

Achieving Oil Security, with Emphasis on the Transport Energy Sector

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Transport and Oil in APEC



- Continued Dependence on Oil Products

- The transport sector will continue to drive up oil demand barring a major technological breakthrough.
 - By 2030, the transport sector will lead about 70 percent of incremental oil demand growth.
 - By 2030, oil is expected to continue to be the major energy source for the transport sector.
 - By 2030, road transport is projected to account for about 80 percent of total transport energy demand.

- Rising Oil Import Dependence in APEC

- APEC's net oil import dependence will jump from the current 36 percent to 52 percent by 2030.

Drivers of Transport Energy Demand

High Income Growth

- GDP per capita will grow at an annual rate of 3.5 percent.

Expansion of Automobile Industry

- Production of vehicles at lower prices than imported ones

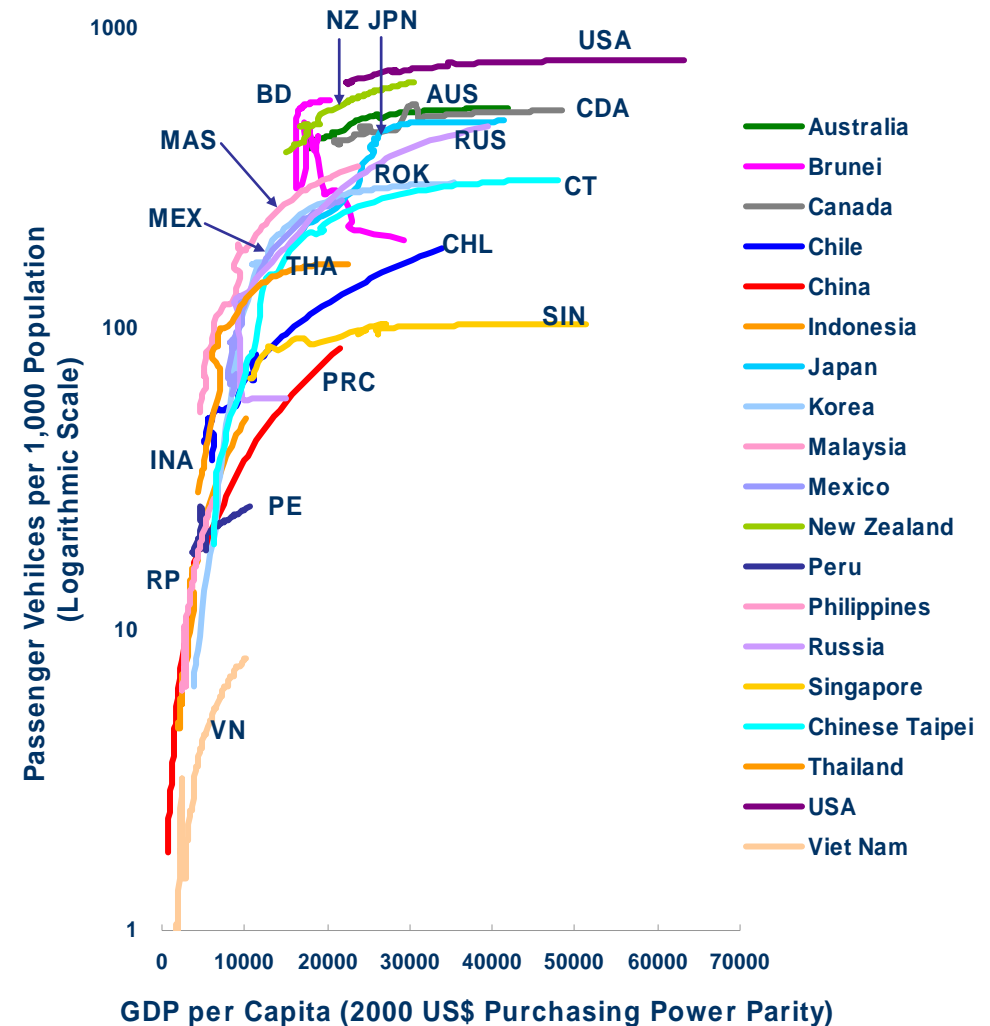
Continued Rapid Urbanisation

- By 2030, 26 million people per year will migrate from rural areas into urban areas.
 - Urban population is likely to need more transport energy than rural population.

