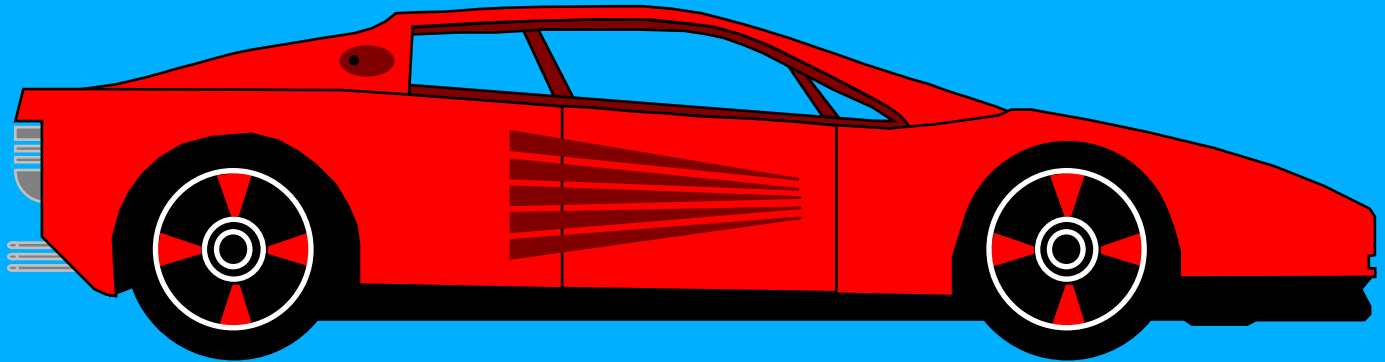


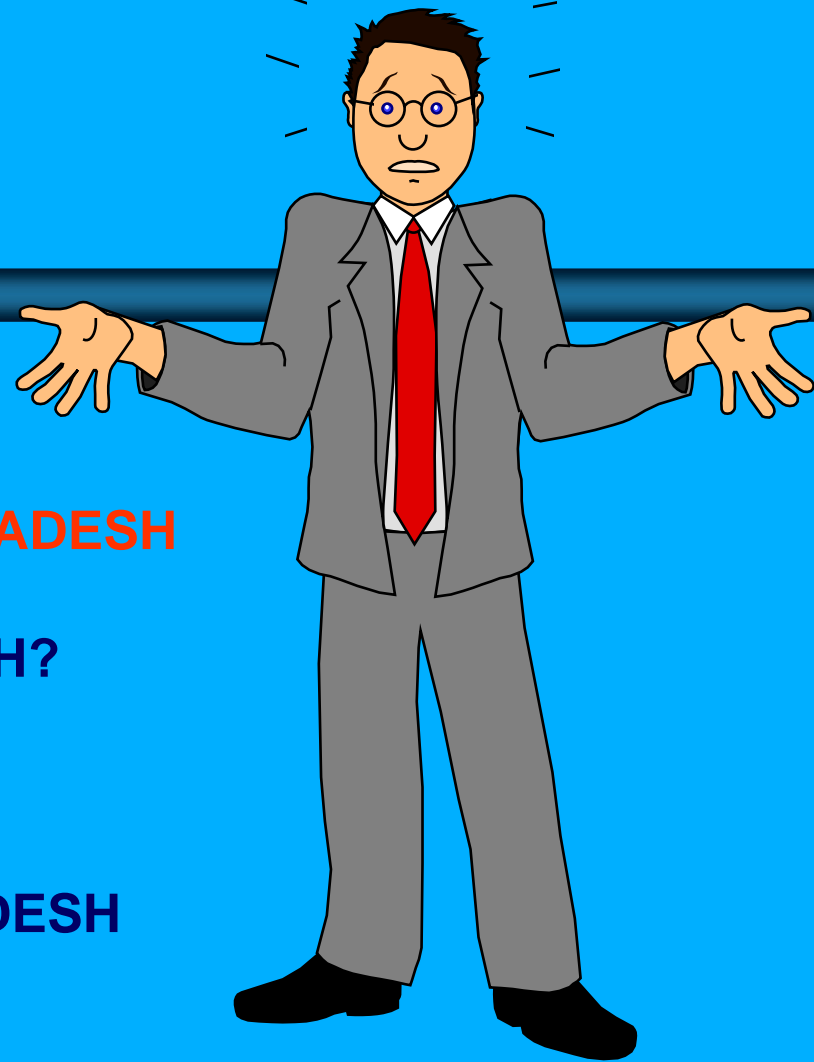
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# AN ALTERNATIVE FUELS PROGRAM FOR BANGLADESH

