Energy and Sustainability
Are we asking the right questions?

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Apparently -obvious questions

- No more oil - what now?
  - Oil for what? At what price?

- Travel less
  - Implies a stability of job/education/social needs

- Use public transport
  - Economics of lightly loaded systems

- Consume less
  - An excellent and enduring question

- Use rail for freight
  - Do the sums on end point distribution

- Price strategies to reduce oil use
  - Yes- but no substitute for distributional impacts
Why this contribution?

- I was raising issues that addressed the context of the conference. And asked to do this here
- Several areas of concern
  - Realisation of the role of freight
  - Distribution impacts of measures
  - Systemic assessments through the economy are subject to structural changes
- So to cover some of the ‘obvious’ questions....
Not so obvious questions

- Energy input output: are we really winning?
- Pricing strategies
  - Do we handle them reciprocally (GHG credits)
- Lifetime lifecycle costs
  - Shows that choices that look odd are rational
- Constraint bound choices for location at given times
  - Needs serious social and economic recognition
- The peak problem
  - Capacity v provision- we have no overall rationality
- Hydrogen economy a solution or a sideways shift?
  - Where is the energy being generated? Fuel cell catalysts, capitalisation, risk rebalancing- energy cycle
A contribution for Dr Anible: on LGCVs…

Recent Growth in Number of Trucks, Annual Truck Miles, Real GDP and Personal Consumption Expenditures in the United States

% Increase
400
300
200
100
0

1982 1987 1992

Services Truck-Miles

Number of Service Trucks

PCE Index

Real GDP Index

We need to do a better job of categorizing urban vehicles and how they are used:

1. Freight movements for commercial purposes
2. Freight movements for commercial purposes but in private vehicles
3. Freight movements for private trip purposes in LGCVs
4. Freight movements in private vehicles on private purposes
5. Non-Freight movements in LGCVs for commercial purposes
6. Non-Freight movements in identified LGCVs on private purposes
7. Non-Freight movements in private vehicles on commercial purposes

Consequently 2, 5, 6, 7 would all be visually misclassified

A central outcome of the 2001 DfT freight modelling Needs review

The next issues

- Base load power vs other
- Transport needs portable(?) energy storage
- Persistence in vehicle life, age and utilisation effects
- Logistics is THE top priority
- Structural signals mean pricing - but also information
- Crafting a more persuasive message
- Get past the simplistic ‘walking and cycling’ for the public transport dependent- these are for younger richer groups- and concentrate on Competitive Advantage
- Trends: home schooling and entertainment, shopping as recreation - but what about social interaction? (myspace etc may be one answer - scan first travel second but communication generates travel...)}
Productive questions

- Handling social v private prioretisation (or the rich wins in a zero sum game): distributional equity
- Terrorism and tourist crowding as assets in long term adjustments against personal airtravel (but pro freight..)
- Travel down = home energy up.. So….??
- The information commons have been prejudiced by ‘security’ and media concentration - so what basis for community trusted information?
- Lobbying has replaced rationality in many areas of transport - the safety culture and the neglect of serious all-groups mobility valuations. Information and trust are key: why are we spending them so freely? We need it…. Energy issues are pervasive and critical
Where next?

- CONTESTABLE evidence based policy will engage the communities - overwhelming with one sided expensive studies will continue to disengage

- We need trusted information and longer term strategies or we WILL get non optimal transitions and increased vulnerabilities and an unwinding of global logistics plus political power via energy management (see Russia and the ex satellites already in use)

- And where are the overall risk assessments? Have we discussed these in an integrated manner? Why not?

- Energy Input output tables (instead of fiscal flows) are a way of assessing the system impacts consistently
Some mobility mixes....

Here are some key mobility mixes ....

- **VATS (Melbourne) all day travel data from 1995-98**

- **Trip length**
- **Trip Time**
- **Speed (km/hr)**

**Graph Key:**
- Bicycle
- Car Driver
- Tram
- Bus
- Motorcycle
- Train

- **Lowest average speed**
  - Shortest trip length
- **Fastest average speed**
  - Second longest trip length