Accelerating Industrialisation

- Rising industrial activities will increase freight transport demand.

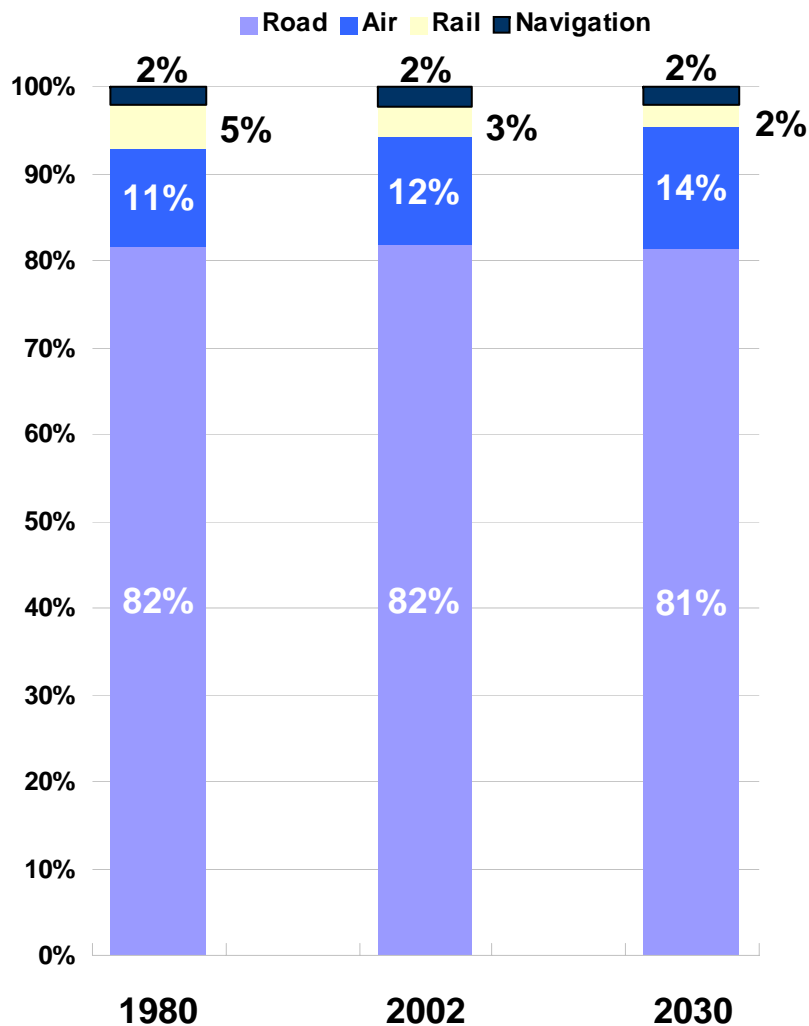
Passenger Vehicles per 1,000 Population (1980-2030)



