

Session 4: Urban energy analytical tools, metrics, frameworks

Current ETP analytical framework

Luis Munuera Energy Analyst International Energy Agency

www.iea.org





Global energy system today





Global energy system in 2050





ETP model finds cost effective investment and operation of energy technologies to meet energy demands from now to 2050



Cost-effective strategies for meeting global energy system demands...



Infrom now to 2050, in 28-40 regions



Cost-effective strategies for meeting global energy system demands...

- Technology-rich representation of the system
- Given a set of constraints: resource, technical, capacity buildup, behavioural, environmental
- Necessarily aggregate!
 - Improved temporal resolution (integration of VRE) but limited spatial detail
 - Sub-national infrastructures difficult to model but fundamental impact

www.iea.org





Key questions for this session

- Within the urban context: what metrics, indicators, proxies to assess energy use, environmental impact, infrastructure, technology penetration?
 - What are the key data limitations encountered by analysts?
 - Is the urban/rural split sufficient?
- What formal tools are in use for policy support at the urban level?
 - What methodologies for what problems? Planning/evaluation/assessment?
 - At what scales is it appropriate to analyse urban energy systems?
- How can findings from urban analytical frameworks be scaled-up to national and global levels?
- How can national planning tools enhance their representation of the urban context?