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Compressed Natural Gas in India: Contemporizing the Delhi Pollution Case

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Abstract:

In 1998, the Indian Supreme Court, embracing its activist role, issued a controversial order *suo moto* mandating the conversion of the entire Delhi fleet of diesel powered buses to compressed natural gas (CNG). The judgment of the apex court came as a surprise to the executive agencies that lacked the technology and finances to implement the impugned order. Although the judgment seemed novel in letter and spirit, it led to exasperated tensions between the organs of the State. The paper aims at providing tentative solutions to address these tensions, thereby upholding the doctrine of separation of powers. The paper also provides solutions to improve the functioning of the Pollution Control Boards, and examines the need and viability of implementing the use of CNG across India. An international perspective on the matter is also provided.

Keywords: Compressed Natural Gas (CNG), International Perspective, Judicial Activism, Pollution Control Boards, Vehicular Pollution.

1.0 Introduction:

The judiciary has always been the ultimate custodian of human rights. When the court sees that fundamental rights have been violated, it rises to the occasion to safeguard these rights. However, the role of the judiciary is ideally, to interpret the law. When the court tries to step beyond this role and tries to discover new facets of law, it must do so realizing that it is not the only organ of the State dealing with the law. Many look at the court as a source of justice, but then again there are a few who condemn the power of the court and contend that judges "ought not soil their judicial robes by entering the administrative area and taking decisions which are within the province of specialist enforcement agencies." (Divan and Rosencranz, 2005)

In 1998, the Indian Supreme Court, embracing its activist role, issued a controversial order *suo moto* mandating the conversion of the entire Delhi fleet of diesel-powered buses to compressed natural gas (CNG). (MC Mehta v. Union of India, 1998). The court however failed to realize that CNG in India was at its development stage. Conversion in such a small span of time would mean expense and risk. The court also disregarded the government's plea to extend the date, which again brings to light the tussle between the judicial and administrative organs of the State. Questions arise as to which organ should have been given the authority to decide the matter, and whether the court overstepped its jurisdiction, while deciding the matter.

Although this judgment has aggravated tensions between the judiciary and the executive, it has certain positive implications. These implications are in the form of the judiciary prioritizing the implementation of the use of CNG fuel as a matter of necessity over convenience. In light of the increasing levels of vehicular pollution throughout the country, the paper examines the practicality of widening this spirit of the judgment in the form of a nation-wide policy.

1.1 Facts

The Supreme Court's involvement in Delhi's air pollution problem originated over concerns that the city's polluted air was slowly poisoning its citizens. A widely cited study conducted in Delhi estimated that 10,000 people die every year due to complications from air pollution, a staggering total of one person every hour (Centre for Science and Environment Press Release, Jul. 18 2000). Alarmed by this unchecked pollution and its health impacts on the Delhi population, environmental activist, M. C. Mehta filed a Public Interest

Litigation (PIL) suit in the Supreme Court against the Union of India in 1985, charging that existing environmental laws obligated the government to take steps to reduce air pollution in Delhi in the interests of public health (MC Mehta v. Union of India, 1985). For several years following the initial appeal, the Court did little more than set up fact-finding commissions to determine the status of air in Delhi. In 1990, based on the opinion of the Ministry of Environment and Forests (MoEF), the Court acknowledged that heavy vehicles including trucks, buses and defense vehicles were the main contributors to the air pollution problem (MC Mehta v. Union of India, order dated Apr. 16 1999)

Due to the complexity of the issue at hand, a 'high power committee' was constituted on 14 March 1991, headed by Justice K. N. Saikia, to look into the technology of alternative fuels. However the report submitted by this committee was not considered by the court, rising crucial questions as to the purpose of the committee. In 1996, the Court ruled that all government vehicles in the city be converted to compressed natural gas (CNG) (MC Mehta v. Union of India, order dated Apr. 26 1996). Consequently on 29 January 1998, the Supreme Court endorsed the Central Government's decision to set up the Environmental Pollution (Prevention and Control) Authority (EPPCA) headed by Mr. Bhure Lal. Furthermore, based on the findings of the Bhure Lal Committee, the Court has not taken into consideration the economic exaggeration made by the government with regard to the lack of financial capacity to implement the orders of the court. The case took on its current significance in 1998 when the Court mandated that all buses in the city must be converted from diesel fuel to CNG by 31 March 2001. Auto-rickshaws were later brought under the same rule.

