

CDM Possibilities in transport Sector (BMTCT)

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Indian Road Transport Sector

The road transport network in India has risen from 0.9 Million Kilometer in 1971 to 2.52 Million Kilometer in 1999.

- Over 80 % of the passengers and 60% of freight are transported by roads.
- Road transport is dominant form of transportation for people and goods in India.
- Approximately 0.5 Million buses currently catering the needs of the people in India.
- Passenger transport services are provided by SRTUs (State Road Transport Under Takings).

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Road Transport Sector – Existing Scenario: BMTC

Bangalore Metropolitan Transport Corporation was set up under the Road Transport Corporations Act 1950, in the year 1961 with buses and is wholly owned by the Government of Karnataka. Government of India is also a shareholder in this Corporation.

Sl. No.	Description	Value
1	Total number of buses in BMTC (@ present)	3506
2	Avg. HSD consumption per year (In state transport) in KL	42000
3	Fuel Efficiency (km per Litre)	4.6
4	Average KM traveled per bus per day	367
5	Total KM traveled by all buses in the last financial year (Lakhs)	5620

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Technology of the existing buses

- Most of the existing buses are having huge and heavy engines. Many of these do not have a turbo charger, which is, more than 20 years old technology.
- This obsolete engine is connected to a gearbox to drive the vehicle to about 110 km per hour or more.
- The rules in the country do not permit speed more than 70km/hr. keeping safety in mind and therefore, their power output is never fully utilised.
- The city buses barely reach 40 km/hr & often the first and the 5th gear are never used. Therefore, it is quite clear that there is an urgent need to look for a much smaller high efficiency engine which will also improve the mileage (KMPL) significantly.

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Technical Interventions from the CDM Angle

- **The Need of Energy Efficient Engine**
 - To improve fuel economy (KMPL)
 - To reduce noise
 - To meet future stringent emission regulation

Advantages

- Energy Efficient Engines offer around 30 to 35 % more mileage (around 24 km a liter) with model car
 - Energy Efficient Engines also offer around 25 % more power than a normal direct injection engine.
 - Energy Efficient Engines offer 70 % more torque than a normal diesel engine.
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Bio fuel addition

Proposed Modifications:

- Addition of bio fuels along with conventional fuel can reduce the GHG emissions
- This will induce the percentage addition of bio fuels in a large amount in various vehicles

Estimated Emission Reduction

Table: An Estimation of CO2 emission reduction

S. No.	Description	Value
1	Possible Fuel Savings by Technology Intervention	20%
2	Fuel Savings in KL per year	10795
3	Total Estimated GHG Reduction in Tons per year	22671

Conclusion

- **Replicability will be higher in this sector**
- **Road Transport sector could be a good candidate for CDM**
- **This project can induce new business growth such as Energy Efficient engine manufacturing**