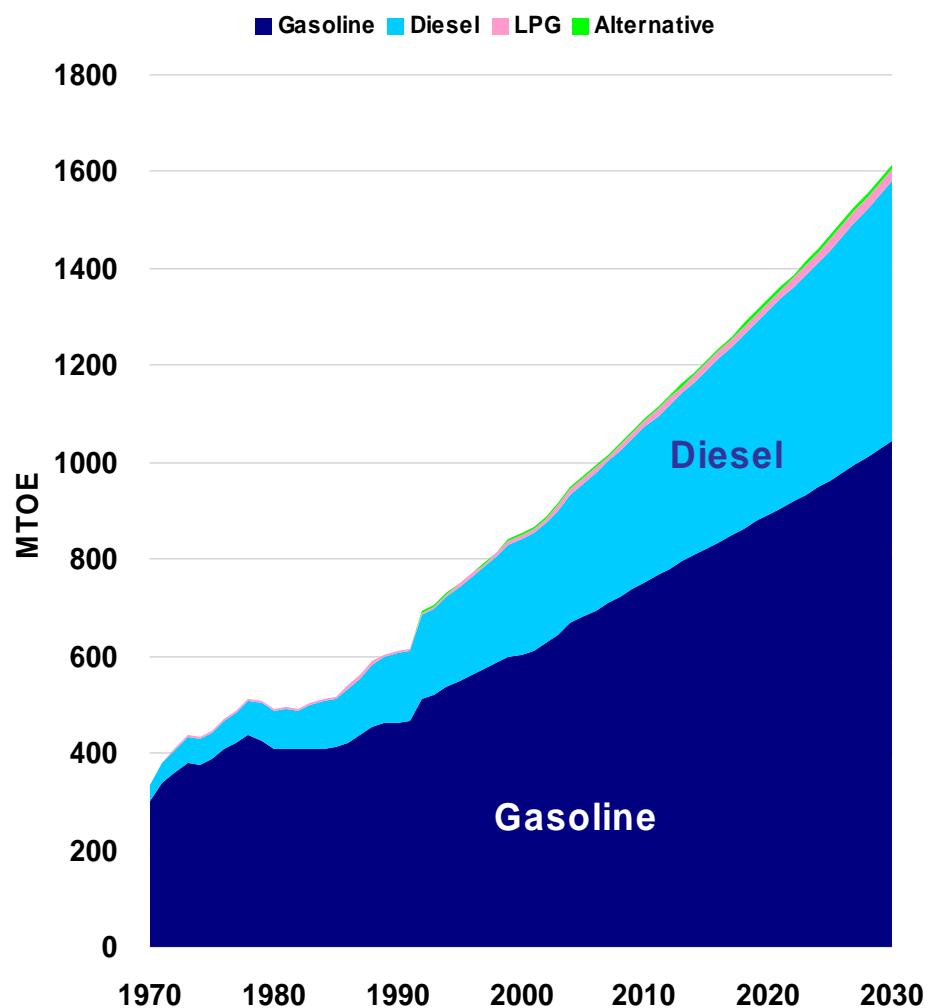
History and Outlook of Transport Energy Demand



Ratio of Transport Energy Demand by Sub-sector (1980, 2002 and 2030)



Energy Demand for Road Transport (1970-2030)



Factors Affecting Urban Passenger Transport Energy Demand



- Rising income in some cities of APEC has driven substantial growth in gasoline consumption.

