

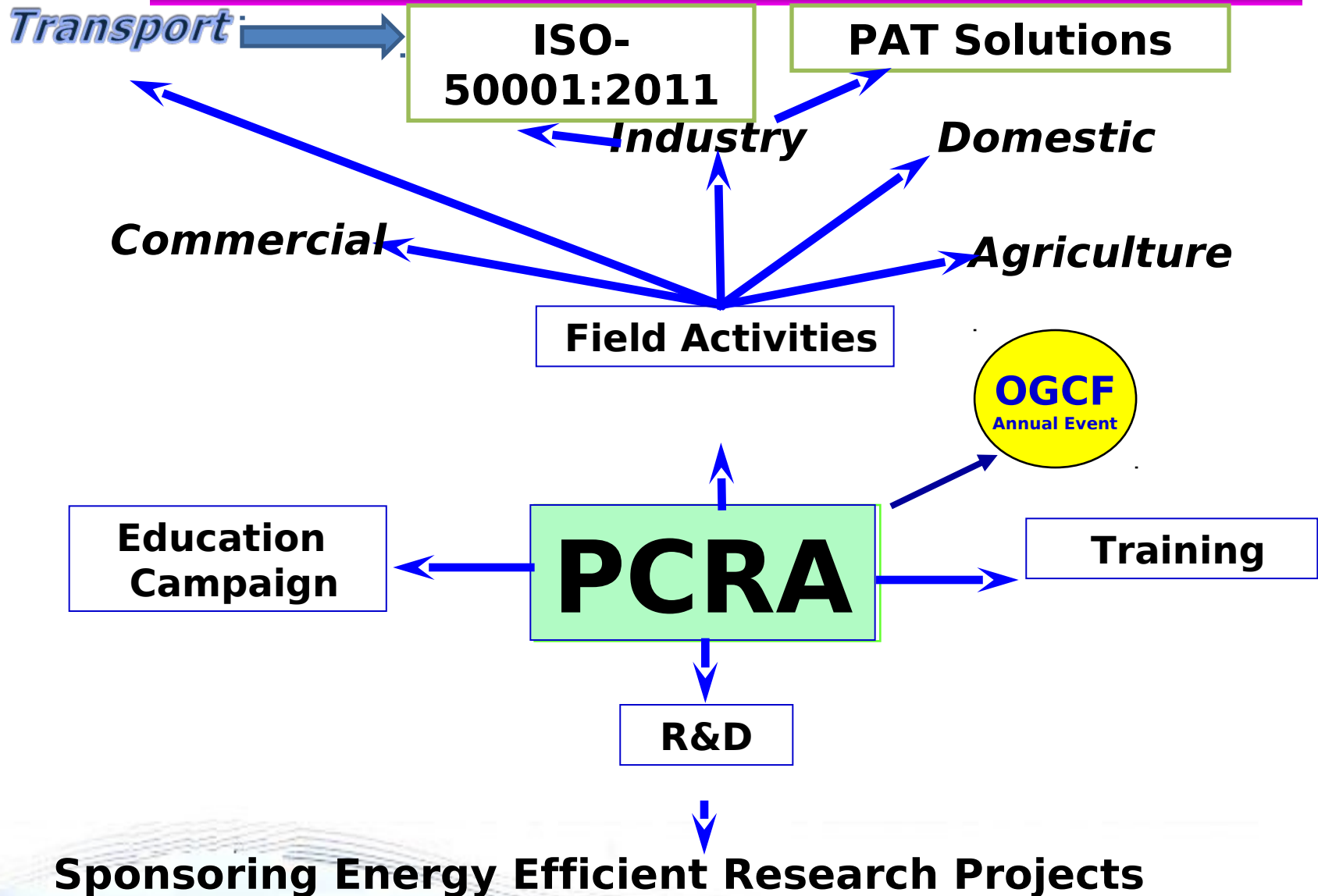
Low Carbon & Low Cost Interventions

Satish Chandra Sharma
Additional Director
PCRA, New Delhi

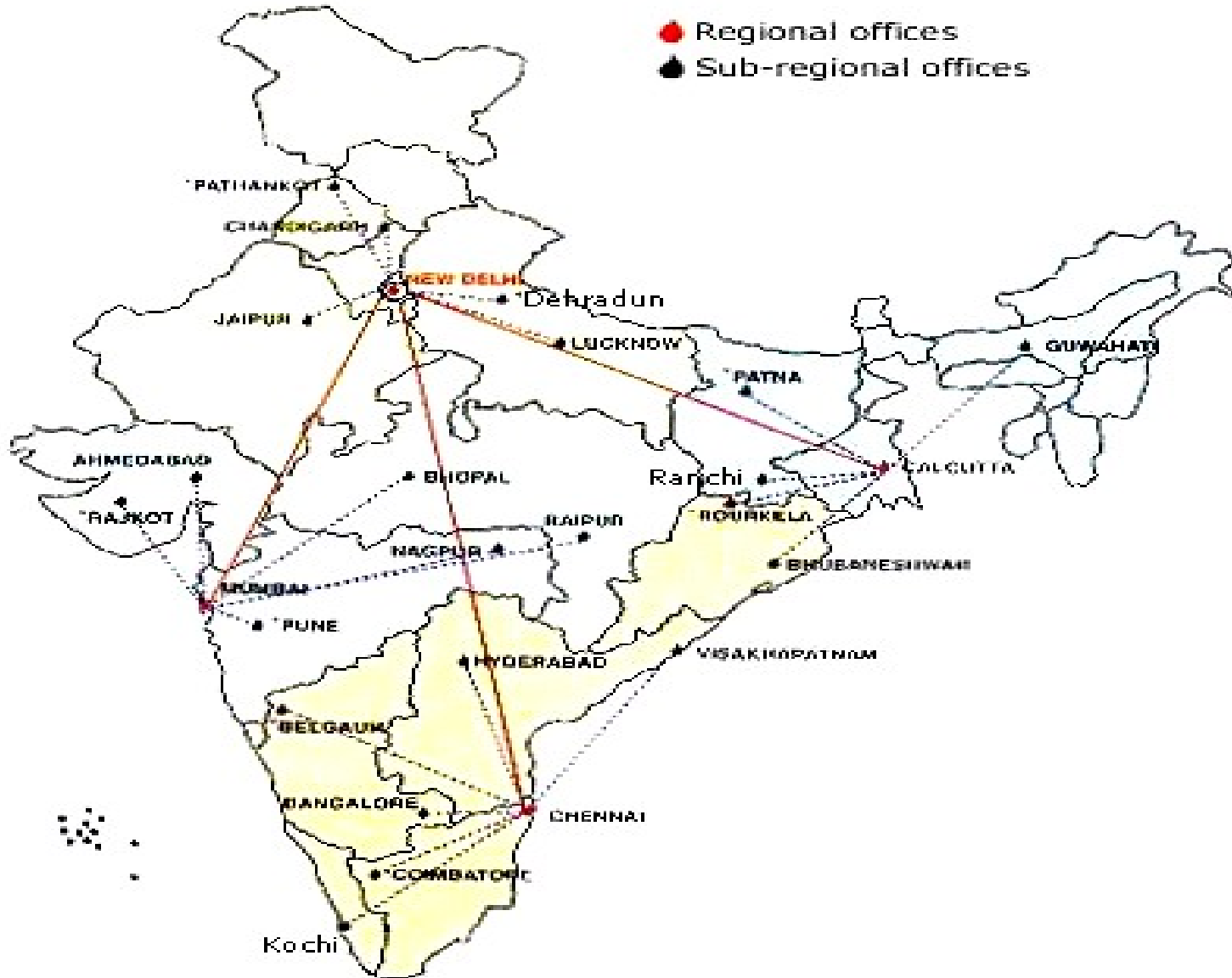
- Brief Introduction on PCRA**
- Brief on transport sector & opportunities therein**
- Low carbon & low cost interventions :-**
 - PCRA's Driver Training program (DTP)**
 - Model Depot Project**
 - ISO 50001 in transport sector**

