

A Low Carbon Vision for Bhopal 2030: Transitions in Residential and Transport Sector

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Bhopal is a million plus city located in Central India. It is the capital of Madhya Pradesh State. Bhopal has a unique topographic configuration in which the different parts of the city are interspaced by hills and lakes. The lakes and hills of Bhopal provide large open spaces within the city. Low density development in the past has helped in continuing with green cover. The afforested hills have also helped in keeping the city water bodies clean. This natural balance is now being disturbed due to faster and somewhat thoughtless development. The new developments are not particularly eco-friendly and planned interventions are needed if Bhopal wants to continue as a cleaner and greener city.

In previous studies it was identified that Residential and Transport sectors are major contributors to the GHG emissions in Bhopal and also have good potential to mitigate the emissions. In pursuit of cleaner and greener Bhopal and to make it a more liveable entity to all its residents, comprehensive seven Actions have been conceptualised. These actions have been defined with an understanding of the inherent strengths and potential of Bhopal which can be explored at this time of rapid development. A sustainable path taken now can guide tomorrow's growth in a more holistic and inclusive manner with little need of post-action course correction. These actions, though, identified separately for the ease of communication, are inseparably linked to each other and can only work in conjunction towards achieving the vision.

In the present work, transformation of Residential and Transport sector in line with seven actions has been modelled using AIM/endues model. Some initial results indicate that the final energy demand in Bhopal is expected to rise more than three times 2030 where the share of residential sector would be 43% followed by industry with 28% and transport sector with 21%. A sectoral analysis of GHG emissions shows that the contributions from building sector (residential and commercial) for Bhopal would rise almost 5 times compared to year 2005 in BaU scenario. In 2030 LCS scenario, it is expected that the total GHG emissions in Bhopal is to be reduced by almost 40% in comparison to the BaU scenario. These are preliminary findings as the detailed modelling work is in progress.

Based on the results of the present study, it can be envisaged that a city like Bhopal can move on to the path of becoming a low carbon society city to be able to address the issues of increasing energy consumption and emissions. This would be possible only if needful steps and planning measures are taken in coming years to address the infrastructure bottlenecks and by adoption of cleaner technologies. It is expected that the policymakers will be able to accommodate these requirements addressing the environmental concerns in the future development proposals for Bhopal.