Contributing Factors

- Motorisation
- Road Infrastructure
- Vehicle Distance Travelled

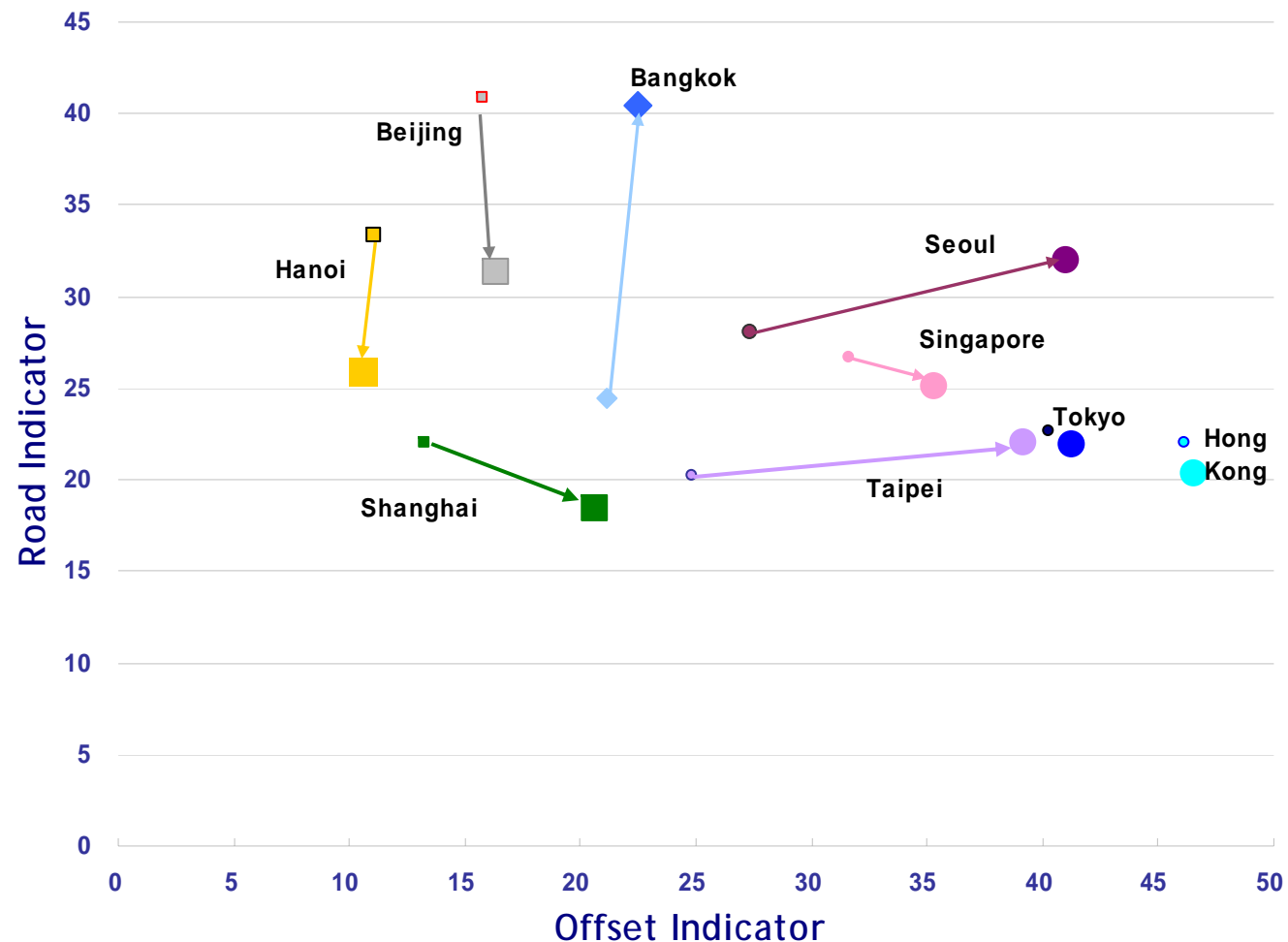
Offsetting Factors

- Technology Development
 - Vehicle Energy Efficiency Improvement
 - Alternative Fuels
- Accessibility to Urban Mass Transit
 - Rail and Subway
 - Bus
- Traffic Demand Management
 - Governance

Indicators for Urban Transport in Some Asian Cities: (1995-2005)



- Substantial changes can take place within a decade.
- Seoul and Taipei reduced growth in passenger vehicle dependency through subway development.
- Timely investment in urban mass transit is key.