- ▶ **1973** : **OIL CRISIS WORLD OVER**
- ▶ **STUDY TEAM** : **ENGINEERS FROM IOC, NPC, DGTD ESTIMATED HUGE OIL CONSERVATION POTENTIAL IN INDUSTRIES & STUs**
- ▶ **STUDY RESULTS** : **CONSERVATION POTENTIAL OF 20 - 30%**
- ▶ **6th JAN'76** : **PETROLEUM CONSERVATION ACTION GROUP (PCAG) FORMED**
- ▶ **10th AUG'78** : **PCAG RECONSTITUTED AS "PETROLEUM CONSERVATION RESEARCH ASSOCIATION" (PCRA) AND REGISTERED AS A SOCIETY UNDER MOP&NG**

PCRA Activities



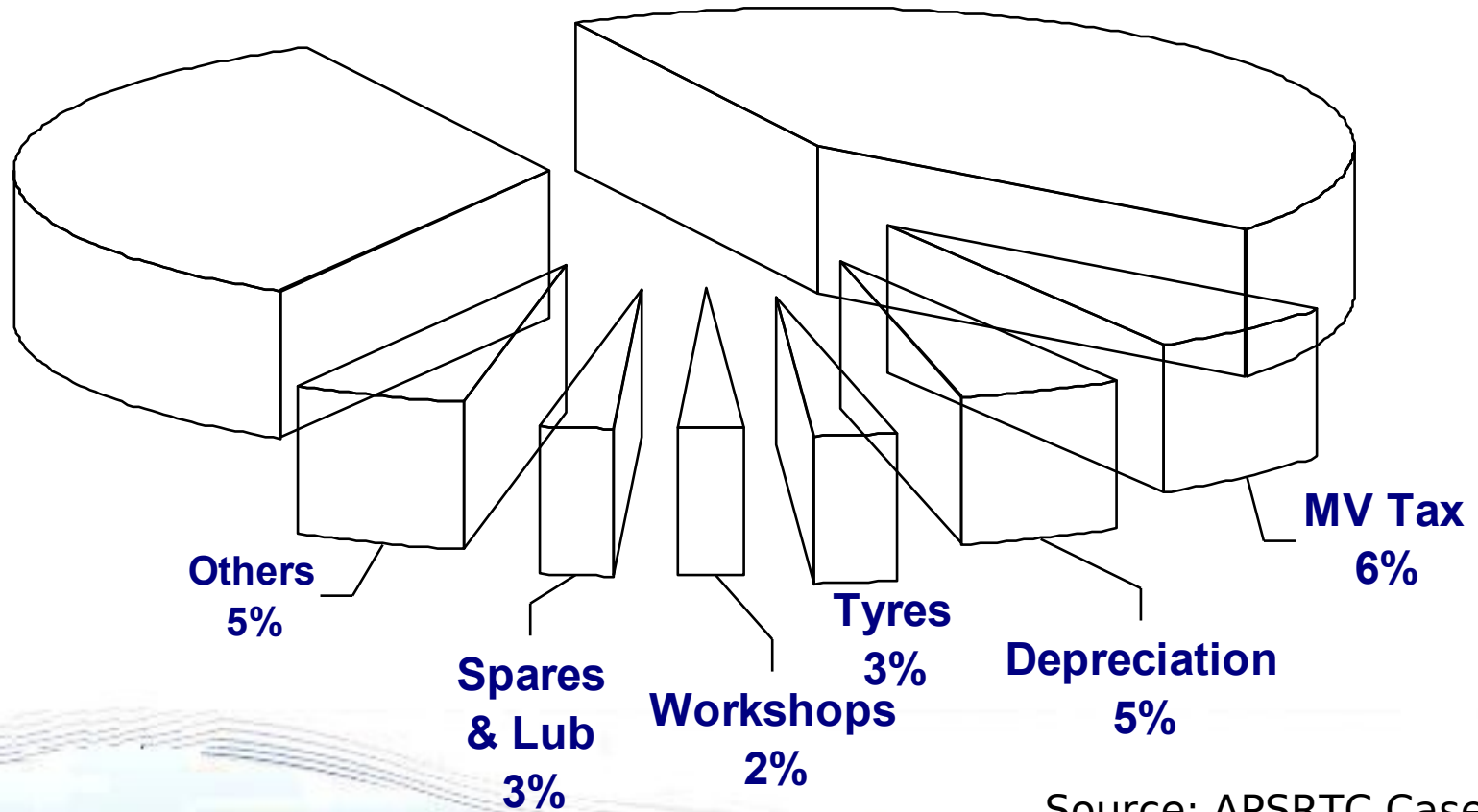
PAN-India Presence



How Corporation spends ?



