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

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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)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Components</th>
<th>Stressors</th>
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<tbody>
<tr>
<td>Access</td>
<td>Poor availability of energy carriers appropriate to meet household needs</td>
<td>External</td>
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<td>Affordability</td>
<td>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.</td>
<td>External/internal</td>
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<td>Flexibility</td>
<td>Inability to move to a form of energy service provision that is appropriate to household needs</td>
<td>Internal</td>
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<td>Energy efficiency</td>
<td>Disproportionately high loss of useful energy during energy conversions in the home</td>
<td>Internal</td>
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<tr>
<td>Needs</td>
<td>Mismatch between household energy requirements and available energy services; for social, cultural, economic or health reasons</td>
<td>Internal</td>
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<tr>
<td>Practices</td>
<td>Lack of knowledge about support programmes or ways of using energy efficiently in the home</td>
<td>Internal/external</td>
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Bibliography


