

Additional HANDOUT for presentation: From Customers to Prosumers in an Equitable Low Carbon Transition Prof Sandra Bell & Dr Janice Astbury, Durham Energy Institute, Durham University, UK
Energy Systems Integration 102 – Research Challenges, iiESI, 6 August 2015

Additional definitions, figures and references (information not included on slides)

Slide 11 Considerations of vulnerability, equity and justice in energy transitions

Definitions:

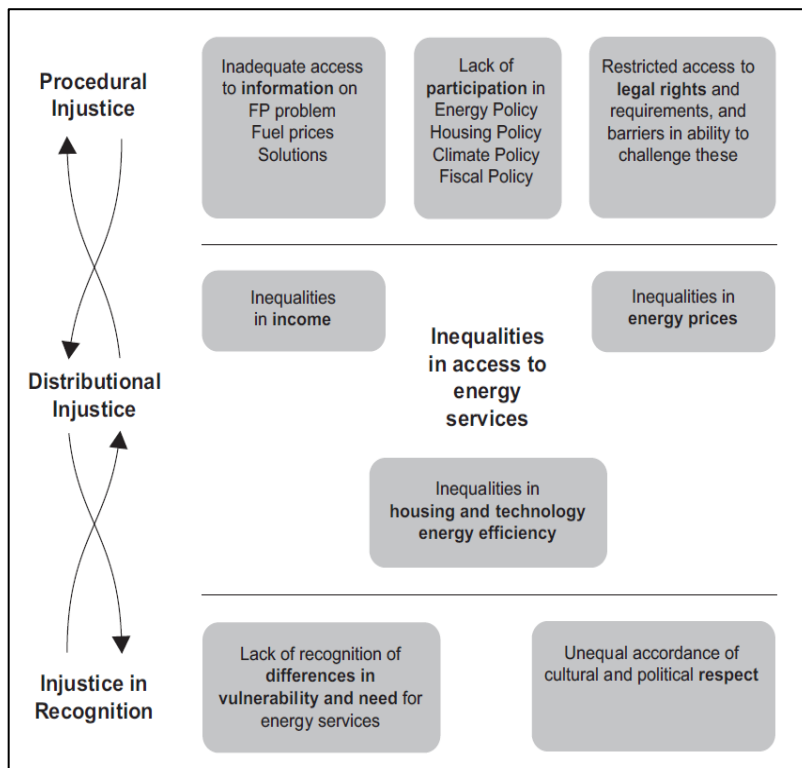
Energy Vulnerability – the propensity of an **individual** to become incapable of **securing** a materially and socially needed level of energy service in the home (Bouzarovski, Petrova & Tirado, 2014, p. 10)

Energy Equity – ensuring **access** to affordable, safe and reliable energy and **distribution of the risks and benefits** of new technologies, which vary over space and time, and between and within social groups (Hall, Hards, & Bulkeley, 2013, p. 415)

Energy Justice – speaks to ideas of distribution, procedure and recognition regarding “what constitutes the **basic rights and entitlements** of a sufficient and healthful everyday life” (Walker and Day 2012, p. 69)

Slides 12-14 Work of the Interdisciplinary Cluster on Energy Systems, Equity and Vulnerability

Three forms of injustice and their component parts in fuel poverty (Walker & Day, 2012, p. 74)



Slide 15 Dimensions influencing the delivery of energy services to the home, and the rise of domestic energy deprivation (Bouzarovski, Petrova & Tirado, 2014, p. 10)

Typology of energy vulnerability factors and constituent elements (Bouzarovski, Petrova & Tirado, 2014, p. 11)

Factor	Components	Stressors
Access	Poor availability of energy carriers appropriate to meet household needs	External
Affordability	High ratio between cost of fuels and household incomes, including role of tax systems or assistance schemes. Inability to invest in the construction of new energy infrastructures.	External/internal
Flexibility	Inability to move to a form of energy service provision that is appropriate to household needs	Internal
Energy efficiency	Disproportionately high loss of useful energy during energy conversions in the home	Internal
Needs	Mismatch between household energy requirements and available energy services; for social, cultural, economic or health reasons	Internal
Practices	Lack of knowledge about support programmes or ways of using energy efficiently in the home	Internal/external

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