- On an average, 38% of operational cost of an STU pertains to HSD consumption.



Source: APSRTC Case



- Improve engine efficiency
- Improve transmission and drive train efficiency
- Improve vehicle and trailer aerodynamics
- Reduce rolling resistance
- Reduce vehicle weight
- Reduce auxiliary loads
- **Optimize driver behavior**
- **Maintenance of vehicles**

- ❑ **What is DTP:** A low cost intervention towards “Green Initiatives” in transport sector based on improvement in driving behavior and maintenance practice.
- ❑ **Why DTP:** STU/Fleet operational cost towards fuel expenses ~30-40%.
- ❑ **Potential saving :** Could be to tune of 15-20%
- ❑ **Benefits of DTP :**
 - Most effective Programme of PCRA as per “Price Water house Coopers”.
 - Improves driving skills & induces attitudinal changes towards conservation.
 - Reduces Emissions, breakdowns and maintenance cost.
 - Post completion, drivers are awarded with a Certificate/ Badge





Training Methodology	1.On Road Test Drives 2.Class room training/Discussion on Driving Habits and Screening of PCRA Films.
Beneficiaries	STUs , other Fleet Operators (Public and Private) And Army etc
Duration	3 days per program

PCRA is the only organization which conducts Driver Training Programs (KMPL improvement) in organized & un-organized sector in a structured way.

NAME OF THE STU/ PARTY : RSRTC
TRAINING VENUE : Ajmer
DURATION OF TRAINING : FROM 16/02/2009 TO 18/02/2009

VEHICLE DETAILS : TATA

SN	NAME OF DRIVER	FIRST TRIP			SECOND TRIP			% Improvement
		KM	LIT.	KPML	KM	LIT.	KPML	
1	Krishan Ram	10	2.20	4.54	10	2.00	5.0	10.13
2	Parmeshwar lal	10	2.60	3.84	10	2.20	4.54	15.42
3	Prahlad Meena	10	2.40	4.16	10	2.20	4.54	8.37
4	Om Prakash	10	2.60	3.84	10	2.20	4.54	15.42
5	Hemchand Parahar	10	2.00	5.0	10	1.80	5.55	12.11
6	Ram Ratan	10	2.40	4.16	10	2.20	4.54	8.37
7	Ganesh Lal Sharma	10	2.20	4.54	10	2.00	5.00	10.13
8	Pukhraj	10	2.40	4.16	10	2.20	4.54	8.37
9	Pal Singh	10	2.40	4.16	10	2.20	4.54	8.37
10	Rajendra Kumar	10	2.20	4.54	10	2.00	5.00	10.13

SN	NAME OF DRIVER	FIRST TRIP			SECOND TRIP			% Improvement
		KM	LIT.	KPML	KM	LIT.	KPML	
11	Praduman Singh	10	2.40	4.16	10	2.20	4.54	8.37
12	Mohan Meghwal	10	2.20	4.54	10	2.00	5.00	10.13
13	Banne Khan	10	2.20	4.54	10	2.00	5.00	10.13
14	Sita Ram Jat	10	2.00	5.00	10	1.80	5.55	12.11
15	Shahid Beg	10	2.40	4.16	10	2.20	4.54	8.37
16	Ashok Kumar	10	2.40	4.16	10	2.20	4.54	8.37
17	Rajender Singh	10	2.00	5.00	10	1.90	5.26	5.73
18	Bhanwar Singh	10	2.40	4.16	10	2.20	4.54	8.37
19	Govind Ram Mali	10	2.20	4.54	10	2.00	5.00	10.13
20	Average km Per Liter Before Training	10	2.40	4.16	10	2.40	4.16	7.05

