



Step up the controls beyond Odd-Even scheme: TERI

Says odd-even should be used as emergency measure; recommends congestion pricing and other measures to curb pollution levels in NCR

- Recommends congestion pricing as an alternative to odd-even scheme
- Urges for ensuring earliest possible introduction of BS-VI vehicle and fuel quality norms.
- Recommends real-time monitoring and reporting of industrial emissions in NCR
- Highlights need for business models to convert agricultural wastes into energy using biomass gasification technologies

New Delhi, May 10, 2016: While acknowledging that the odd-even vehicle scheme in Delhi was successful in raising public awareness on air pollution as well as in improving traffic speeds, TERI has cautioned against the regularization of this scheme. TERI, which launched an impact assessment study on the odd-even scheme in the city today, said that the rule should at best be used as an emergency measure.

As private cars have limited contribution in the PM_{2.5} levels in the city, the scheme yielded only marginal reductions (4-7%) during both the phases. During phase 2 of the scheme, the general variation of PM_{2.5} concentration due to daily changes in local emissions, meteorology and background concentrations (influences from outside Delhi) was 42%. The reduction achieved from Odd-Even scheme during this phase seems too small (~4%) to be captured, among the other more dominating factors.

TERI observed that the impact of the odd-even scheme with respect to traffic counts, average speeds and air quality declined during the second phase in comparison to the first phase in winter. Its analysis shows that this decline could be probably due to people opting for second cars with alternative number plates, installations of CNG kits or enhanced use of taxis.

The analysis of both the phases of the scheme suggests that regularizing it can reduce its impact. As in the case of other cities in the world that have tried out the Odd-Even scheme in the past, people could look for alternatives by purchasing new/old cars or motor bikes, which would, over a period of time, neutralise and negate the positive impacts. This is likely to happen as the public transportation system is not reliable and attractive enough to encourage the car users to shift to public transport. Hence, the odd-even scheme should be used only as an emergency measure when the pollution levels are expected to be very high, such as in winters.

Regularizing it or its frequent use may only reduce its impacts, unless public transportation is improved and sales of alternative vehicles are checked.

Further, TERI recommended that alternative solutions such as ‘congestion pricing’ must be introduced to increase effectiveness and sustain the gains accrued from Odd-Even. Congestion pricing is based on a ‘pay-as-you-use’ principle with an aim to reduce the number of vehicles and in turn encourage modal shift by charging vehicles on entry in restricted zones/times. This can be complemented by providing exemptions to higher-occupancy vehicles. Such a model has proved to be successful in cities such as Singapore, London, Sweden, Rome, Durham, Seoul, San Diego, among others. The congestion pricing scheme can be first tried out in different ways, including, (a) all across congestion pricing (b) identification of low-emission zones and (c) road-wise congestion pricing.

TERI also stressed upon the need to significantly strengthen the public transport infrastructure along with measures such as congestion pricing. It recommended key interventions in different sectors for long term air pollution control. These include immediate measures such as enhanced LPG penetration in NCR and complete ban on refuse burning. A number of other measures are suggested to reduce air pollution in the region in the short and medium term.

TERI emphasized that air quality management plans should be based on scientific studies that are updated every 3-5 years—especially in the rapidly changing urban environment like the National Capital Region — and air-quality targets must be defined for each year and strategies must be enforced to achieve them in line with these plans.

Dr Ajay Mathur, Director General, TERI, commenting on the way forward, said, “The results of the two phases of odd-even scheme in Delhi suggest that it is useful only when high pollution episodes are expected. We do not see merit in regularising the scheme. A more sustainable approach for dealing with air pollution not only in Delhi but also in other metropolises would be congestion pricing, which is a far more effective option”.

Mr Sumit Sharma, Fellow, TERI, said, “We need multi-sectoral measures for the whole NCR to effectively reduce air pollutant levels, which calls for regular air quality management plans based on scientific studies”.

Methodology & Analysis

To effectively analyse the second phase of the odd-even scheme, TERI adopted a methodology of analysing air quality in the city across nine locations, issuing a daily data report for the previous 24 hours. A modelling approach was followed to delineate the effect of the Odd-Even scheme on PM_{2.5} concentrations which are affected by several factors including local emissions, meteorology and backgrounds. In the first phase in winter, the odd-even experiment led to reduction of 7% in PM_{2.5} concentrations. In summer, however, when the pollution levels are relatively lower and the share of vehicular sources is lower too, the impact of odd-even scheme is further reduced (4%).

About TERI

The Energy and Resources Institute is an independent, not-for-profit research institute focused on energy, environment, and sustainable development and devoted to efficient and sustainable use of natural resources. Since its inception in 1974, TERI has emerged as an institution of excellence for its path-breaking research, and is a global brand widely respected by political leaders, policy makers, corporate entities as well as the civil society at large.

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