Subsequent to the Supreme Court decision, there has been an increasing trend in the consumption of CNG fuel in Delhi. Facts reveal that the fleet of CNG vehicles in Delhi has increased from 26350 units in 2001 to 344868 units in 2009, while CNG consumption has increased from 77.49 kt in 2001 to 526.98 kt in 2009. (Richa Singh and Chhemendra Sharma, 2011)

2.0 Materials and Methodology

This is a doctrinal research paper, which critically analyzes the judgment of the Supreme Court in the Delhi Pollution Case in 1988. Data and information referred to in the paper has been derived from various secondary sources such as scholarly articles from reputed journals, academic texts, judicial pronouncements, government publications and e-sources.

3.0 Results and Discussion

To a common man, the decision passed by the Supreme Court may seem very correct. But on a close inspection of the case, certain questions arise. Does the court possess the jurisdiction to pass an order relating to pollution? Is the judiciary superior to the executive? Had stronger enforcement machinery been in place, would the judiciary have directed the government to take action rather than itself? Is there a need for a stronger executive wing? Has the court been too strict in implementing its order?

This section deals with harmonizing the ties between the judiciary and the executive by strengthening the powers of the Pollution Control Boards. This would in turn reduce the dependence on the judiciary. Furthermore, the section also deals with the practicality of universal implementation of the use of CNG fuel across India, in tune with an international frame of reference.

3.1 The Powers of the Pollution Control Boards

The Supreme Court in deciding this case failed to realize that pollution is an element that is wide spread. Therefore limiting vehicular pollution in Delhi alone will not suffice. Pollution emitted from neighboring states may still keep the pollution levels high. This is when the Pollution Control Boards established in every state, will play a pivotal role in ensuring pollution control measures in all the other states. But by way of this decision, "judicial activism has restricted the growth of a responsible and independent bureaucracy." (Divan, 2002). They have no power to impose fines, cannot threaten imprisonment for non-compliance, and are reliant on the courts to enforce their order (Kuik et al., 1997) Their power to shut down polluting factories is often compromised by their reluctance to bring about unemployment and economic dislocation (Pravinbhai J. Patel v. State of Gujarat, 1995 (2) Guj. L. Rep. 1210). In the "National Conservation Strategy and Policy Statement on Environment and Development", developed in 1992, the Ministry of Environment and Forests recognized the need to strengthen the enforcement agencies in order to enforce efficient environmental regulations. Thus,

this calls for sufficient parliamentary funding backed by increasing the powers of the PCB. This measure will not only ensure that these bodies function better, but will also keep the powers of the Judiciary in check. After all, every democracy needs a system of checks and balances.

3.2 Failure to acknowledge to Government's plea:

The Court's decision in mandating the conversion of the entire Delhi fleet of diesel-powered buses to CNG, needs to be supported by all wings of the government. However, the executive wing of the government failed to co- operate with the decision of the court and in fact even submitted pleas to the court to relax the mandate. In 1998, in order to suppress issues relating to air pollution, the Delhi health minister, Dr Harsh Vardhan, was quoted as saying that air pollution does not increase the risk of heart and lung disease (Centre for Science and Environment, Press Release Jun. 17 1998). Mr. Parvez Hashmi, the Delhi transport minister, denied the reliability of CNG as a fuel source, claiming that the government will be "blindly spending public money on an un-proven technology. We don't want CNG…" (Centre for Science and Environment, Press Release, Dec. 20 2000) The court also disregarded the government's plea regarding the financial incapacity to implement the order passed by the court. In a conflict between the health of the citizens and the economic concern of the government, the court intervened and addressed the needs of the citizens first and ordered the government to "stand up for the health of the citizens of Delhi" (MC Mehta v. Union of India, 1985). This caused a tussle between the administrative and judicial wings of the government. In a democracy, there should always be harmony between the various organs of the State. Conflicts such as these indicated the lack of trust, security and co-operation between the organs of the State. This can create a negative impact on the citizens of our country.

