

Key fuel and vehicle issues: *Indian Industry Perspective*

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Challenges for the Industry

Air Quality
Global Warming
Energy Security
Fuel Quality

A photograph of a pond with several pink lotus flowers in various stages of bloom. The flowers are surrounded by large, round green lily pads. The background is dark, making the flowers and leaves stand out.

Enablers

Vehicle
Technology

Traffic
Management

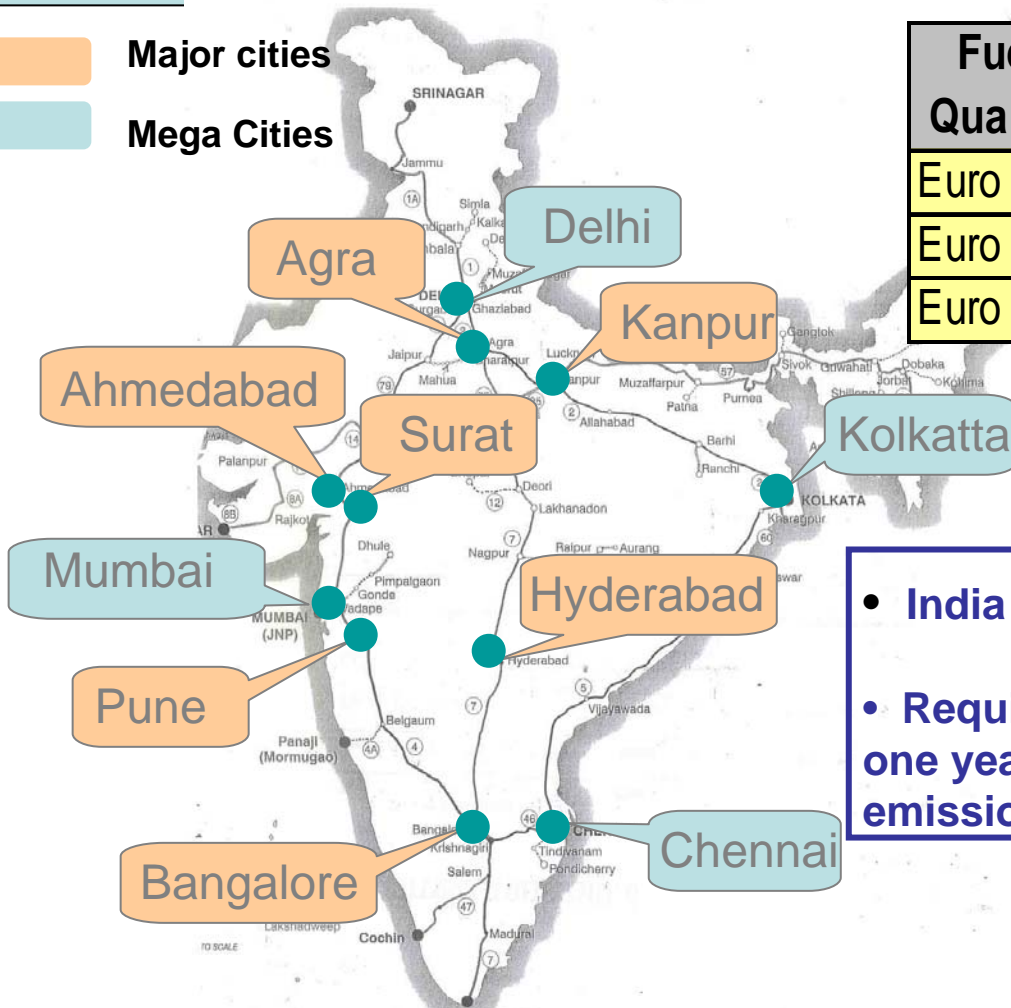
Air Quality + Global Warming + Energy Security

Fuel
Quality

I/M
Air Quality
Monitoring



Outcome of Auto Fuel Policy



Fuel Quality	Mega Cities	Major Cities	Rest Of India
Euro II	April 2001.	April 2003.	April 2005.
Euro III		April 2005.	April 2010.
Euro IV		April 2010.	Not decided

- India Emission Regulations \equiv EU Regulation
- Required Fuel = Matching Euro fuel at least one year before date of implementation of the emission norms

Challenge to Vehicle Manufacturers:

- Different Fuel Quality in different parts of the Country
- Same vehicles plying in various areas – Effects after-treatment devices/ OBD/ other engine components.

