



UNIVERSITY of STRATHCLYDE
**INTERNATIONAL PUBLIC
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CENTRE FOR ENERGY POLICY

Energy efficiency policy: the different approaches

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“ENERGY AND THE ECONOMY: PUSHING THE BOUNDARIES”

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**SESSION 2: IDENTIFICATION OF AND TRADE-OFFS BETWEEN MULTIPLE BENEFITS OF
ENERGY EFFICIENCY**



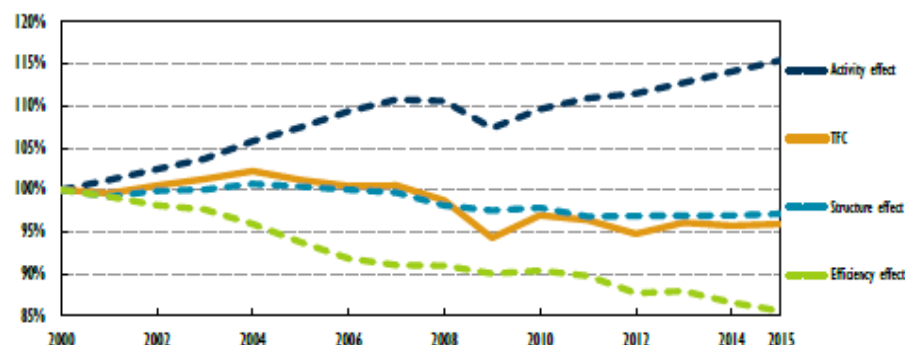
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Where does energy efficiency fit in overall energy policy?

It is becoming increasingly clear that energy efficiency needs to be central in energy policies around the world. All of the core imperatives of energy policy – reducing energy bills, decarbonisation, air pollution, energy security, and energy access – are made more attainable if led by strong energy efficiency policy. As the world transitions to clean energy, efficiency can make the transition cheaper, faster and more beneficial across all sectors of our economies. Indeed, there is no realistic, or affordable, energy development strategy that is not led by energy efficiency. For the IEA, it is the first fuel.

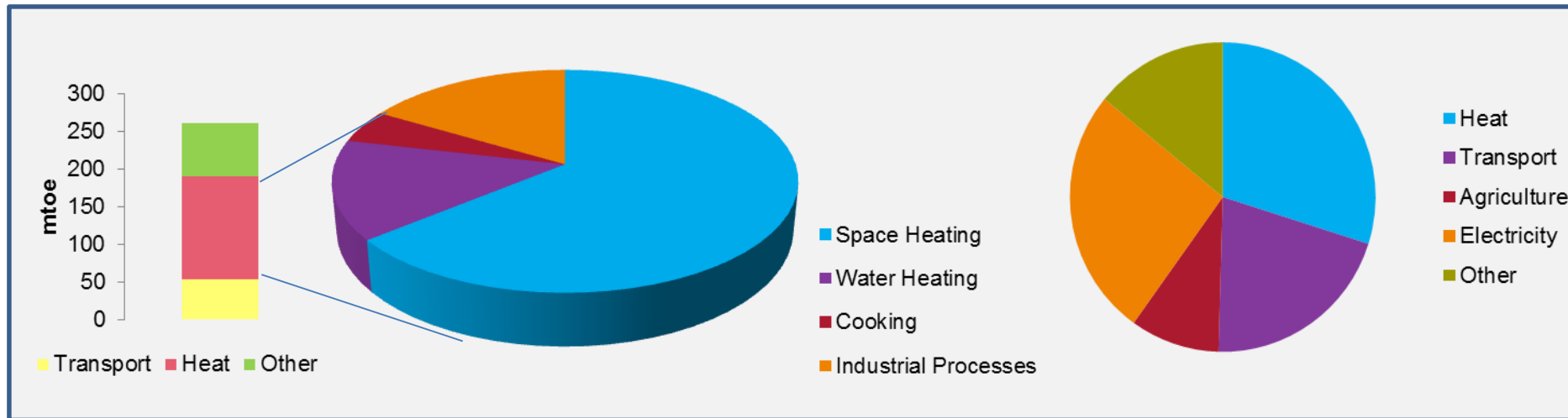
Energy Efficiency Market Report 2016, IEA

Figure 1.10 Decomposition of total energy demand in IEA countries



Note: Analysis based on the IEA Energy Efficiency Indicators database (2016 edition). TFC in this analysis covers the following sectors: residential, industry and services, passenger and freight transport. It does not include agriculture, non-energy, and energy supply sectors. The energy consumption decomposed in this analysis represents 90% of TFC in IEA countries in 2015.