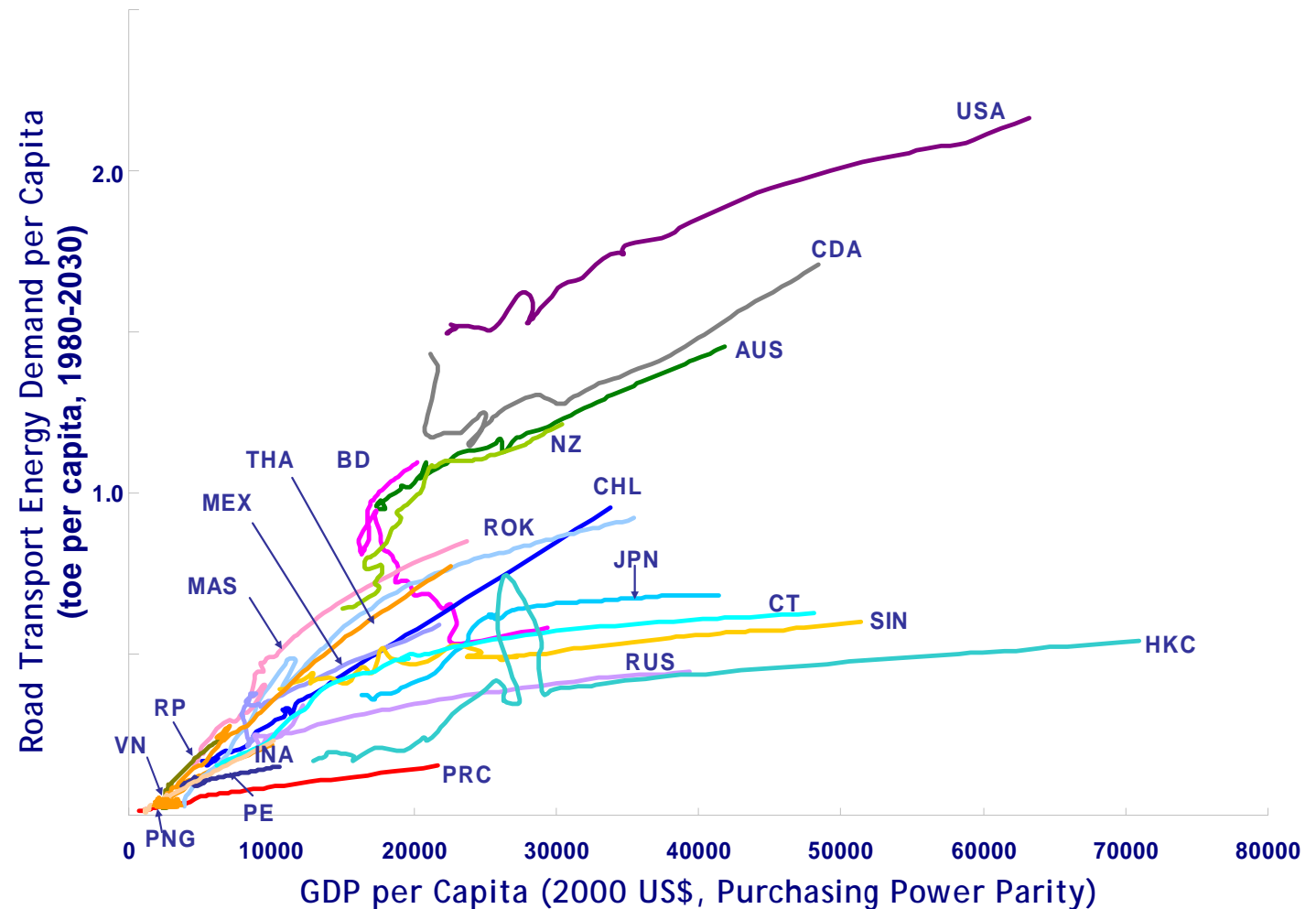


Challenges for Transport



Rising Road Energy Demand per Capita (1980-2030)

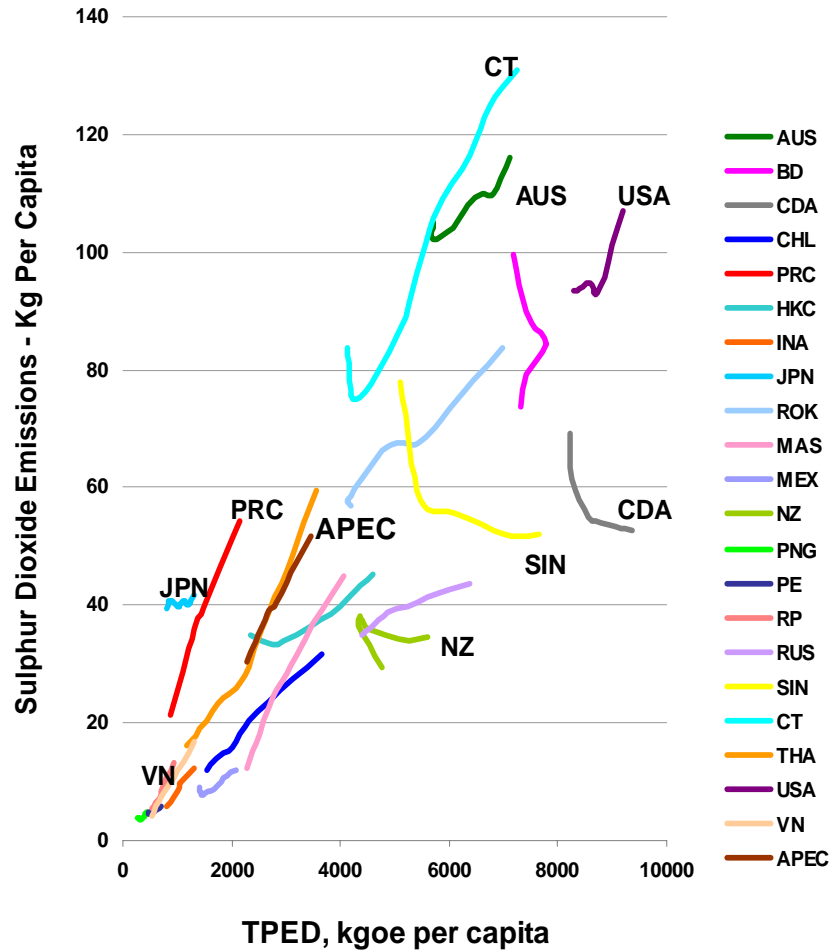
- High *Infrastructure* Cost
- Weak *Policy* Coordination
- Slow *Tech* Development & Implementation
- Unsustainable *Lifestyle* Choices