3.3 Did the court over step its jurisdiction?

Many believe that the Judiciary was arbitrary in deciding an environment related matter. The truth is that the court was protected by law to make a judgment regarding pollution control in India. Article 21 of the Indian Constitution (Right to Life), has been so interpreted as to cast an obligation on the State to promote the health of its citizens and protect the environment. The Indian Constitution is one of the only few in the world that contains specific provision for Environment protection (Divan and Rosencranz, 2005). There also exists a fundamental duty upon the citizens and State to improve the environment (42nd Amendment, 1976). The Supreme Court's decision to control air pollution in Delhi was consistent with precedent. The Kerala High Court in an attempt to strictly implement vehicular emissions framed under the Motor Vehicle Act, had directed the State to provide a smoke meter and gas analyzer at every major town (Murali Purshotham v. Union of India, AIR 1993 KER 297). Similar decisions were also passed by the Gwalior bench of the Madhya Pradesh High Court (Santosh Kumar Gupta v. Secy., Ministry of Environment, AIR 1998 MP 43.). The Supreme Court's determination to use its power to manage Delhi's vehicular pollution may, however, have been a mistake in judgment (Divan, 2002). Although it may seem that the court has been efficient in controlling pollution in Delhi, one has to consider the detrimental effect of the judgment on environmental management in India. Many environmental NGO's across India, were overjoyed by the strict stance of the Supreme Court, they failed to realize that this excessive judicial power may result in the executive wing of the government gradually losing its power. Although the Court has come to be seen as the "savior" of the people in India against the other seemingly indifferent or outright hostile branches of government, and against the multinational firms that plague the environment and cheat their workers, the real effects of the Indian Supreme Court's judicial activism are deeply problematic (Moog, 1998). The precedent created by such adventurism is one that eschews the democratic principle of separation of powers, thereby threatening the future of India's democracy with an insidious oligarchy.

3.4 Proposed Improvements In Functioning of the Pollution Control Boards:

3.4.1 Functioning of Pollution Control Boards not to be swayed by financial pressures:

The Pollution Control Boards were established to prevent pollution, and not promote it by giving way to interests of industries and polluters, who claim they will suffer large losses if pollution-controlling action were to be taken. The Boards must be expected to place society over industry (Leelakrishnan, 2008), and discharge its duties in accordance with the various pollution control laws that have been enacted. The importance of the

Boards acting purely in the interests of society has also been highlighted in the case of Stella Silks Ltd v. State of Karnataka (AIR 2011 Kant 219) where the social duties of the Boards were stressed upon. In this connection, the Ganga Pollution case (MC Mehta v. Union of India, 1988) may also be mentioned, wherein the Supreme Court held that no matter the effects closure may have on the polluting entities, the adverse impact on the general public by the discharge of trade effluents would prevail over any such effects. The Central Government, State Pollution Control Board and the District Magistrate were asked to monitor the enforcement of its orders (AIR 1988 SC 1037), whereby the tanneries in question were issued directions to either set up primary treatment plants (PTPs) or stop their functioning.

3.4.2 Boards should be independent of judiciary:

Pollution Control Boards are bodies that fall under the judicial hierarchy. They function on orders of the courts, rather than in accordance with the pollution control laws of the land. The removal of the Boards from under the umbrella of the judiciary may see the Boards functioning more effectively and proactively. The Pollution Control Boards are often criticized for not taking action against polluters violating the law. In the case of Uttar Pradesh PCB v. Modi Distillery (AIR 1988 SC 1128), the prosecuting power of the Boards were brought into question, and the Supreme Court sought that role of the Boards in initiating prosecution was taken up with more commitment. Thus, the independence of the Boards may even help eliminate the problem of lethargy, by forcing these bodies to take action *suo moto*, and not on directions of the court.