**May 2001**





- ❖ **HISTORY OF CNG IN BANGLADESH**
- ❖ **WHY CNG FOR BANGLADESH?**
- ❖ **CNG IN BANGLADESH**
- ❖ **GOVERNMENT OF BANGLADESH INITIATIVE**
- ❖ **CNG SUCCESS STORY IN BANGLADESH**

# HISTORY OF CNG IN BANGLADESH



- CNG as a vehicle fuels was first introduced to Bangladesh in 1982 through a World Bank pilot project
- 4 CNG stations were established and a 1000 vehicles converted in the last 16 years
- In 1999, four private companies obtained permission to set up about 5 stations each
- The government also approved a foreign joint venture with RPGCL to set-up 51 stations wherever piped gas is available in early 2000. In this project 2 400 CBM/HR capacity stations have already been set-up

# HISTORY OF CNG IN BANGLADESH



And another 6 will be established within 2001.  
Finance already cleared for this.

- Pilot conversion of two-stroke auto rickshaws under BEMP (CIDA-funded) has proven successful and large-scale conversions are now being contemplated. It is believed this will be the first 2-stroke conversion project.

# WHY CNG FOR BANGLADESH ?



- Bangladesh has a large amount of stranded gas. Most analysis recommend CNG as a major downstream use for this gas.
- CNG use could save Bangladesh significant amounts in foreign exchange. World Bank estimates savings of Tk. 4 core per station per year which is twice that of the investment cost.
- Maintaining air quality in metropolises like Dhaka has become the nation's top most priority. CNG could cater to that need and make significant cross savings in the health sector and reduce public health hazard.

# WHY CNG FOR BANGLADESH ?



- World Bank recently estimated that about Tk. 117 core per year can be saved in health costs in Dhaka city alone on account of PM reduction. This does not include mortality estimates.
- Cost of CNG is attractive and could offer significant consumer savings to the average consumer.

# REASONS FOR SLOW GROWTH OF CNG IN BANGLADESH



- Investment Rigidities
- Slow pace of conversion of vehicles
- Inadequate infrastructure
- Lack of publicity
- Absence of an integrated market development approach
- Absence of a sound regulatory mechanism



# Government

# Involvement

- Provides fiscal incentives such as tax holidays and duty free imports of CNG related equipment and in case of Station Equipment VAT-free
- Reduced long-term gas feedstock price
- Reduced road taxes for CNG vehicles
- Financial support by authorizing nationalized commercial banks to provide loans on soft terms
- Government considering mandatory CNG usage particularly in 2-stroke auto-rickshaws which contributes about 60% of vehicle pollution

# GOVERNMENT INITIATIVES



## FUNDING FOR R & D

- Government considering creation of a research and development center

## DEVELOPMENT OF STANDARDS

- National standards, safety codes and regulations for safe use of CNG in vehicles and appliances are being developed with foreign assistance

# GOVERNMENT INITIATIVES



## MARKET DEVELOPMENT

- To stimulate the demand for CNG vehicles, government is developing an accelerated vehicle conversion program with RPGCL as the “Center of Expertise”. It will be entrusted to train and certify conversion centers and enforce standards, so that sub-standard conversions are discouraged.

## COMMUNICATION AND PUBLIC AWARENESS

- To make CNG popular as an automotive fuel, government should intensify its mass media efforts.

# SUCCESS STORY IN CNG CONVERSIONS

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- Four 2-stroke baby-taxis were successfully Converted to CNG in late May 2000 by the Department of Environment under the CIDA-funded Bangladesh Environmental anagement Project (BEMP)
- Most noticeable feature of the converted baby-taxis is the low tailpipe emissions (reductions of CO by 90%, hydrocarbons by 83%, CO<sub>2</sub> by 48% and NO<sub>x</sub>/SO<sub>x</sub> by 99%)

# SUCCESS STORY IN CNG CONVERSIONS

## Economic Incentives

The cheaper price of CNG in comparison with petrol provides excellent incentives for auto-rickshaw drivers and owners to convert:

Avg distance travelled per year	60,000 km
Avg fuel consumption rate	20 km / litre
Avg fuel consumption per year	$60,000/20 = 3,000$ litre (gasoline equivalent)
Price of gasoline/CNG	Tk 25/litre      Tk 10/litre eq.
Estimated annual gas/CNG cost	Tk 75000      Tk 30000
Estimated annual fuel savings	<i>Tk 45000</i>
Estimated CNG Conversion Cost	<i>Tk 25000</i>
Pay-back period of conversion cost	6.5 months ( $25000/45000=0.55$ yr)