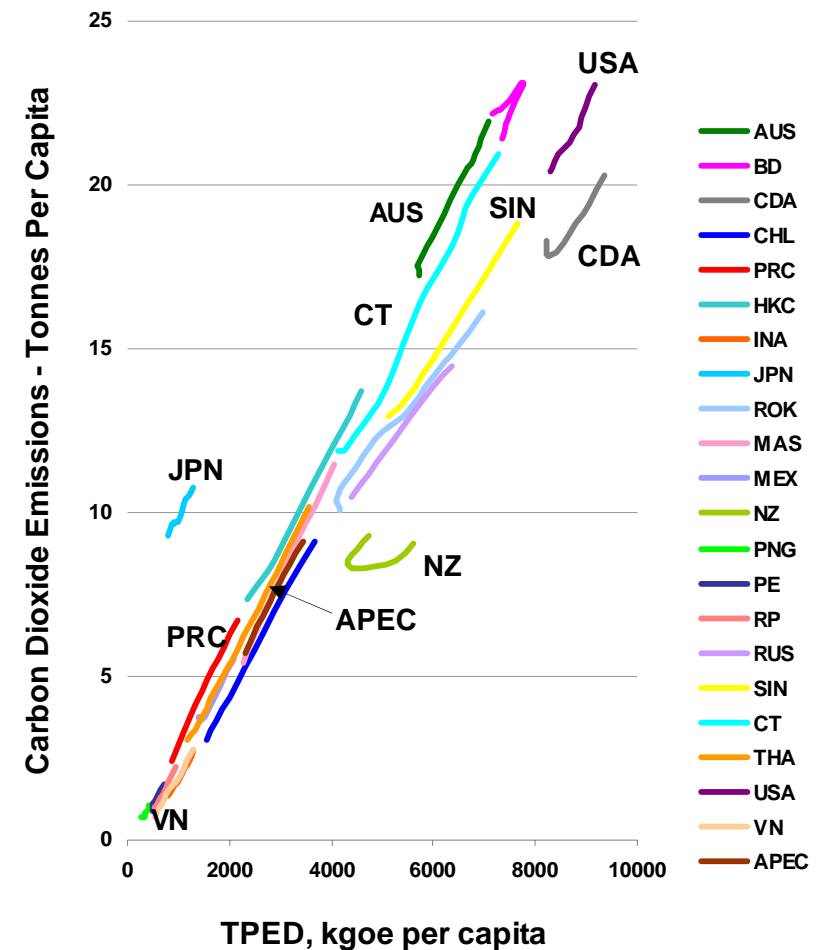
Environmental Issues for Transport



Local Environment: SO₂



Global Environment: CO₂

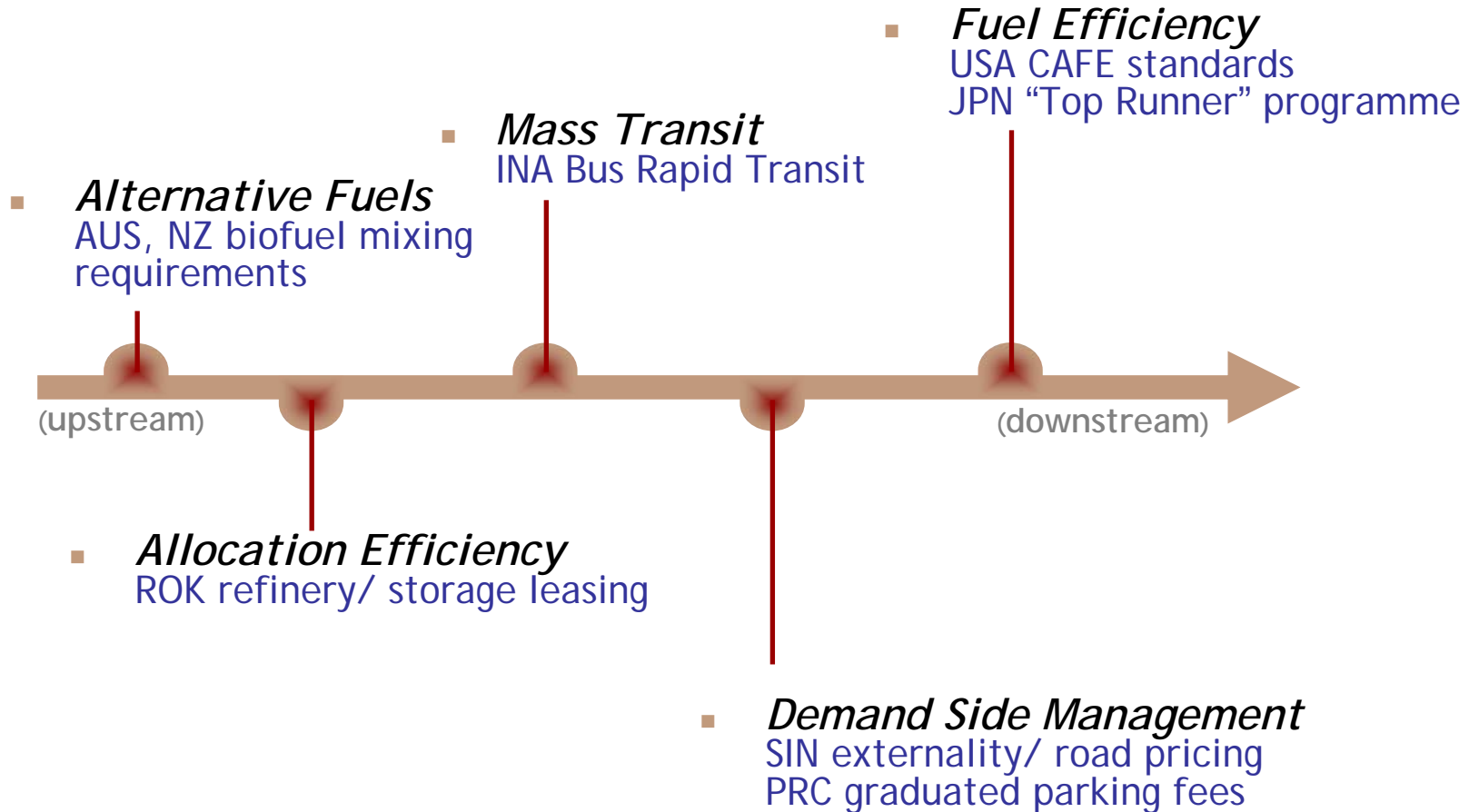


Good Practices for Transport Energy Efficiency and Security



Tech / Infrastructure
Projects & Policies

Socioeconomic
Measures



Options for Transport Energy Efficiency and Security



- A holistic approach tailored to meet the needs of each APEC economy
 - Needs for economic development
 - Needs for urban development
- Policy implementation and coordination
 - Central and local levels
 - Cross sectional coordination
- Technological development
 - Improvement in efficiency
 - Alternative fuels
- Education conducive to changes in lifestyle

The Long, Long, Long-Term (but inevitable) Solution





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