3.5 Need and Viability to Promote Use of CNG across India

The contribution of vehicles to the total air pollution load is quite significant, especially in most urban areas. Increased levels of air pollution may be attributed to the substantial increase in the number of vehicles. The number of motor vehicles has increased from 0.3 million in 1951 to 37.2 million in 1997 (Ministry of Surface Transport, 1999). Out of these, 32% are concentrated in 23 metropolitan cities. Delhi itself accounts for about 8% of the total registered vehicles and has more registered vehicles than those in the other three metros (Mumbai, Calcutta, and Chennai) taken together (MoEF, 2001).

The quantum of vehicular pollutants emitted is highest in Delhi followed by Mumbai, Bangalore, Calcutta and Ahmedabad (MoEF, 2001). The daily pollution load generated due to automobiles in 12 metropolitan cities is shown in Table 1. Carbon monoxide (CO) and hydrocarbons (HC) account for 64% and 23%, respectively, of the total emission load due to vehicles in all these cities considered together (Central Pollution Control Board, 1995). Although its source is not confined to vehicular pollution, Suspended particulate matter (SPM) is one of the most critical air pollutants in most of the urban areas in the country, and permissible standards are frequently violated in several monitored locations (MoEF, 2001). Its levels have been consistently high in various cities over the past several years. The annual average minimum and maxi- mum SPM concentration in residential areas of various cities ranged from 60 µg/m3 (at Bangalore during 1991) to 521 µg/m3 (at Patna during 1995), while in industrial areas the annual average ranged between 53 µg/m3 (Chennai during 1992) and 640 µg/m3 (Calcutta during 1993) (MoEF, 2001).

The need to implement stringent measures to check vehicular pollution is further strengthened by the various health effects associated with common vehicular pollutants. The chief pollutants include Lead, SPM, Volatile Organic Compounds (VOC), Nitrous Oxide, Carbon Monoxide, Ozone and Sulphur Oxides. The health affects associated with these pollutants are wide ranged and pose a serious threat. These include cardiovascular disease, brain and kidney failure, behavioral and development problems, elevated blood pressure, increased likelihood of spontaneous abortion among women, respiratory diseases, cancers, effects on immune system etc. In light of the circumstances as outlined above, it is necessary and expedient that vehicular pollution be controlled and prevented to the fullest extent possible. It is suggested that the Supreme Court's order may be used by the executive as the basis for implementing policies relating to the use of CNG throughout India. However, merely the lowering of the price of CNG may not be an effective measure in itself, as this will lead to less responsible use of CNG fuel. To counter this problem, this paper suggests measures such as increasing road taxes, increasing taxes on vehicles and increasing fees for licenses to be adopted alongside the reduction in the price of CNG. It is also suggested that hybrid and greener vehicles be made more easily available and at affordable costs.

3.6 International Perspective:

Emissions from vehicles have been a subject of concern for a considerably long period of time. Most developed countries have now largely contained some of these emissions, as a result of technological changes in vehicle parts and fuel content. However, this is not yet the case in developing countries, although improvements in some are taking place through technology transfer and local effort (Amin, 2009). For example, the use of CNG fuel is predominant in Bangladesh, where it is an inexpensive, indigenous energy resource, which currently accounts for the majority of automobile and domestic energy consumption. (Suthawaree et al, 2012)

With every nation viewing economic growth as the means to achieve its respective development goals, the transport sector continues to be a driving force for growth, along with industries that produce greenhouse gases. In this environment, the absence of appropriate public policy, emissions policies for the transport sector will continue to adversely affect the local environment, human health and climate change. The adverse effects of emissions produced by the transport sector can be minimized by the implementation of concerted local, national and international efforts. These efforts, if implemented wisely, can also reduce dependence on fossil fuels. Levels of car ownership have been steadily increasing over the years, and consequently, the transport sector is one of the largest contributors of Carbon Dioxide emissions. These conclusions may be deduced from the tables provided below:

Table 1: Estimated vehicular emission load in metropolitan cities, 1994

	Vehicular Pollution Load (tones per day)					
Name of the city	**Particulates**	**SO_2**	**NO_x**	**HC**	**CO**	**Total**
Delhi	10.30	8.96	126.46	249.57	651.01	1046.30
Mumbai	5.59	4.03	70.92	108.21	469.92	659.57
Bangalore	2.62	1.76	26.22	78.51	195.36	304.47
Calcutta	3.25	3.65	54.69	43.88	188.24	293.71
Ahmedabad	2.95	2.89	40.00	67.75	179.14	292.73
Pune	2.39	1.28	16.20	73.20	162.24	255.31
Chennai	2.34	2.02	28.21	50.46	143.22	226.25
Hyderabad	1.94	1.56	16.84	56.33	126.17	202.84
Jaipur	1.98	1.25	15.29	20.99	51.28	88.99
Kanpur	1.06	1.08	13.37	22.24	48.42	86.17
Lucknow	1.14	0.95	9.68	22.50	49.22	83.49
Nagpur	0.55	0.41	5.10	16.32	34.99	57.37
Grand Total	35.31	29.84	422.88	809.96	2299.21	3597.20

(Amin, 2009)

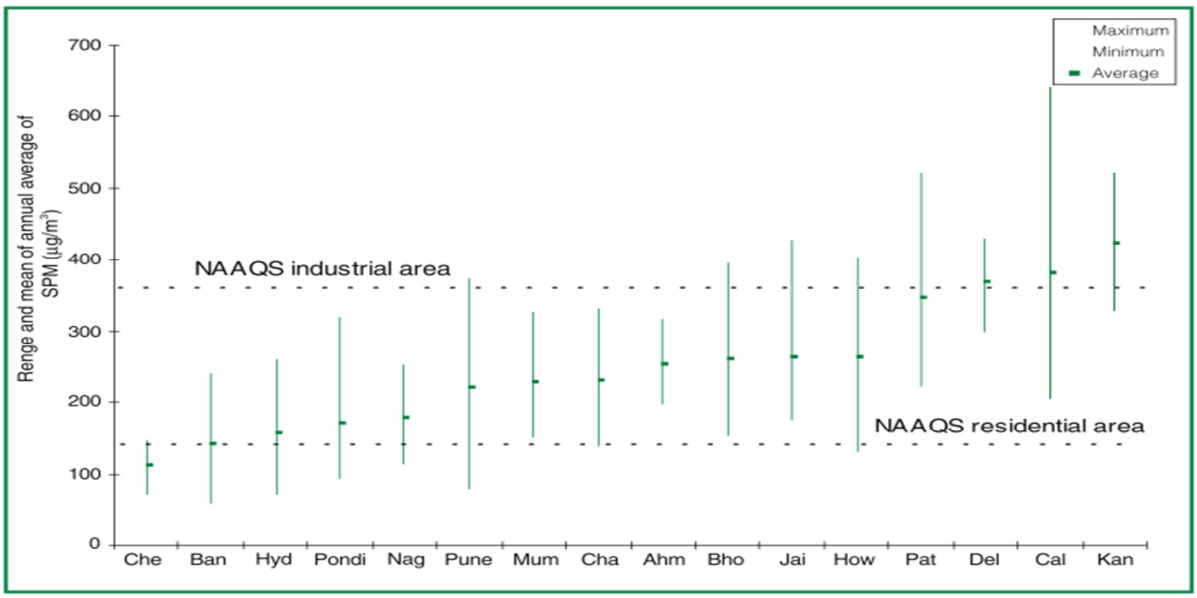

Fig. 1: Range and mean of annual averages (1990-98) of SPM in various cities (Delhi Pollution Control Board, 2000)