Demand & Domestic Production of Transport Fuel

Item	Period	MS	ATF	HSD	NG*
Projections in thousand MT	2001-02	7070	2299	39815	81.33
	2006-07	10067	2691	52324	179
	2011 -12	12848	3150	66905	313
	2016-17	16398	3687	83575	

Diesel / Petrol Ratio 6 ~ 7

2 wheelers consume 2/3 of petrol

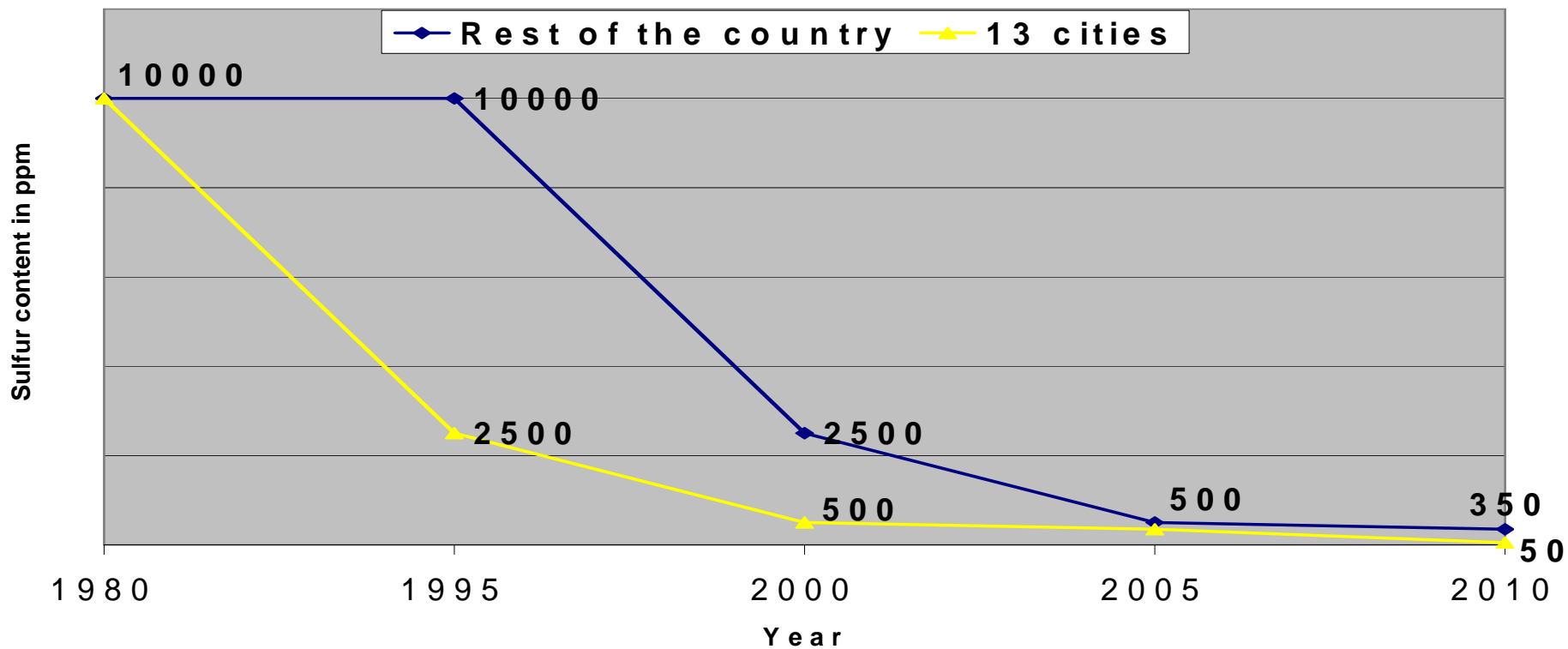
** NG is expressed in Million Standard Cubic Meter Per Day*