Average km Per Liter After training

: 4.80

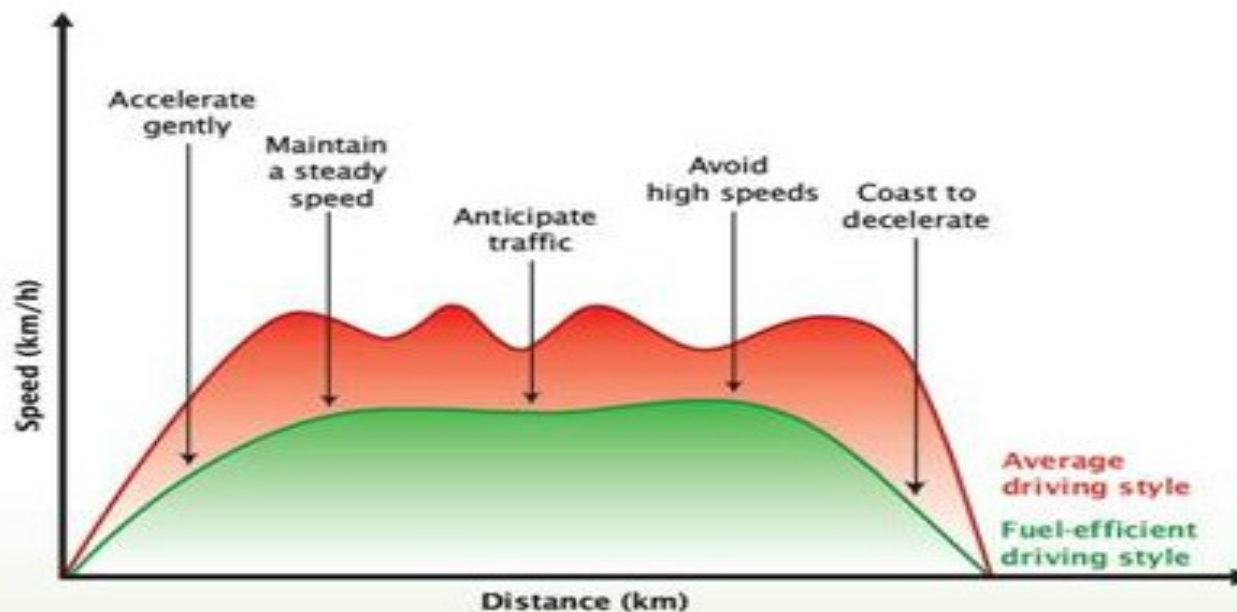
Overall Improvement (%)

: 9.78

Efficient Driving Techniques Drive Sensibly

Fuel Economy Benefit: 5–33%

Five fuel-efficient driving techniques



Observe the Speed Limit

Fuel Economy Benefit: 7–14%



Remove Excess Weight

Fuel Economy Benefit: 2-4% per 100 kgs

Avoid Excessive Idling

Fuel Cost Savings: As per study undertaken by PCRA in Delhi, it amounts to saving of Rs.994/- crores per annum.

Improved maintenance practice

Tyre pressure, Air filter and lube oil etc.



Best Media Campaign Award:
PRSI (Public Relation Society of India) awarded PCRA campaign as the 'Best Media Awareness Campaign' throughout India in 2009.

Viewers' Choice Award
TV ad 'Traffic Light' won the "Viewers' Choice Award" in the prestigious CMS (Center for Media Studies) Vatavaran Film Festival in Oct '09.

Top Brand in Radio Advertising
Economic Times, in its edition of 21.12.09, placed PCRA, radio advertisements in the 'Second Place' amongst top 5 brands across the nation during the period of January - Sept '09.

PCRA Ad topped in Independent Survey:
TV ad 'Traffic Light' was rated 'Number One' amongst all television ads on Indian TV during the month of March '09 in an independent media survey carried out by an independent survey agency 'Synnovate' for Hindustan Times Group/Deccan Chronicle, a leading daily of Southern India adjudged the TV ad 'Traffic Light' as 'The Ad of the Week'.

Testimonies

RAJASTHAN STATE ROAD TRANSPORT CORPORATION
PARIVAHAN MARG, AIPUR-302001
Ph: 2373043, 2373044, 2375487, 2375585 Fax: 01415116021

No.RSRTC/EDE/Trg,Cell/ 123

Dated: 10th Aug. 2006

The Executive Director
Petroleum Conservation Research Association
Sanrakshan Bhawan
10, Bhikaji Cama Place
NEW DELHI

Sub: Reg. Drivers Training Programme.

Sir,

Fuel Conservation is a major thrust area for any STU and in RSRTC too, various initiatives were launched jointly with the Jaipur Office of PCRA.