Table 2: Trends in motorization

By income level/region	Motor vehicles per 1,000 people		Passenger cars per 1,000 people	
	1990	2003*	1990	2003*
World	118	141	91	100
By Income				
Low	5	8	3	6
Lower middle	22	39	10	29
Low & middle	25	47	16	35
Middle	37	69	24	51
Upper middle	121	187	91	143
High	499	623	390	433
By Region				
East Asia & Pacific	9	20	4	14
Europe & Central Asia	97	170	79	142
Latin America & Carib.	100	153	72	108
Middle East and N.Africa	36	--	24	--
South Asia	4	10	2	6
Sub-Saharan Africa	21	--	15	--
Europe EMU	429	570	379	502

a. Data are for 2003 or most recent year available (World Bank, 2006)

Table 3: Global CO2 emissions by sector

Producing Sector	Sectoral Share (%)
Power Generation	44.4
Industrial Sector	21.2
Domestic	12.9
Transport	**21.5**
Automobile	18.5
Others	2.9

(International Energy Agency, 2005)

Consequently, the reduction of emissions from this sector will likely have multiple impacts on air quality, health and global warming (International Energy Agency, 2005). With regard to the suggestion that CNG be implemented across India, the following example of the Transport Air Quality Management Project in Mexico may be cited, as provided by Nurul Amin, for the United Nations Environment Programme, September 2009:

Mexico City, with funding from the World Bank for the achievement of Millenium Development Goals (MDGs), embarked on a comprehensive transport air quality management project using demand and supply measures. On the demand side, gas prices were increased to make unleaded gasoline competitive, while on the supply side, vehicles were retrofitted to run on compressed natural gas (CNG), and more efficient models that ran on clean fuels replaced existing taxis. CNG was made the least expensive of all the available fuels, and clean fuels were generally encouraged. With fine-tuning over time, the project improved air quality and had a favourable impact on emissions.

According to this report, a similar policy is working effectively in Dhaka, Bangladesh as well.
In order to overcome the problems posed by vehicular emission, international co-operation and assistance is essential. The scope of the problems is too great for political leaders or policymakers, particularly in developing country cities, to undertake initiatives and actions without encouragement and support from international agencies, access to official development assistance (ODA), external capital markets and foreign direct investment (FDI) (International Energy Agency, 2005). Support, co-operation, technical assistance, dissemination of learning experiences and knowledge between countries and international agencies is therefore of paramount importance.

4.0 Conclusion:

Although there has been much progress with regard to undertaking major environmental policy initiatives, the time for a rational, well-planned transition to a sustainable system is running out fast. (Arshdeep Sngh, Jaypreet Singh Kohli, 2012).

The Supreme Court of India has taken a firm stand in the M.C Mehta case and has made known to the rest of the government that it is here to stay. The attitude demonstrated by the court in passing this decision brings out a sense of power that the judiciary tries to display. Through this decision it is not only clear that Indian courts are gradually employing the realist approach in disposing of cases but it also indicates the need and concern of the court in protecting the environment and with it, the health of the citizens. Although the court has not realized the consequences of its decision, this decision has come as a blessing for the environmental activists all over India. The judiciary, a spectator to environmental despoliation for more than two decades, has recently assumed a proactive role of public educator, (MC Mehta v. Union of India, AIR 1992 SC 38), policy maker (S. Jagannath v. Union of India, AIR 1997 SC 811), super-administrator (T.N. Govdavaraman Thirumulpad v. Union of India, AIR 1997 SC 1228), and more generally, *amicus* environment. The development of Environmental law in the 1990's is largely the story of India's judiciary responding to the complaints of the citizens against environmental degradation and administrative sloth (Divan and Rosencranz, 2005). The courts ultimate objective is to ensure a safer environment with healthier citizens. Thus whether the court was superficially right or wrong seems irrelevant to its ultimate objective. Even though the court may have exercised its functions in a manner not befitting the cause of the executive, it is not a matter of dispute, that the Court was playing the role of a welfare State. Apart from the suggested implementation of CNG across India, and improvements to the Pollution Control Boards, it is also suggested that multi-pronged strategies be adopted to reduce vehicular pollution, such as urban planning to reduce car use, development of transport infrastructure and mass public transport and greener car technology.

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