*Source : Report of the committee on Development of Bio Fuels
Planning Commission*

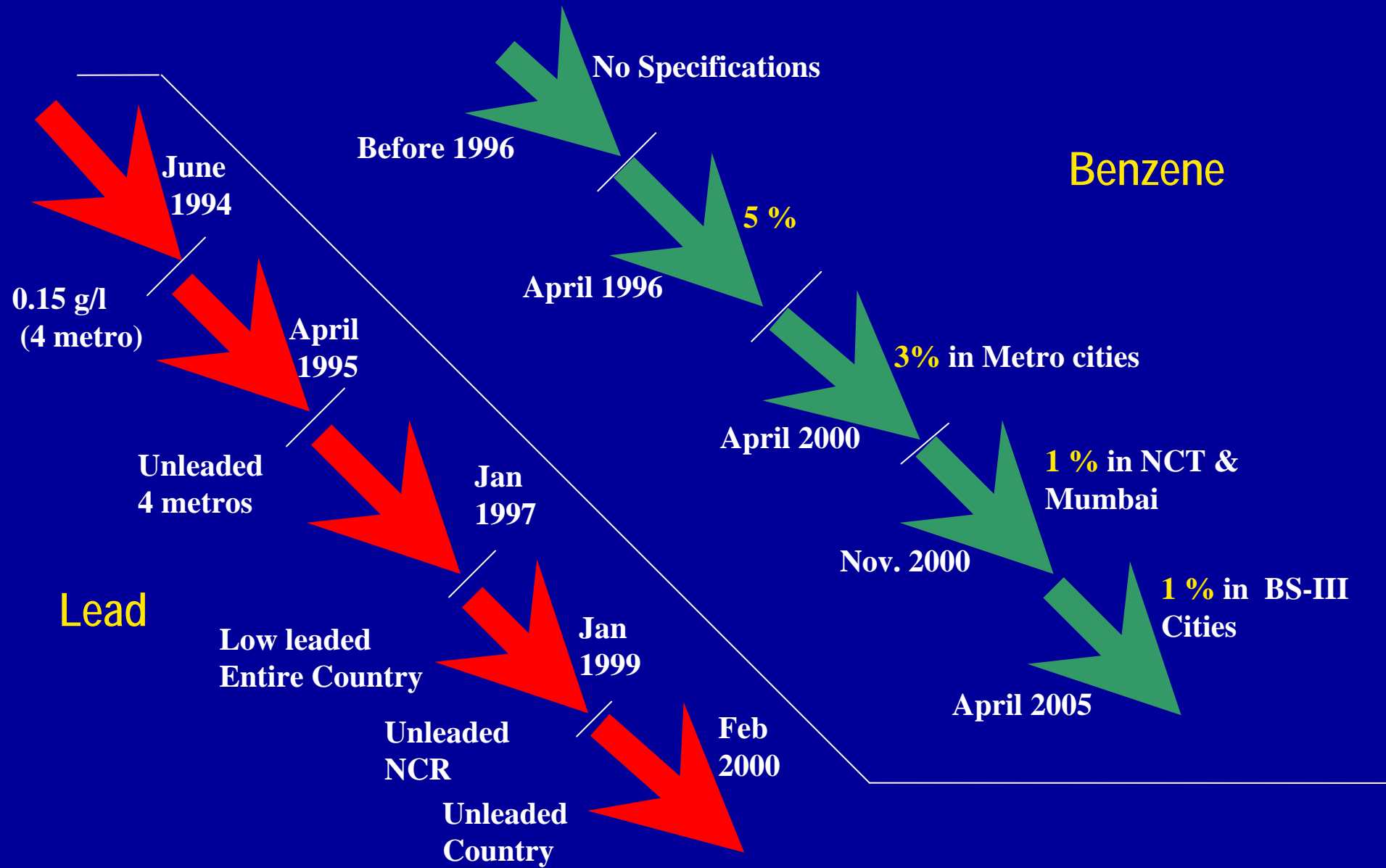
ISSUES / CONCERNS

- Fuel Specifications
- Fuel Quality at retail outlet
- Fuel Adulteration
- Court Orders
- No clear roadmap on
 - Ethanol gasoline blends
 - Bio Diesel
 - LPG
 - CNG
 - Hydrogen & CNG Blends

Diesel Quality Change - India



GASOLINE QUALITY IMPROVEMENT IN INDIA



GASOLINE LEAD PHASE-OUT PROGRAMME IN INDIA

Issues : Specifications

- Relaxation for Cetane & Octane number for North East Refineries
- Flash Point : 35 against 55 in Europe
 - This is a safety issue
 - Many fires reported

Fuel Quality at Retail Outlet : Industry Concerns

- **Fuel Adulteration**
 - Adversely effects vehicle performance and calls for major engine repairs.
- **Quality**
 - Gum content in some samples found to be too high
 - Specification of Gum content met only at refinery level and not at retail level.
 - Members reported problems even with fuel being supplied to them directly by refineries where no intermediary is involved.
- Variation in fuel quality and specifications make it difficult for manufacturers to design and tune engine appropriately
- Consequences of fuel adulteration being absorbed by automobile manufactures only
- Going forward, with sophistication in vehicle technology, adulteration will worsen the gains sought to be achieved through technological routes

Issues : Retail Outlets

- **Oil Industry has introduced bio markers and other measures**
- **The effect still to be visible at ground level**
- **SIAM recommends adoption of EU directive 98/70/EC for ensuring RO fuel quality**
- **Need to introduce filling nozzles to eliminate evaporative losses during vehicle fuelling**

