered coal fields with Mine Mouth Power Stations in accordance with PSMP

# Additional Coal Sector Policy



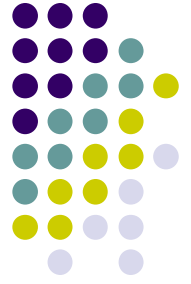
- | A regulatory watchdog capacity shall be created in Bureau of Mineral Development
- | Geological surveys shall be conducted to identify additional coal resources
- | A Coal Fund supporting coal research and applications shall be created
- | Rural energy applications of coal shall be developed
- | Coal transport infrastructure for domestic & international markets shall be developed
- | Advanced technologies for *in situ* coal gasification shall be developed

# Rural Energy Objectives



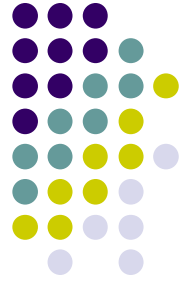
- | Electricity access to be afforded to all areas by 2020;
- | Household coverage and power loads to be increased in areas where the grid has been extended;
- | Promote productive uses of energy to support income generation & improved livelihoods
- | Areas inaccessible to grid electricity to be provided with alternative forms of access, via off-grid or other approaches

# Rural Energy Policies



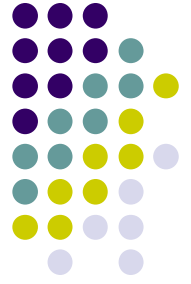
- | Develop new institutional arrangements including Rural Energy Committees
- | Integrate rural energy development programs with other rural development programs
- | Introduce Lifeline Tariffs for the rural poor
- | Focus on poverty reduction and livelihoods improvement
- | Extend stock of biomass through DSM activities such as improved cook stoves, afforestation
- | Increase supply of affordable modern fuels in Rural areas
- | Promote other models, such as the Remote Area Power Supply Systems (RAPSS)

# Renewable Energy Objectives



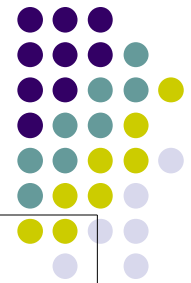
- | Harness potential of renewable energy to fulfill the aspirations of poor people, especially hard-to-reach populations;
- | Develop sustainable energy resources to supplant non-renewable energy supplies
- | Adopt affordable renewable-based rural energy solutions, especially where grid extension is uneconomical;
- | Rapidly scale-up contributions of renewable energy to the power sector, achieving 5% of total electricity production 2015 and 10% by 2025

# Renewable Energy Policy



- | Establish an autonomous Sustainable Energy Development Agency as a lead agency
- | Create a renewable energy financing facility to facilitate investments in renewable energy by public & private sectors
- | Undertake renewable-based rural energy programs in cooperation with Community Based Energy Groups and others (such as the PBSs), especially in remote areas

# Effects on Key Sector Issues of Proposed NEP 2006



	Gas	Coal	Efficiency	Renewable Energy
Power Crisis	Accelerated power development	Mine mouth IPPs by 2015	Peak demand reductions of 500 MW +	Increased rural self-reliance
Energy Access	Gas to Western region, Increased use of LPG, CNG	Rural coal applications developed	Efficient, clean-burning cook stoves, Energy efficient appliances	Affordable electricity for isolated populations
Sector Investment	IOC-led exploration of frontier areas	Private sector led coal development via leasing of proven reserves	Micro-finance for domestic customers via distributors; Revolving Fund created	Sustainable Energy Fund capable of accessing donor & carbon funds



- | Consultations
- | Development of Strategic Action Plans for each major sub-sector policy
- | Promulgation, coordination, implementation