

# Reducing vulnerability and inequality in low-carbon energy and mobility transitions

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SYKE, CDE, SPRU webinar on Justice in transitions  
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# Introductions

## Science Policy Research Unit (SPRU)

- 80 faculty members
- Leading research on science, technology and innovation on pressing global policy agendas
- <http://www.sussex.ac.uk/spru/>

## Sussex Energy Group (SEG)

- Over 50 members across the University of Sussex
- Directed by Professor Benjamin Sovacool, Dr Karoline Rogge and Dr Marie Claire Brisbois
- Energy research in energy policy, energy demand, renewable energy diffusion, community energy, electric vehicles, low-energy housing, energy poverty etc.
- Aim to understand and foster transitions towards sustainable, low carbon energy systems
- <http://www.sussex.ac.uk/sussexenergygroup/>



*University of Sussex, Brighton, UK*

**Over 55 years of research on energy and innovation policy**

# We need a low-carbon energy transition

## The energy system is fascinating....

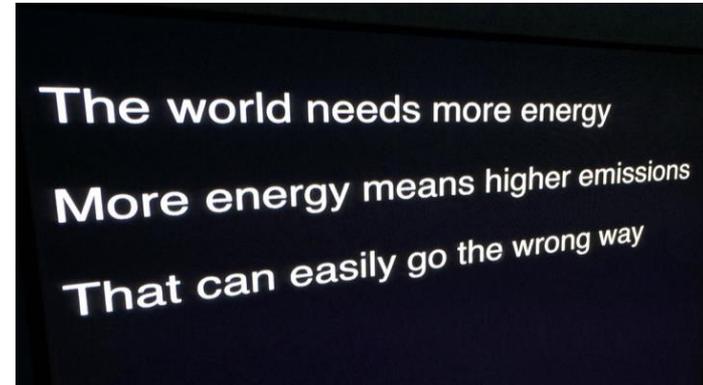
- We find it hard to function without energy
- Demand is predicted to grow

## ....but for many reasons the system needs fixing

- Can be a dirty and dangerous business
- Many injustices and externalities (e.g. human rights abuses, land grabbing, accidents, climate change)
- Many systems run by governments and large businesses behind closed doors

## Low-carbon transition: a move away from fossil fuels to renewable energy systems

- This is happening and being accelerated



*Oil Museum, Stavanger, Norway*



*Global Climate Strike, Brighton, UK*

# A transition is happening and it needs to be just

## Low-carbon transitions must be *just*

- So that we do not repeat past mistakes

## How can we make it just?

- First understand the underlying processes, structures and conditions that underpin energy systems

## Energy justice can help by asking questions like:

- Who has a say and is being listened to?
- What are the benefits and disadvantages?
- Who benefits?
- Who is left behind?
- Can be used as a policy tool to assess risks related to energy systems



*The TFM cobalt and copper mine in Fungurume, Democratic Republic of the Congo (DRC)*



*Electric Vehicle in Oslo, Norway*

# What we know from previous research

## **INNOPATHS: Examining energy justice in European energy transitions (2018-2020)**

- Electric vehicles (EV) in Norway, solar PV in Germany, smart meters in the UK
- Specific focus on energy (in)justice, users, whole systems
- Early users investing in PV and EVs received very high subsidies and many benefits – is that fair if everyone pays?
- Higher incomes often linked to higher overall consumption – is that fair if everyone is impacted by emissions?
- Decline of solar industry in Germany left many people unemployed – is that fair if jobs are lost?
- Where do the minerals for your EV battery come from, and where does your old car end up?



