HIGH-SHIFT SCENARIO
UC-DAVIS & ITDP

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High Shift Scenario

• “Base Case” aligns with the IEA 4 degree scenario (4DS)
  • Some fuel economy improvement
  • No shift away from car growth
  • Other modes static or slow growth

• “High Shift” Scenario:
  • Increased rapid transit
  • More walking and cycling, & E-bike use
  • Preserve projected growth in personal mobility
  • Cut car travel in cities by half by 2050 from Base Case
2050 EMISSIONS FROM URBAN TRANSPORT

We could avoid

~2100 megatons
of global CO2 emissions,
a 7% reduction in urban transport emissions over BAU due to cycling, as part of a 47% total reduction in the comprehensive HSC scenario

2015-2050 CUMULATIVE COSTS OF TRANSPORT

And save cities

$130 trillion
over the next 35 years
with $25 trillion due to cycling
Cut annual CO2 emissions 2.1 GT (47%)

Impact on global urban passenger transport CO2 emissions
Global Savings of $130 trillion by 2050

Global Public and Private Direct Costs

Trillion US Dollars

OECD  non-OECD  OECD  non-OECD  OECD  non-OECD  OECD  non-OECD
2010-2030  2010-2050  2010-2030  2010-2050

Base  High Shift

- Infrastructure Rail
- Infrastructure BRT
- Infrastructure Roadway
- O&M Cycle/e-bike
- O&M Rail
- O&M Bus
- O&M Private vehicle
- O&M Road-related
- Fuel Electricity
- Fuel LDV-2W liquid fuel
- Purchase Cycle/e-bike
- Purchase Rail
- Purchase Bus
- Purchase Private vehicle
Re-route 20% of what would have been spent on cars/roads to public transport, walking, and cycling – this will provide most of what is needed.
Need Emission Standards to Cut P

Global Air Pollution Mortality from Urban On-Road PM2.5

Data labels indicate global annual premature mortalities from exposure to primary PM2.5 emissions from on-road vehicles in urban areas.
Need All Solutions

- Prioritize & Expand Public Transport
- Regulate and price parking, vehicles & road use
- Reform urban design and street codes
- Reduce traffic speed
- Encourage & Improve Cycling
- Clean technology & fuel standards
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