

Policy Options for Energy Efficiency in Australia

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What is energy efficiency?

- Physical: energy/unit of work
- Cultural: energy/unit of useful service
- Economic: energy/unit of economic output
- Issues:
 - End-use energy or primary energy
 - Links to greenhouse gas emissions, energy supply cost etc

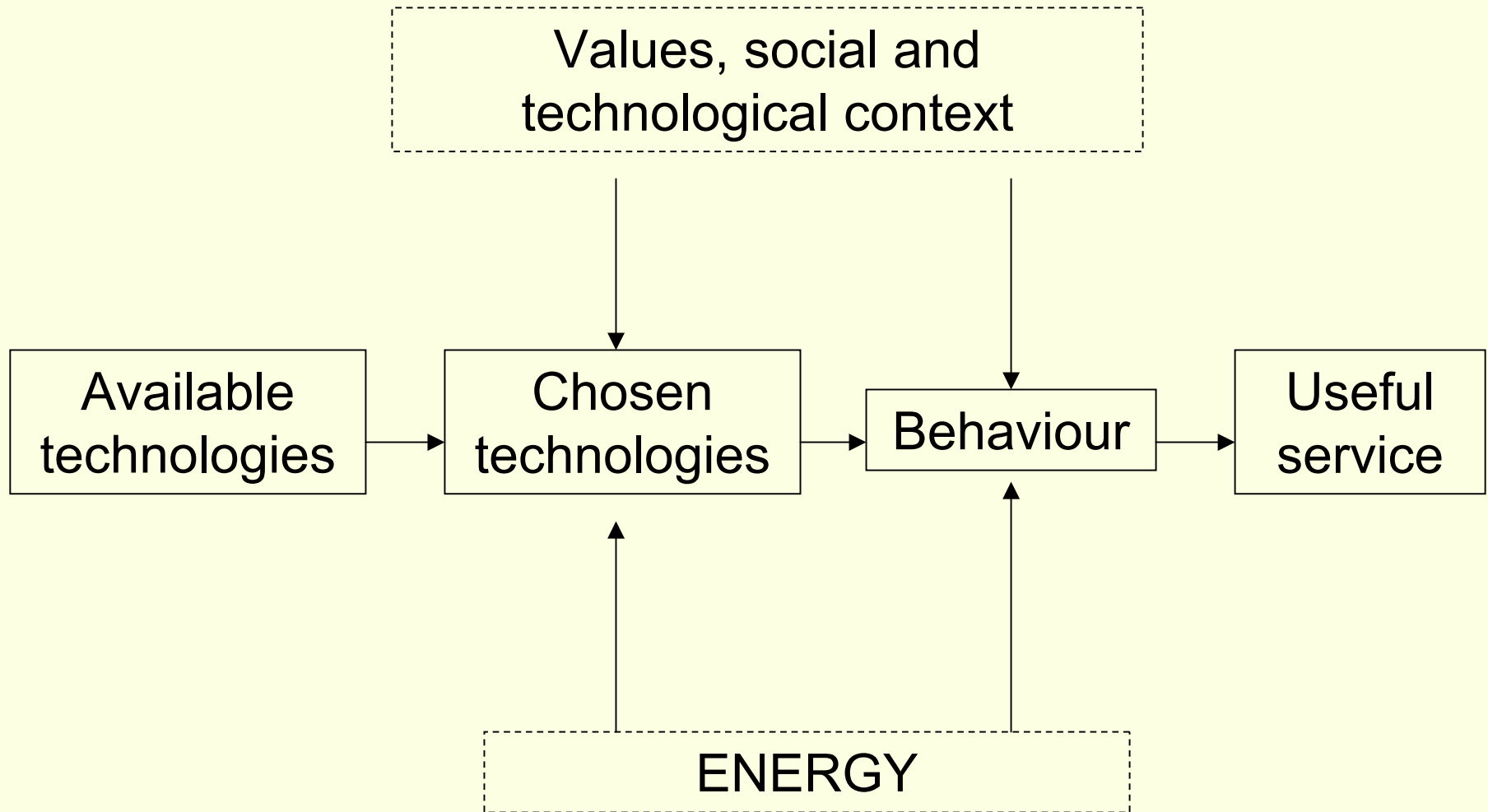
Energy and the Economy

- Energy supply traditionally seen as the ‘engine of growth,’
BUT
- It is a small contributor to GDP and jobs and is capital intensive
SO
- Satisfying energy service requirements with energy efficiency helps the economy
- Others have broken the link between energy growth and economic growth – why can’t we?
- Total energy cost is what matters, not price

The case for energy efficiency

- Competitiveness – spin-off benefits, costs
- Cutting total energy cost
- Climate change
- Reliability of supply
- Jobs
- Exports of energy efficiency

Energy – an input to services



How to measure energy efficiency?

- Primary energy?
- End-use or final energy?
- Energy intensity (per unit of economic activity)?
- Energy use per capita?
- Useful energy
- Direct and induced energy?
- Lifecycle energy?
- Or a combination?

Energy activities creating GHG

- **Commercial** 60% to keep buildings comfortable
25% so people can see...
- **Industry** 44% metals
24% motors
15% low temperature heat
- **Homes** hot water 28%
refrigeration 18%
space heating & cooling 14%
lighting 8%
appliances & equipment 23%

Savings potential

- Rate of return expected
- Looking at the whole system
- Importance of benchmarking against 'Best Possible' not 'Best of a Bad Lot'

What energy users need to become energy efficient /1

- Availability, affordability of products/services
- Awareness, knowledge, and understanding
- Motivation/ priority
- Information applied to specific circumstances
- Feedback - learning from experience
- Support and recognition

What energy users need to become energy efficient /2

- Capacity to make decisions
- Helpful, informed intermediaries
- Understandable tariffs and retailer choices
- Energy prices that reflect true costs

Our recommendations

- Set clear targets
- Establish and publicise fallback strategies
- Develop and debate long term sustainable energy paths
- Undertake sustained effort to overcome inertia of past approaches
- Recognise enormous scope of energy efficiency
- Acknowledge economic, social and environmental benefits