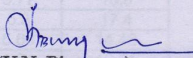
During the year 2005-06, 20 MDPs and 27 Drivers Training Programmes were conducted by PCRA and 1406 drivers have been trained by PCRA in approximately 55 Driver Training Programmes.

I have pleasure to put on record that Driver Training Programme of PCRA is immensely successful with the result that our KMPL of HSD has improved from 5 to 5.09 during this financial year.

I, therefore, request you to kindly consider our above performance for reward under your Scheme for STUs.

Vishu Begans S.

Yours sincerely


(Y.N. Bhargava)
Executive Director (Engg.)

The savings in terms of money is about Rs. 6 crores per annum

NORTH BENGAL STATE TRANSPORT CORPORATION SILIGURI DIVISION

Memo No. 1162/STC/SLG/OSD

Dated : 08.05.09.

From : The Divisional Manager & OSD,
NBSTC : Siliguri.

To : The Additional Director &
Chief Regional Co-ordinator,
P.C.R.A., Kolkata - 700068


Dear Sir,

It is a great pleasure to inform you that due to your immense help to start FUEL CONSERVATION FORTNIGHT in NBSTC being inaugurated by our Hon'ble Chairman we got a very good response. During the month of February, March and April'09, an amount of Rs. 50 lacs could have been saved on account of fuel expenditure with respect to the month of Jan'09.

We express our gratitude and hope same kind of co-operation from your end in the days to come which will definitely enhance our relationship. We would like to request you to organize Training Programme as per previous system in the national interest as well as in the interest of our Corporation. As per discussion had with you earlier, the rest depot-wise Training Camp supposed to organize after election.

So, I shall request you to kindly make it convenient to organize the programme at Mathabhanga, Alipurduar, Jorai, Dinhat, Jalpaiguri, Moynaguri, Islampur, Chanchal, Raiganj, Ultodanga, Ranaghat & Krishnanagar at Ranaghat Depot.

Thanking you,


8.05.09
Divisional Manager & OSD,
NBSTC, Silg. Divn.

Savings of Fuel Worth Rs. 50.00 Lacs in
03 months

- ➔ A brief report details inter alia, fleet strength, operating KMs, KMPL, inspection findings and anticipated fuel savings will be submitted to the depot in-charge.
- ➔ PCRA officials follow-up with the depot in-charge in due course to find out the savings realized with better maintenance practices being followed by them.

- Lack of appropriate efficiency norms. Hence, requires standardization and performance mapping.
- Legacy of unstructured approach on efficiency.
- Fleet operational cost on account of projected crude price appreciation demands immediate action for improvement on efficiency front.
- Systems such as ISO-50001EMS will enable continual monitoring leading to improvement in performance indexes inter alia fuel efficiency.

- ❑ The purpose of ISO 50001 : 2011 EnMS Standard is to enable organization to establish the systems and processes necessary to reduce fuel consumption and improve vehicle efficiency.
- ❑ ISO 50001: 2011 EnMS standard is intended to reduce green house gas emissions and other related environmental impacts and energy cost through systematic management of energy.
- ❑ Successful implementation depends on commitment from all levels and functions of the organization.
- ❑ ISO 50001 is designed to be used independently, but can be aligned or integrated with other management systems (e.g., ISO 9001 and 14001, & OHSAS 18001).

- **Immediate Monetary saving for the fleets.**
- **Reduce the impact of rising cost of fuels**
- **Brand Equity Enhancement.**
- **Pride & Motivation to the drivers and fleet operators.**
- **Improved life of vehicles.**
- **Helps meet legislative or self-imposed carbon targets.**
- **Reduce reliance on fossil fuels.**
- **Enhance the entity's reputation as a socially responsible organization.**

- **Conducting one cycle of EnMS Internal Audit** and provide guidance for initiating corrective action for the reported audit findings in form of NCs
- **Provide guidance for conducting Management Review** in accordance with the requirements of the standard.
- **Provide guidance for initiating corrective action** for the external audit findings reported by the certifying body.
- **Trainings:**
 - (a) Awareness Training: 3 tier.
 - (b) Internal Auditors Training
 - (c) Training for MRM

Thank You !

sharmasc@pcra.org