

# Energy and Resources Group Fall 2009 Colloquium Series (ER295)

**September 2, 2009**



## **A New Framework for Integrating CO<sub>2</sub> Emissions from Road Transport INTO Transport Planning: The Case of Latin America**

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WE REVIEW AGGREGATE TRENDS IN CO<sub>2</sub> EMISSIONS FROM ROAD TRANSPORT IN LATIN AMERICA. COMPARISON WITH OTHER REGIONS, AS WELL AS WITH AUTOMOBILE OWNERSHIP AND USE SUGGESTS THAT ROAD TRANSPORT THE EMISSIONS IN THIS REGION ARE CLOSELY CONNECTED TO HIGH AUTOMOBILE OWNERSHIP AND USE. EXAMINATION OF DETAILED ESTIMATES OF VEHICLE STOCKS, USE AND FUEL INTENSITY AS WELL AS DATA FROM FOUR LARGE METROPOLISES IN THE REGION CONFIRM THIS SUGGESTION. THE SAME METRO DATA SHOW THAT IT IS CARS THAT ARE THE MAIN REASON FOR CONGESTION, HIGH LEVELS OF AIR POLLUTION, AND OTHER TRANSPORT RELATED EXTERNALITIES IN URBAN REGIONS. WIDELY CITED PROJECTIONS OF CAR OWNERSHIP AND USE IN 2030 SUGGEST THAT CAR USE WILL MORE THAN TRIPLE. EVEN WITH A 20% REDUCTION IN FUEL USE AND EMISSIONS/KM, CO<sub>2</sub> EMISSIONS WILL BE WELL ABOVE PRESENT LEVELS. BUT IF THE FUNDAMENTAL PROBLEMS OF URBAN TRANSPORT THAT PLAGUE LATIN AMERICA TODAY ARE ADDRESSED, CAR USE WILL GROW BY CONSIDERABLY LESS, RESTRAINING CO<sub>2</sub> EMISSIONS CONSIDERABLY AS A CO-BENEFIT OF TRANSPORT STRATEGIES. A REVIEW OF THE IMPACT OF A BRT PROJECT IN MEXICO CITY SHOWS A REDUCTION OF 10% IN TRAFFIC-RELATED EMISSIONS IN THE BRT CORRIDOR EVEN WITHOUT FUEL AND EMISSIONS BEING ADDRESSED DIRECTLY. ONE THIRD OF THOSE SAVINGS AROSE BECAUSE METROBUS RIDERS LEFT CARS AT HOME AND TOOK THE BUS. THE MONETIZED VALUE OF THE CO<sub>2</sub> EXTERNALITY IS SMALL COMPARED TO OTHER BENEFITS OF METROBUS AS A TRANSPORT PROJECT. THUS CO<sub>2</sub> REDUCTION CAN BE EVALUATED AS A CO-BENEFIT OF A TRANSPORT PROJECT. WHAT THE AGGREGATE DATA SUGGEST CAN THUS BE FOUND BY CLOSELY EXAMINING TRANSPORT PATTERNS AND THE RESULTING CO<sub>2</sub> EMISSIONS.

**110 Barrows Hall – 4:00 p.m.**