*PV roof in Freiburg, Germany*

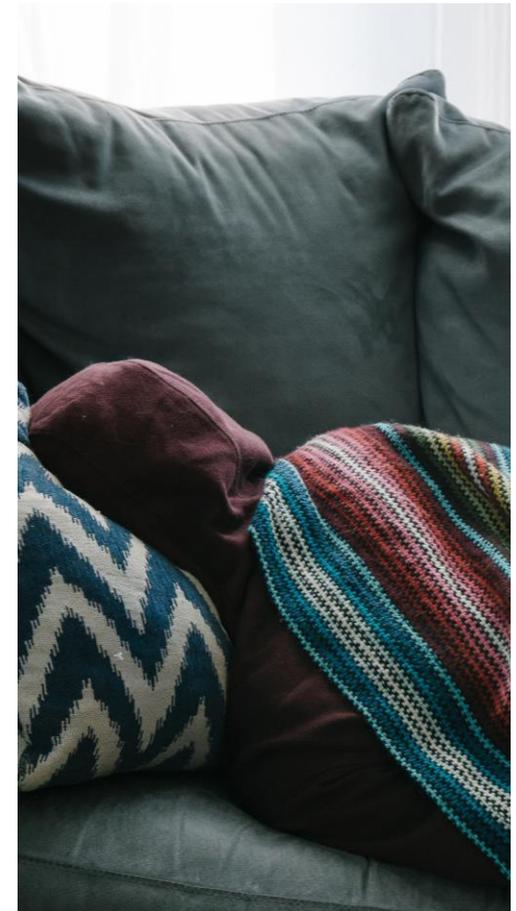


*Cobalt mine in DRC*

# What we are learning from ongoing research

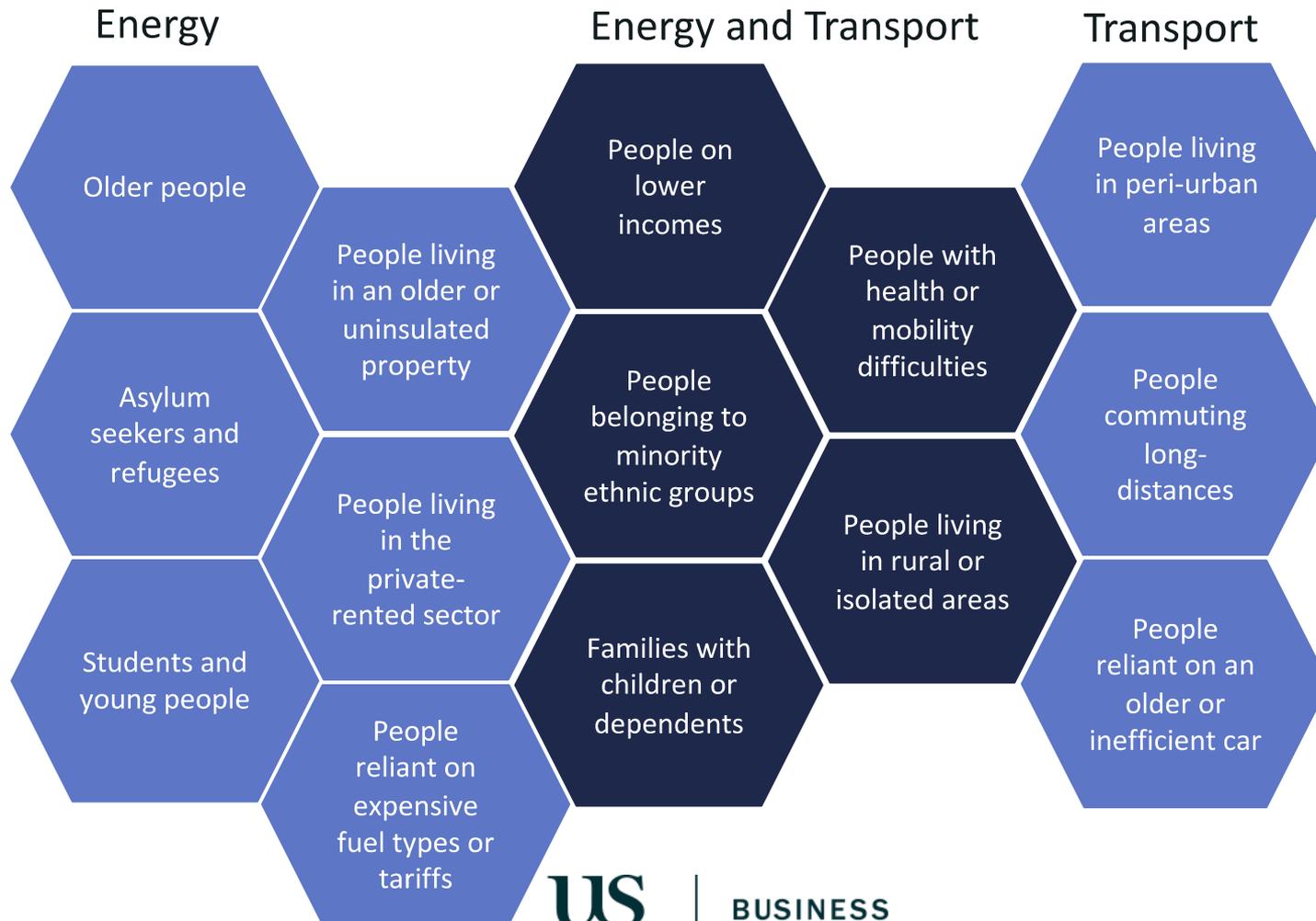
## Fuel and transport poverty in the UK's energy transition (FAIR) (2020-2023)

- Increasingly interconnected energy and transport systems as we move to low-carbon societies
- **Fuel/energy poverty:** the inability to secure materially and socially necessitated energy services, such as heating a home or using appliances
- **Transport poverty:** enforced lack of mobility services necessary for participation in society, resulting from the inaccessibility, unaffordability or unavailability of transport
- **Affordability:** energy / transport costs are too high
- **Access:** cannot access required energy / transport services



Stock image

# Overlaps between energy and transport poverty



# Community energy = a way to a more just transition?

## The notion of community energy

- Sustainable: renewables and demand reduction
- Local: Local action for local benefits
- Voluntary: Many (have to) rely on volunteers
- Inclusive and democratic: Open to all?

## Who *will* and *can* take part

- Who can afford to invest in community energy?
- Are there issues related to class, education, gender, race, etc?

## Who's 'community' is it?

- Community does not necessarily equal harmony
- Who has a voice and who makes decisions



*The Energy Café run by South East London Community Energy*

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*Brighton Energy Co-operative share offer*

# To summarise

## We need fair and equitable low-carbon societies

- Who designs and delivers transitions
- Who benefits, who loses, how and where
- Develop 'low-carbon literacy' for everyone
- Interdisciplinary research and practice needed involving social scientists, engineers, economists, humanists, policy makers, civil society etc.
- Need wider structural societal change
- What kind of society do we want to live, and possibly even survive, in?

### Climate change: Sir David Attenborough warns of 'catastrophe'

By Matt McGrath  
Environment correspondent

© 18 April 2019



*BBC News headline*

# Thank you!

Questions welcome 😊

<https://www.creds.ac.uk/fair/>

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