Growing policy awareness of energy demand mix



UK Department of Energy and Climate change 2105

- Challenge of decarbonising heat, industrial heat, and transport through combination of increased efficiency of demand and decarbonisation of fuels.
- Heat and mobility changes directly impact voters in their homes

UK Government

- Each Home Counts: Bonfield review December 2016
 - Proposes creation of a quality Mark, establish consumer charter for high standard in service and access to redress, creation of technical codes and standards for installation of EE and RES, advice and guidance for the consumer and monitoring and reinforcement.
- Industry Strategy January 2017
 - Delivering affordable energy and clean growth Higher priority in policy for securing industrial opportunities of energy innovation and the affordability of energy.
 - Minimise cost of low carbon shift, manage network changes, capitalise on business opportunity.
- New emissions reduction plan 2017

European Union Winter Package

- **Energy Efficiency Directive**
 - 30% EU level binding target – raising the level of ambition
 - Selective articles relating to 2030 targets reviewed – too soon to review whole
 - Article 7/9/10 - 1.5% end-use annual efficiency target extended to 205 heat metering requirements
- **Energy Performance of Buildings Directive**
 - Article 6 – streamlining inspection and reporting on heating systems
 - Foster the digitalisation of heating systems-using Automation and controls alternative to inspection and “smartness indicator” for buildings.
 - Infra structure for electric car charging
 - Non-binding initiative: finance for retrofitting and construction sector forum
- **Ecodesign Framework**
 - Hand dryers, electric kettles, lifts, refrigerated containers and solar panels.

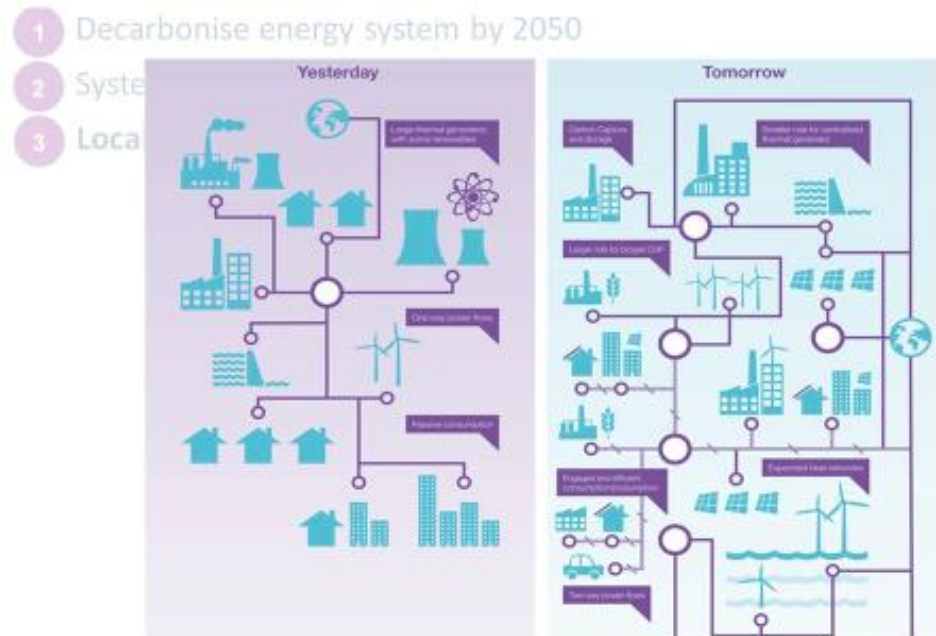
Scottish Energy Efficiency Action Plan

- To achieve climate change targets must reduce emissions across the economy by 75% (2032) and 98% (2050)
- Long term action to reduce energy demand and decarbonize heat supply to residential, services and industry sectors.
- Phase one (of 3) > £0.5Bn 2017-2021 focusing on improved delivery of energy efficiency measures, following up on best practice and creating demonstrations of most promising solutions.

Climate policy is driving
large changes in the
energy system

Any changes in the energy
system have an economic
impact

How can policy makers
better simulate the
impacts of these changes
in economic terms?



Modelling different energy efficiency policy options

- The rebound and multiple benefits arguments have their basis in the reality that when anything happens in energy supply and/or demand, driven by technology, policy etc., there will be economic reaction
- Need multi-sector, multi-market economy-wide modelling to consider and quantify the nature of impacts.
- However also need to be wise about how and when to use different types of modelling in policy planning and assessment



Energy Efficiency policy right now

- EU
 - Continuing on target focused standards and regulations.....which work
 - Progressively addressing finance and construction....the big issues for the built environment
 - Making the jobs and economy pointsbut not driving them home
- UK
 - Linked energy policy to industry
 - Focused on cost for the energy user, and need for professional and reliable execution of energy efficiency measures
 - Scotland breaking ground with long term approach based on very regional action.

Ongoing Challenges for Energy Efficiency in Energy Policy

- Desirable but not investible?
- At the buildings level/ mobility level requires real technical innovation for effective solutions.
- Policy makers warming up to the multiple policy benefits of energy efficiency but have not yet managed to make these arguments effectively



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THANK YOU!