FUEL QUALITY RELATED DECISIONS BY COURTS AND GOI

- Mashelkar Committee submitted auto fuel policy report – Approved by Government
- EPCA submitted a report on Clean Fuels to the Hon'ble Supreme Court.
- As per orders of the Hon'ble Courts
 - All buses in Delhi to be converted to CNG mode.
 - Autos allowed option of CNG and Petrol.
 - Taxis complying to Bharat Stage II allowed with CNG / Petrol / Diesel.
- LPG allowed by Government as an automotive fuel.
- MoP&NG decided to introduce 5% ethanol blending in gasoline.
- Cabinet decides to increase ethanol content to 10 % while bio fuel policy has recommended 20 %

ETHANOL/ GASOLINE BLEND

- 1. 5% Blend of Ethanol – Gasoline implemented in India**
- 2. No clear time frame available for all India implementation**
- 3. Sustained availability is a issue**
- 4. Government considering introduction of 10 % blend from October 2008**
- 5. However no roadmap notified**

BIODIESEL

SIAM agrees bio diesel is :

- Environment friendly
- Clean burning
- Renewable fuel
- No engine modification for 5 % blend
- Increases engine life
- Biodegradable and non-toxic
- Easy to handle and store

But would like a road map to enable all stake holders to commit necessary resources

To Sum up.....

- Alignment of petrol / diesel standards with EU regulations in all respects and supply at RO to enable industry meet sustained emission performance
- Need to evolve standards for CNG, LPG, Bio Fuels & Hydrogen CNG blends
- Prepare roadmap for sustained availability in consultation with all stake holders

SIAM Members



About SIAM

Visit us at www.siam.in

Thank you

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Society of Indian Automobile Manufacturers

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