

**SCHOOL OF ENERGY, GEOSCIENCE,
INFRASTRUCTURE AND SOCIETY**

**Urban Governance, Urban Development,
Land Use and Energy Access**

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Introduction

- How can energy provision be delivered to the poorest and disadvantaged in LIC-MIC transition countries?
- What are the legal, institutional and co-ordination arrangements needed to scale up Energy Efficiency and ensure Energy access in urban context, and at what level?
- What is the role of municipality reforms, decentralisation on ensuring energy efficiency and energy access?

Introduction

- By 2030 urban populations will account for around 75 per cent of global energy demand, with non-OECD countries accounting for 80 per cent of the projected increased demand above 2006 levels.
- Urban dwellers in LICs and MICs often access electricity through irregular, patchy and informal connections which are frequently considered illegal.
- Situation is closely linked to how urban areas have been developing, and continue to develop, in LICs and MICs, often with weak urban governance and little control over urban development, resulting in 'informal settlements' and slums.
- Studies of urban infrastructure in LICs and MICs have tended to concentrate on water and sanitation networks, with comparatively very limited attention being paid to access to electricity.

How the urban poor access electricity

- Urban poor in LICs and MICs comparatively better provided with electricity than with other services
 - 720 million urban residents do not have access to a piped water supply (UN-Habitat, 2015b)
 - 131 million urban residents do not have access to electricity (World Bank, World Development Indicators 2015).
- Means of connection to electricity supply in informal settlements:
 - clandestine connections
 - community meters as a result of community-led negotiations
 - standard individual formal connections , etc...
- Electricity distribution companies often the first utilities to provide formal services in informal settlements, but hesitant due to:
 - potential of non-payment of bills
 - electricity theft
 - additional costs and risks of working in areas outside of planned urban environments.

How the urban poor access electricity

- Territorial differences in electricity distribution exacerbate urban fragmentation and inequalities.
- Examples:
 - In Rio de Janeiro, Brazil, electricity supply from the local electricity distribution company (Light) is divided into ‘electrical sectors’ (geographic areas) with great variability in quality of service.
 - In Medellin, Colombia poor households who had been transferred from informal settlements to state-built housing estates had to prioritise regular payment of utility bills over food.
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Urban governance interaction with electricity distribution

- Shift from 'government' to 'governance' has affected delivery of urban services since 1980s/90s .
- Wider range of stakeholders involved in delivery of formal urban services, and increasing recognition of other forms of delivery that may be termed 'informal'.
- In the formal system, the transition from government to governance has included:
 - decentralisation of service provision from national to local governments
 - New Public Management approach to service delivery applying private sector approaches in the public sector
 - privatisation of service delivery
 - public-private partnerships.
- Increasing interest in co-production: 'citizen involvement or participation (rather than bureaucratic responsiveness) in the delivery of urban services' (Brudney and England 1983: 63).
- Draws on concepts of 'community involvement' and 'governance' in the production and management of the built environment, and in LICs and MICs on *sites-and-services* and *informal settlement upgrading*'.

Urban governance interaction with electricity distribution

- ‘Urban sustainability policies are being implemented on the basis of an insufficiently robust research base about energy use and planning.’ (Rutherford and Coutard, 2014: 1357) – partly because production and supply of electricity is seldom a competency of urban actors and local authorities, despite cities being major energy consumers, but rather of other actors that see cities simply as supply end points.
- Growing literature on energy in urban studies has contributed to recognition of:
 - mutual influence between energy provision and urbanisation
 - importance of space in the supply and use of energy within urban regions
 - rising capacity of urban actors to govern or influence energy-related change
 - importance of infrastructures as powerful instruments for energy or low carbon policies.
- Notion of *urban energy governance* as a way ‘to capture the multitude of ways in which urban actors engage with energy systems, flows and infrastructures in order to meet particular collective goals and needs, as framed or expressed in policymaking processes, but also in debates, contestations and conflicts over policy orientations, resources and outcomes’ (Rutherford and Jaglin, 2015: 174).
- The types of relations around electricity distribution between different levels of government and other stakeholders will very much depend on the socio-political context, as well as other factors such as scale, etc.

Experiences in improving poor households' access to electricity

- Some key approaches: privatisation of electricity supply and distribution, pre-paid meters.
 - Peru: Privatisation of the electricity sector in 1994 led to almost complete coverage and optimal service quality, also due to other factors (political framework supportive of the improvement of access to urban services and technical innovations in network engineering).
 - Philippines: privatisation since the 2000s initially led to the state having a diminished role in promoting access to electricity in informal settlements, but later an increasing role for city governments as urban poor organisations channelled their demands more easily through these
 - State of Delhi: Energy transition as implemented by the three companies that took on electricity distribution when it was privatised in 2000, also shows that urban development policies were more influential on the utilities' strategies than the environmental agenda.
- Prepaid systems increasingly popular in the delivery of urban services in Sub-Saharan Africa. Energy specialists, economists and development scholars report advantages in situations where governments are weak or when there is a lack of infrastructure planning with unclear land tenure and extensive poverty. Urban scholars critical of three aspects of prepayment: as a proxy for neoliberalism; as a disciplining technique; and as de-politicizing state-society relationships.
- Ethnographic approaches have helped understand:
 - positive effect of pre-paid electricity meters in Mozambique on forms of sociability and social ordering (Baptista, 2013).
 - provision of social surveillance and reduction in fraud, in regularisation project in favelas in Rio de Janeiro (Pilo', 2015).

Experiences in improving poor households' access to electricity

- Approaches that take a more holistic view across services when addressing the needs of the urban poor. Example:
 - 'Light Recicla' scheme in Rio de Janeiro: people recycle solid waste in exchange for a discount on their electricity bills. The scheme has exceeded expectations in terms of the number of people signing up and the volume of waste that has been recycled.
- Conclusions:
 - Utilities have to adapt to specific spatial and social geographies, in contrast to conventional uniform public policies that usually overlook local implementation contexts.
 - Policymakers in the energy sector should consider socially and politically sensitive issues and the multidimensional specificities of urban contexts.
 - There is scope to explore approaches to access to other urban services and infrastructure in poor and disadvantaged urban areas in the Global South, and the potential relevance of these to delivery of electricity in such areas.

Priority research questions

- What potential do different forms of urban management have to ensure access to reliable and safe energy by the poor and disadvantaged in LICs and MICs in existing (and future) urban areas?
- What forms of urban planning (and regeneration) can help ensure access to reliable and safe energy in new (and regenerated) urban areas?
- What scope is there to draw further lessons for access to energy from the way in which other urban services and goods are made available and accessed in low-income areas in LIC and MIC cities?
- What spatial and institutional scales should be considered when designing strategies to improve access to energy by the urban poor and disadvantaged?
- What scope do the answers to each of the above questions offer in terms of identifying and developing appropriate ways to expand adoption of energy-efficient technologies by the urban poor and disadvantaged in LICs and MICs?